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The Philadelphia Medical Journal

A Weekly Journal Owned and Published by The Philadelphia Medical Publishing Company and Conducted Exclusively in the Interests of the Medical Profession

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The Use of the X-ray in Fractures.—Our attention has been again called to the interesting subject of the X-ray in the diagnosis and prognosis of fractures by an excellent exposition of the subject in the *British Medical Journal*, June 8th, from the pen of Golding-Bird, one of the Guy's Hospital surgeons. That the X-ray has oftentimes produced confusion and discomfort in the surgical mind and a marked discontent in the mind of the patient is too true to require repetition. But the mistake should not be made of depriving this most wonderful discovery of its proper place among diagnostic means. Our confusion and our distrust have in most instances been shown to be due to some mistake in technique or to an improper interpretation of the skiagraph. The rays have frequently shown undoubtedly that a fracture was present when none was suspected, but it must not be forgotten that to an inexperienced eye a fracture would oftentimes seem to be present when none existed. The X-ray must be looked upon as *one* of the means of diagnosis, and we should use it just as we try to elicit crepitus and deformity. That it is too often neglected in cases of doubt is very true. It is, however, as great a mistake to go to the extreme of trusting absolutely to the skiagraph, as it would be to neglect entirely the clinical side of other conditions and trust the laboratory altogether for our diagnosis. In cases of difficulty and doubt, Golding-Bird tells us it is our duty to use the X-ray always, but that the result "should be received with caution, and only after the interpretation by some one whose experience warrants his speaking with authority." The author also shows us that the surgeon who would judge his results by what the X-ray shows is doomed to disappointment, for when the limb comes off of the splint the skiagraph will not infrequently show great mal-adaptation of fragments and a condition suggestive of failure. If however, another skiagraph is made after the lapse of considerable time when callus has been absorbed, a wonderful improvement is shown. In no sense is the X-ray to be used as a prognostic measure after fracture. Function is far more important than perfect coaptation of fragments. It has often seemed that too much attention is paid to obtaining

a beautiful bone scar and not enough to restoration of function, which, after all, is the thing at which we should aim. The general practitioner has not as yet come to realize the great advance made in the last few years in the treatment of troublesome fractures, particularly those about the elbow and wrist joints. Cases with perfectly set and firmly united bones continue to turn up at our hospitals with ankylosed joints and tendons, when early motion and massage would have saved the patient much pain and loss of time.

If patients themselves examine the skiagraphs, Golding-Bird rightly suggests that they should always be told that when the splint is removed the X-ray will show the bones much as they were at first, but that this fact will not interfere with the function of the part, and that a skiagraph made a number of months later will show an entirely different picture. As an evidence in court, the X-ray should not be admitted as a factor in prognosis and only in diagnosis when corroborated by other symptoms.

The Present Status of Plague in San Francisco.—We have, in some of our previous issues, referred editorially to the plague situation in San Francisco. In these editorials we have endeavored to point out the importance of the recognition of the existence of plague in this country, and to urge the use of such measures of removal and prevention as circumstances warrant. Although the existence of plague was established beyond a doubt by the local health authorities of San Francisco, and their conclusions were verified by all of the leading pathologists and bacteriologists of that city, yet in the face of doubts thrown upon their conclusions by the hostile State Board of Health and State officials occupying high places, the appointment of a national commission for the purpose of final judgment seemed entirely justifiable. Doubtless very few of the physicians of the East who have read reports of the plague situation in San Francisco, in the newspapers and medical journals, were surprised at the report of the National Commission. They were convinced that the plague had prevailed in the Chinese quarter for at least a year.

The present status is at least unfortunate. There is reason to believe that a respectable fraction of the intelligent people of San Francisco still doubts the combined decisions of the City Health Board, the local bacteriologists and pathologists, and the National Commission. In addition to the laity which has remained unconvinced, it would appear that certain prominent medical men hold and promulgate contrary views. It is proper to state that these physicians had committed themselves in public to the non-plague character of the epidemic disease at an early date in the course of the controversy, and before the arrival of the National Commission. There is no reason to believe that their views have been based upon careful study. They seem to have been arrived at extemporaneously, and as such have been held with great tenacity, and in spite of convincing evidence to the contrary.

It has been intimated that this unfortunate situation is in large part the result of the delay observed by the Treasury Department in publishing the official report of the Plague Commission. That there was such a delay is of course well known, and we criticised it quite freely in these columns; but it does not seem clear to us, upon further inquiry, that prompt and immediate publication would have changed the heretical views held by the physicians alluded to. On the contrary, it is claimed that good was accomplished by withholding the official announcement of the existence of the disease in San Francisco in view of the nervous tension evident in the States immediately bordering upon California. Texas had already quarantined against California; other States might have been expected to follow such example, and it is doubtful whether the exigencies of the situation demanded such a course; while in the interval before the publication of the report, time seems to have been afforded for launching into successful operation the somewhat complex and difficult machinery through which regular medical inspection, care, and treatment of established and suspicious cases might be provided. This action, in which all interested parties joined, offered a pledge of security to the adjoining States, and probably obviated the hasty and unnecessarily violent action of quarantining the State of California, and thus interfering with the industry, commerce, and travel of the State.

Looked at, therefore, without heat, and weighed with caution, the action of the Secretary of the Treasury and the Surgeon General of the Marine Hospital Service, while, perhaps, a severe temporary trial to those brave advocates of science in San Francisco who were held up to ridicule and abuse by the newspapers, must, we think, in the end be

regarded as justified by the local situation, and, moreover, cannot be held to have endangered the health of the State, or diminished the high gratitude due to the City officials and the disinterested scientists in San Francisco, who carried the burden of the situation well during the troublous times of the controversy.

Insects as Factors in the Conveyance of Disease.—Surgeon General Wyman, of the United States Marine Hospital Service, has recently issued a circular directing the attention of the medical officers of that service to the great importance of this subject. It has seemed to us (although we may be mistaken), that the marine and military authorities pay more attention to this subject than do municipal and other civil functionaries. We know that right here in Philadelphia the "plague of flies" is not well combated in some of our large hospitals. To go through some of our wards on a mid-summer's day is to be harrowed not more by the vision of disease than by the all-pervading curse of insects. Flies are not the only sinners. Fleas, bed-bugs and mosquitoes do their share in the general bedevilment of the sick and injured.

This is no longer a mere question of comfort. It is one even of life and death. As Dr. Wyman says, there is now no doubt as to the relation of the mosquito to malaria and filariasis. Plague, according to Simon, is transmitted from the rat to man by the flea. Typhoid fever and cholera are possibly conveyed by flies which become contaminated by the excreta. Again, yellow fever, according to some, but not all, observers, is transmitted by the mosquito. The best way to kill flies and mosquitoes is by sulphur fumigation. Mosquitoes should be prevented from breeding by draining or covering all collections of standing water, or by covering the surface with petroleum. In this city of Philadelphia fly-screens and mosquito-netting should be used universally. No hospital should be considered well equipped that leaves doors and windows unguarded. Excreta should be kept away from flies.

A Menace to Colorado.—In the early days Colorado was rather proud of her pre-eminence as a health resort—an honor which the State clearly deserved. All was well with the young and nascent Commonwealth so long as invalids flocked thitherward and paid their way and supported hotels and doctors and helped to build up the State. The commercial aspects of the situation alone seemed to appeal to the inhabitants, and they saw nothing but prosperity in the arriving tide of valetudinarians. This optimism, however, has suffered some decline of recent years, and evidence is not lacking that some people in Colorado do not relish a further in-

flux of invalids—and especially consumptives—into the State. There is a distinct pessimistic note in their complaints; they think (with some show of reason) that a tuberculous population is not to be desired. They especially deplore the permanent settlement and breeding of consumptives within their borders. Mr. H. A. Crafts, in a recent paper (*Popular Science*, July, 1901), says that "the doctors, undertakers and drug stores have had a harvest in Colorado," but as for the rest of the people, they begin to realize that their zeal for consumptives has run away with their common sense. Statistics seem to prove that deaths from tuberculosis contracted in Colorado are rapidly on the increase. In Denver alone deaths from this dread disease contracted in the State increased from 49 in 1893 to 99 in 1898—an increase of more than 100 per cent. in five years. Of the entire mortality of Denver, the percentage of deaths from tuberculosis increased from 11.23 in 1893 to 19.77 in 1898—but the number of imported cases among these is not stated.

The cry of alarm is evidently raised because of the belief that tuberculosis is a contagious disease. Hence it is not altogether unreasonable. But we should like to ask whether this cry about the contagiousness of consumption is not somewhat over-loud? That the disease is due to a specific bacillus is well enough established, but that it is actively infectious by personal contact in ordinary social life is not sufficiently proven. Let us recall the example of malaria, and probably that, too, of yellow fever.

No Yellow Fever in Havana.—It is gratifying to read the report from Havana that there is no yellow fever in that city, and that since March 1st only one death from the disease has occurred, and that the last case was treated on May 7th. According to the dispatch, from which we quote, never before has Havana been free from yellow fever during the same period. So elated are the authorities over this state of things that they have decided to ask that the quarantine in New York against Cuba be raised as being unnecessary. Major Gorgas, the chief sanitary officer, is reported as having endorsed this request, which seems reasonable enough.

While all this is extremely pleasing, it hardly justifies the conclusion, which some seek to draw from it, that this exemption proves the truth of the mosquito theory. Yellow fever patients in Havana, we are told, have been protected from the bites of mosquitoes by being surrounded by netting, and hence the conclusion is drawn that yellow fever is being controlled. We are rather inclined to give some credit to the general improvement in sanitation which has marked the American administration

in Cuba. We shall, of course, keep a mind open to proof of the mosquito theory, but this proof must be based on something rather more convincing than even this most satisfactory report.

The Fourth of July Sacrifice.—It is sad to think of the goodly number of American boys who, at the time of this writing, being yet in buoyant and exuberant health, shall, ere these lines appear in print, have paid the forfeit of their safety or their lives in the annual fusillade that marks our national holiday. Unless all precedents fail, we are to reap in a few days our seasonal harvest of injury and death. It is useless to moralize about it, or to indulge in direful philippics against the American eagle. Perhaps it is even out of place to try and draw classical parallels and to say that we are like the ancient Athenians who every year paid tribute of their youths to the fabled Minotaur. But even if we are obstinate in our patriotism to the extent of wanting to make a noise about it, we should at least have sense enough to keep firearms out of the hands of children and boys. This year, as heretofore, there will doubtless be a certain amount of Fourth of July tetanus, and almost every case of it will be chargeable to the authorities who neglect to suppress the villainous toy-pistol. As for the older patriots, who insist on firing cannon and dynamite bombs, there is nothing to do but to let them play the fool; but they ought at least to be driven out of the cities and towns and made to express themselves in the open fields. It will not be too late, even when this writing appears in print, to urge a most careful antiseptic treatment of all Fourth of July wounds.

The Influence of Boric Acid, Borax and Formaldehyde on Nutrition and Tissue-Change in Children.—The extensive use of these agents in food, in spite of the energetic efforts of health authorities, makes any information concerning their physiological actions of much interest. The data in this field have been accumulated by many observers and in several ways. Some have experimented merely in test-tubes and flasks studying especially the influence on digestive processes; others have made prolonged studies of the effect on the lower animals when fed with articles containing notable amounts of the preservatives. Both these methods are subject to criticism from the clinical point of view. It is not safe to trust much to negative results obtained in the chemical or physiological laboratory. The human organism is very sensitive and will be unfavorably influenced by conditions which will not disturb the digestion of a starch solution by diastase or the functions of a

small animal. So far as these classes of experiments may be taken as a guide, it appears that neither boric acid, formaldehyde, nor borax exerts any marked influence on ordinary digestion or nutrition.

Important contributions to the subject are found in papers recently published by F. W. Tunnicliffe and O. Rosenheim (*Journal of Hygiene*, April, 1901; *Centralbl. f. Physiolog.*, April 27th, 1901), who have made experiments by feeding apparently healthy and delicate infants with articles containing these preservatives and making careful analytical and other observations as to the effects on nutrition and metabolism. They arrive at the following conclusions, which are not likely to strengthen the hands of those who wish to restrict the use of such agents.

Boric acid in small doses up to one gram per day produces in healthy or delicate children no change in proteid metabolism and no appreciable influence on the assimilation of fat. The body weight is increased. Similarly, borax in 1.5 grams doses per day produces no unfavorable influence on proteid metabolism or assimilation of fat, and the body weight is increased. The amount of dry feces is slightly increased with borax, but not with boric acid. A mixture of boric acid and borax (which has been found to be a better preservative than either alone) is quickly eliminated and does not act unfavorably.

Concerning formaldehyde, the observers find as follows: Formaldehyde added to milk in the proportion of 1 to 5000, or to the entire aliment in proportion of 1 to 6000, has no appreciable influence upon the more important phases of healthy children, but with debilitated children some interference is shown. With these, the quantity of urine and dry feces is increased. The excretion of lecithin is decreased. In no case was any unfavorable influence upon the general health of the children noticed. Neither borax, boric acid nor formaldehyde exerted any antiseptic action upon the intestinal contents. The proportion of formaldehyde used in the milk was considerably in excess of the amount required for ordinary preservation.

Sterility and Fecundity.—At the recent session of the Gynecological and Obstetrical section of the American Medical Association there was probably no more interesting discussion than that which followed the reading of the paper by Dr. George J. Engelmann, of Boston, on "The Increasing Sterility of American Women." Aside from the moral questions that were touched upon by this distinguished statistician, who holds the enviable position of the world's leading authority in his chosen line of investigation, the subject has a bearing of great civic and national importance. Long accus-

tioned as we as a nation have been to consider ourselves a fruitful and progressive people in marked contrast with some of the races of Southern Europe, notably the French, Dr. Engelmann's statement that to-day we are the least fruitful people of the world, comes with appalling frankness. As clearly portrayed by figures that will admit of no controversy, to-day the American born people show a fecundity of less than 2 children per marriage. That is to say, there are barely two children born to a family among those who can claim to be native white Americans. One hundred and more years ago, during the colonial period, the fecundity stood at 6 per marriage, while to-day the general European fecundity is 4.5 per marriage and the French Canadians show the enviable record of 9.1 per marriage. Closely associated with the foregoing statement is the occurrence in Europe of one miscarriage to every 3.3 labors, while in this country a premature expulsion of the ovum occurs in 2.8 labors. Dr. Duff, of Pittsburg, in the animated discussion that followed, emphasized the importance of suppressing the obnoxious advertisements with which the pages of the daily journals teem, and reiterated his belief that dire calamity will fall upon the editorial managements of these journals for admitting such dangerous and nonpatriotic advertisements to the columns of their papers. It is undoubtedly high time that we, as a people, should give this matter of fecundity and sterility careful attention, and still more that we physicians, as the medical guardians of the nation's welfare, take such measures as will tend to suppress vice and encourage the propagation of the race. Dr. Duff's suggestion, which was unanimously endorsed by the meeting, that hereafter the United States Census take note of the paternity (parental nativity), sterility, and fecundity of the people, is a most excellent one. The publication of such records would do much to open the eyes of the best element of the country to the danger that is impending. It is also most important that the blame of sterility be placed where it properly belongs, and that the great frequency of double epididymitis as a causative factor be more generally appreciated. As to the willingness of individuals to assume the important responsibilities of maternity or paternity, this is a phase of the subject that can be influenced only by appealing to the morals of the people. As was suggested by one of the women delegates, an improvement in this direction might be instituted by substituting the questions: "Are you willing to become a mother?" "Are you willing to become a father?" at the time of issuing the marriage license. Failure to acquiesce, in her view, would be deemed ample reason for refusing the license on the ground that legal prostitution could not be countenanced.

Correspondence.

AN EPIDEMIC OF A PECULIAR AND UNFAMILIAR DISEASE OF THE SKIN.

By JAY P. SCHAMBERG, M. D., Philadelphia.

To the Editor of the Philadelphia Medical Journal.

Dear Sir:—It may be of interest to call attention to the existence of a disease, characterized chiefly by cutaneous manifestations which is prevailing in various sections of this city. As far as I have been able to ascertain, the first cases appeared toward the latter part of May. In the Skin Department of the Philadelphia Polyclinic, we have treated some ten or twelve cases during the past few weeks. I am told by several colleagues in charge of skin clinics elsewhere that they have also seen a number of cases of the same character.

The following description is based upon observation of the limited number of cases above referred to, and will doubtless prove to be incomplete when the opportunity is afforded for a more thorough study of this affection.

The disease is characterized by a generalized eruption of erythemo-urticarial spots, many of which acquire at their central summits a pin point to pin head sized vesicle which rapidly becomes pustular. The lesions vary in size from a small pea to a finger nail, are rounded, oval or irregular in shape, and are often quite edematous like the wheals of urticaria. Indeed, the patient is apt to regard the eruption as an attack of "hives." The eruption is usually extensive, involving the trunk, arms and legs, and to a slight extent the face. The back is commonly profusely covered, the shoulders, chest and abdomen being the next most extensive seat of the efflorescence. The forearms frequently exhibit scattered lesions, but the wrists and hands are as a rule free. The thighs and the legs are commonly

itching. This is worse at night, and seriously interferes with sleep. The itching leads to violent scratching, with the consequent production of excoriations and blood crusts, and at times pyogenic infection of the skin.

At the onset of the attack the patient often complains of chills or chilliness, and at times nausea. Mild rigors may recur throughout the course of the next few days, particularly towards evening. The temperature may be elevated from 100° to 102° F. in the beginning, and a rise of one or two degrees may continue for several days. Patients, however, are not inclined to seek their beds. Some patients, although afebrile, complain of malaise and anorexia; others again do not admit being ill at all. There is at times moderate enlargement of the superficial lymphatic glands. The disease seems to run its course in from two to three or four weeks, and apparently is not materially influenced by treatment.

Several members of the same household are commonly affected. These we have observed on one occasion in husband, wife and infant, on another in brother and sister, and several times in husband and wife. As far as we have been able to determine the affection usually begins synchronously in the several members of the same family.

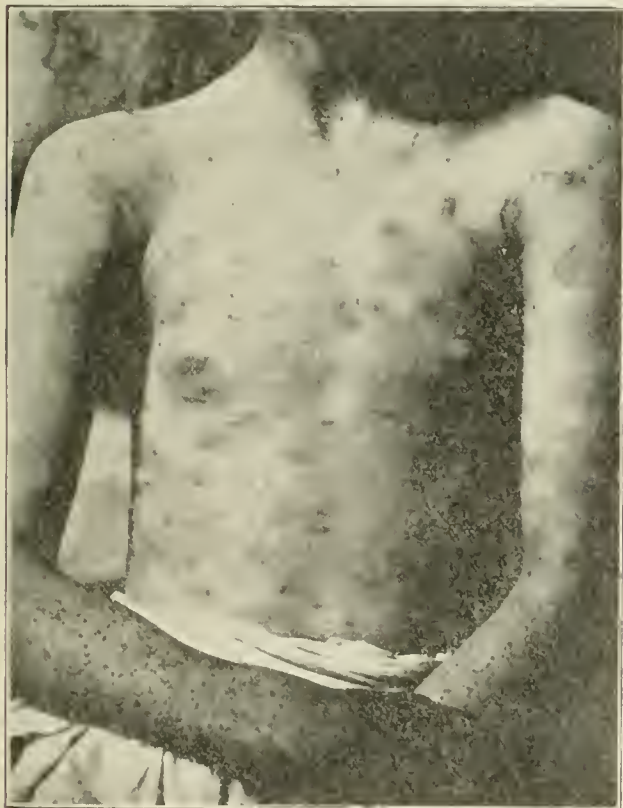


Figure I. Appearances in an average case about the third day.

the seat of a sparse eruption which may develop rather later than on the upper portions of the body. The face may be affected, but the lesions in this region do not seem to last as long as elsewhere.

The eruption is accompanied by the most intolerable



Figure II. Eruption at the end of three weeks showing lesions, excoriations and blood crusts from scratching.

It is too early to say whether or not we are dealing with a disease *sui generis* and it is likewise difficult to state anything definite concerning its nature. The frequency with which the affection attacks several members of the same family would suggest that it is contagious, and possibly of the nature of an acute infectious disease. On the other hand, it must not be forgotten that a common cause, such as the ingestion of a certain foodstuff might simulate a transmissible disease in the production of such a series of cases. It is, perhaps, wisest at this time, to record observations, rather than to elaborate theories. The disease appears to occur in individuals living in widely separated districts of the city.

The eruption is particularly apt to be confounded with ordinary "hives" or urticaria, chicken-pox and scabies. It may be distinguished from "hives" by the much longer duration of the lesions, by the tendency to central vesicula-

tion, the presence of constitutional symptoms, the greater persistence of the attack, and the apparent transmissibility of the affection. It must be admitted, however, that many of the lesions are urticarial in nature.

Chicken-pox may be excluded by the protracted duration of the disease, the smallness of the vesicles, the violence and persistence of the itching, and the great incidence of the disease among adults.

Scabies, or "itch," may be excluded by the freedom of involvement of the hands, by the uniform eruption of erythemo-urticarial lesions surmounted by small vesicles, and by the futility of parasiticide frictions.

THE VIRCHOW FUND.

By A. JACOBI, M. D., of New York.

Editor of the Philadelphia Medical Journal,

Dear Sir:—Some months ago a committee consisting of Dr. Reed, president of the American Medical Association, Dr. Bowditch, president of the Congress of American Physicians and Surgeons, Dr. Welr, president of the New York Academy of Medicine; Dr. Welch, of Johns-Hopkins University, and the writer as secretary, published an appeal to the American medical profession requesting contributions to the Virchow fund which was established ten years ago in honor of Rudolf Virchow's seventieth birthday, which was reached October 13th, 1891. The fund was created for the purpose of fostering biological, anthropological and general medical research. A large German committee, with National committees, formed all over the globe, has undertaken to increase this fund in honor of the coming eightieth birthday of the great medical reformer.

Whatever contributions will be raised, should be sent to Germany on the first day of September in order to be received and acknowledged by the Central Committee in due time. As our former notices may have been overlooked by such as are anxious to show their appreciation of the great master and to aid the cause represented by his lifelong labors, we herewith repeat our appeal.

Reviews.

Die Gicht-Therapie in Karlsbad, by Dr. Richard Sachs
Karlsbad-Wien. Berlin, 1901. Verlag von S. Karger.

This 48-page pamphlet deals with the therapy of gout as conducted in Karlsbad according to modern principles. The first chapter is devoted to the introduction, and discusses the various theories regarding the etiology of gout, with especial reference to the chemical metamorphoses in metabolism. Sachs considers as facts in gout, hyperacidity of the tissue juices due to uric acid, and retarded metabolism; according to these the treatment is divided into three parts, which are discussed separately. (1) Prophylaxis, (2) neutralization of the uric acid, and (3) the treatment directed toward combating the abnormal metabolism. The diet is scientifically arranged. The permissive administration of alkalies from a chemical point of view is wisely guarded against, for it is known that by overloading the blood and the tissue juices with sodium bicarbonate that the latter can easily give rise to the production of insoluble blurate of sodium. It follows, therefore, that alkaline mineral waters should not be used during an attack of gout. There is not a symptom of gout that is not considered in this little work, and with the exception of Karlsbad the doctrines of the author can certainly be employed to advantage by practitioners in any part of the world. It is to be regretted that such valuable treatises are so frequently poorly bound. The author has the happy faculty of saying much in a few words. [M. H. D.]

Lumbar Coccalization; Absence of Analgesia; Prolonged Intoxication. G. Carrière and J. Vanverts. (*L'Echo Medical du Nord*, May 19, 1901. 15me. Année, No. 20).

Carrière and Vanverts report the case of a man, aged 23 years, who was suffering from pain in the right leg, large, multiple adenopathies and emaciation. At the age of 11 the patient had been operated upon, under chloroform anesthesia, for suppurating osteomyelitis of the tibia. Following this operation the patient had vomited for 3

days and had suffered from headache. During the progress of the case an abscess developed in the ankle joint near the tibia. In order to open it and curette the bone it was decided to induce anesthesia by the **subarachnoid injection of 1 cgm. of 1% solution of cocain hydrochlorate**. Four minutes after the administration of the cocain the patient began to vomit, 3 minutes later, on trying to open the abscess, it was found that **sensation was unimpaired**, and after 15 minutes the operation had to be done without anesthesia, but was completed quickly because the bone was not diseased. The patient presented **toxic symptoms**, consisting of violent headache, vomiting and vertigo on standing. These symptoms gradually disappeared so that after 10 days the patient had resumed his usual health. [J. M. S.]

The Pest Epidemic in Egypt from May, 1899 to July, 1900.—The pest appeared first in Alexandria in May, 1899, though it probably existed unknown during the four previous months. In describing this epidemic, Edouard Rist, formerly inspector of the Egyptian Marine and Quarantine Service (*Presse Medicale*, 1901, No. 42) divides the 350,000 inhabitants of Alexandria into three classes, the upper and lower class Europeans, and the natives. Contrary to what is seen in India, the religion of the Egyptians had no effect upon the epidemic. The government hospital is well equipped, having both male and female physicians. All cadavers are examined, and whenever a case seems suspicious, an autopsy is made. The upper class Europeans direct the city, in an advanced manner. The Suez Canal brings vessels from India and pilgrims from Mecca. Port Said is even more exposed than Alexandria. The first cases of pest were not recognized in either city. Most cases were sporadic, without any connection, from one to the other. They were all bubonic. Though the source of the epidemic was sought for most minutely, it could not be found. As many families lived in each house in which a case of pest was discovered, crowds of people were isolated. Out of 992 isolated, only two cases of pest developed. Most of those affected were grocers' and butchers' boys. It was noted that the rats, in the neighborhood in which the first cases appeared, died in great numbers about two weeks before the disease appeared in man. In Alexandria 93 cases occurred, with 45 deaths. 19 of these were only diagnosed after death. Those over six years old, who were isolated, were paid 15 cents a day indemnity. The disinfection was thorough; 90,700 rooms cleaned; 38,259 bags of rags, etc., burned, and 14,674 cloths and 5,822 cushions distributed, to replace those burned or confiscated. 800 people were employed by the sanitary department, and \$180,000 spent. The Yersin bacillus was generally found. From November 1899, to May 1900, there were no cases found. Then the epidemic reappeared. This time the rag-pickers were first affected. It is possible that this outbreak came from Port Said, where the pest had existed for two months. Rist calls especial attention to the fact that the discovery of cases of the pest in a large city is difficult. For four months passed before it was known that pest existed in Alexandria. Yet bacteriological examination will settle the diagnosis. [M. O.]

An Enterococcus the Cause of Dysentery.—K. Lewkowicz (*Przegląd Lekarski*, 1901, Nos. 5-7; *Bohnickowa Gazeta Lekarska*, Vol. XII, No. 11) isolated from the feces of a number of undoubted cases of dysentery a new coccus which he considers as the specific cause of dysentery. The coccus occurs in the form of diplococci (frequently in chains) surrounded by a capsule which is also present in cultures. It differs from the pneumococcus by its larger size and wider capsule. The organism grows only on media containing animal fluids, such as blood serum, ascetic fluid or milk. It is pathogenic to white mice, rabbits (subcutaneously) and guinea pigs. The specificity of the organism rests on the following claims: (1) It was found in all cases observed by the author and Ciechanowski and Nowak (*Centralbl. f. Bakt.*, 1898, p. 445). In two it was present in almost a pure culture. (2) The enterococcus is found also in the metastatic lesions complicating dysentery. (3) The characteristics of its growth point to its parasitic nature. (4) The close relationship to the pneumococcus and streptococcus. (5) Marked pathogenicity to some animals. (6) The predominance of local lesions. [A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Dr. Martin H. Williams, for many years connected with Jefferson Medical College Hospital in various capacities, and at one time chief of the surgical clinic at that hospital, died on June 30 at his home in Philadelphia. He was for two terms a member of the Board of Public Education and at one time Chairman of the Committee on Hygiene in that body. His death will be much regretted by his many friends and confrères.

Dr. J. Ewing Mears, of Philadelphia, has given to the Marion County (Ind.) Medical Society property in Indianapolis valued at \$25,000, on which to erect a home for the society as a memorial to his father, who was a pioneer physician in Indianapolis.

Pathological Society of Philadelphia.—At the meeting of June 27, Dr. William E. Robertson presented two specimens: (1) **Polypoid and ulcerative colitis due to mercury.** The patient had absorbed the mercury while giving injections to another man, the last one having been given 2 years ago. Autopsy showed at least a dozen perforations of the intestine; (2) **Heart and great vessels from a so-called blue baby.** Drs. H. D. Jump and J. D. Steele exhibited specimen of **Polypoid colitis with adenoma of the cecum.** The diagnosis was made post mortem, the patient dying of chronic diarrhea. Double parotitis had developed before death.

Dr. R. C. Rosenberger reported the **pathological findings in a case of trichinosis**, the subject being a patient of Dr. J. Chalmers DaCosta. Examination of muscle removed from the leg of the patient (only one lower extremity being involved) showed encapsulated trichinae, many of which were surrounded by aggregations of lymphoid cells. The literature of the subject was reviewed. One point of interest in the case was the absence of marked eosinophilia. Four blood examinations were made, the eosinophiles ranging from 2.5 to 4%. The statement was made that **eosinophilia is not pathognomonic of trichinosis** as the same condition is noticed in other processes. This statement was borne out by citations from various authors, showing that eosinophilia is present at times in pneumonia, acute articular rheumatism, chorea, leukemia, osteomalacia, emphysema, after injection of tuberculin, and in the presence of many other parasites, as oxyuria, anchylostoma, ascarides, etc. In the discussion Dr. W. M. L. Coplin spoke of the possibility of the recrudescence of lesions. Points in favor of this are that with a local lesion, trichinae may be in other muscles which at the time manifest no symptoms. In this case there was the absence of the marked eosinophilia which is commonly observed in the initial outbreaks of trichinosis. There was also the history of an injury, which cause has produced inflammation of encapsulated but quiescent parasites of other types, as the echinococcus. The fact that pericapsular lymphoid accumulations were present and most marked around the older capsules would indicate that the active inflammatory phenomena present were not of necessity related to living trichinae.

Addition to Allentown Hospital.—The Allentown Hospital has received \$30,000 for the purpose of erecting an additional wing to the hospital for the treatment of surgical cases.

Vital Statistics of Philadelphia for the week ending June 29, 1901.

Total mortality	428	Cases.	Deaths.
Inflammation of the appendix 1,			
brain 15, bronchi 10, heart 1, kid-			
neys 27, lungs, 28, peritoneum 8,			
pleura 3, stomach and bowels 13,			
spine 2	108		
Marasmus 10, inanition 17, debil-			
ity 7	34		
Tuberculosis of the lungs	52		
Apoplexy	18		
Heart-disease of 26, fatty degenera-			
tion of 3	29		
Uremia 12, Bright's disease 4,			
diabetes 2	18		
Carcinoma of the breast 1, liver 2,			
stomach 5, uterus 6, mouth 1,			
rectum 1	16		
Convulsions 21, convulsions, puer-			

	Cases.	Deaths
peral 1		22
Diphtheria	55	9
Brain-disease 1, dropsy of 1, soft-		
ening of 4, tumor of 1		7
Typhoid fever	119	8
Old age		8
Scarlet fever	75	3
Abcess of lungs 1, abortion 1, alco-		
holism 1, atheroma 1, burns and		
scalds 2, casualties 9, congestion		
of the lungs 2, chorea 1, cholera		
infantum 20, cirrhosis of the liver		
2, croup, membranous 1, cyan-		
osis 3, drowned 4, dropsy 3, dys-		
entery 1, epilepsy 1, erysipelas		
2, extra uterine pregnancy 1,		
fever, intermittent 1, gangrene 1,		
homicide 3, measles 2, obstruction		
of the bowels 3, edema of the		
lungs 1, pyemia 1, sclerosis, ar-		
terial 3, septicemia 4, sore mouth		
1, sarcoma, jaw 1, shoulder 1,		
thigh 1, suffocation 1, suicide 2,		
teething 1, tetanus 1, whooping		
cough 8, wounds, gunshot 1		93

NEW YORK.

Cornell University Medical College.—The library of the late Dr. Felix Bireh-Hirschfeld, formerly professor of pathological anatomy in the University of Leipzig, has been acquired by purchase by the Cornell University Medical College. It is said to be one of the most valuable libraries in that specialty in the world, and contains about 5,000 volumes. It cost about \$10,000.

Roentgen Society of the United States.—The second regular meeting of this Society will be held in the University of Buffalo, September 10-11, under the presidency of Dr. Heber Roberts, of St. Louis.

Census of Consumptives.—A census of the consumptives in the State of New York is to be begun in about a week by Dr. Daniel Lewis, commissioner of the State Board of Health. It will be the first census of the kind ever undertaken by this State.

NEW ENGLAND.

Yale University.—The annual address in medicine will be delivered by Professor Edmund B. Wilson, Ph. D., of Columbia University, on "The Higher Claims of Minute Research in Biology and Medicine," in the College Street Hall, Yale University, on Tuesday, June 25th, at noon.

WESTERN STATES.

Physicians' Club of Chicago.—At the recent annual meeting of this club, Drs. W. S. Christopher, Joseph Zeisler and G. Frank Lydston were elected directors, and Dr. L. Harrison Mettler was re-elected secretary and treasurer.

The Indian Territory Medical Association.—The Indian Territory Medical Association at its recent semi-annual meeting elected the following officers: President, Dr. G. M. West, of Eufaula; first vice-president, Dr. Louis Baghy, of Vinita; second vice-president, Dr. W. E. Harley, of Durant; secretary and treasurer, Dr. Frederick S. Clinton, of Tulsa. The next meeting will be held in Muskogee next December.

Plague on Board a Steamship at San Diego, Cal.—It has been reported to the Surgeon General of the U. S. Marine Hospital Service that one death occurred on the British steamer Carlisle at Hong Kong before reaching Honolulu, five deaths between Honolulu and San Diego and the last death on June 20, five of the deaths undoubtedly being due to the plague. The report, which is dated June 23, 1901, states that all were well on board at the time the report was sent out and that every precaution has been taken. A later dispatch dated June 24, 1901, states that there were five cases among the crew, that all were Chinese and that all the cases were fatal. The steamer sailed from Hong Kong on May 16 and from Yokohama on May 29. The cook was taken sick on June 6 and died June 9 without any glandular involvement being noticeable. A fireman was taken ill on June 14 and died June 19, with glandular involvement; a donkeyman became ill on June 17 and died June 19, also with glandular swelling; a greaser was taken ill June 17 and died June 21 with in-

involvement of the glands; a sailor was taken ill June 18 and died June 20, also with glandular involvement; a steerage passenger was also found ill at noon June 18 and died at 1.30 P. M. All had high temperature, pain in the back and limbs and in the glandular regions. Dead rats were noticed before the first case of illness. The cases occurred in different portions of the ship. The ship, passengers, crew and effects have been thoroughly disinfected. The dead were buried at sea and their baggage destroyed. On June 24 all were reported well.

SOUTHERN STATES.

The Presbyterian Hospital at Atlanta, Ga., has elected the following medical board: Drs. Marlon McIl, Hull, president, and F. Bates Block, general medicine and diseases of children; Drs. Stephen T. Barnett and Cyrus W. Strickler, general surgery; Drs. Edward C. Davis and James N. Ellis, gynecology and obstetrics; Drs. Walter B. Emery, secretary, and James McFadden Gaston, Jr., genito-urinary surgery; Drs. Arthur G. Hobbs and James M. Crawford, eye, ear, nose and throat; Dr. Michael Hoke, orthopedic surgery, and Drs. Miller B. Hutchinson and John L. McDaniel, disease of skin and nervous system.

Osteopaths Acquitted.—The test case against E.H. Shackelford and G. E. Fout was disposed of in the Hustings Court of Richmond Va., after consuming two days. The jury was instructed to find a verdict for the defendants as the judge stated he was convinced that the defendants did not come under the statute providing for a permit to practice medicine from the State Board of Medical Examiners. Exceptions were taken and the case will now go to the Supreme Court for final decision.

CANADA.

(From Our Regular Correspondent.)

The Rockefeller Fellow at McGill University has been appointed and Dr. W. W. Ford is the fortunate recipient. He will be engaged on some subject in connection with the study of preventable diseases approved by the Committee of the Fund, and will be under the direction and supervision of Professor J. George Adami, who has charge of the department of pathology at McGill, a department which at the present time is one of the brightest and best equipped of the many departments in the university. As the new McGill laboratories are not yet completed, Dr. Ford will spend the next six months at the Pasteur Institute, Paris. Dr. Ford's appointment as well as that of Dr. J. R. McCrae, who was recently made pathologist at the Montreal General Hospital leaves vacant two research and teaching fellowships in the departments of pathology and bacteriology. Applications for these posts will be received by Dr. Ittutan, dean of faculty, up to the 17th of August.

Smallpox in Ontario has not as yet been successfully checked. Within the last two days a new centre has appeared at a small village near the city of Brantford, Ont., where some twenty to thirty cases, mild in character, have been discovered by the provincial bacteriologist, Dr. J. A. Amyot, Toronto. Dr. Hodgetts, of Toronto, has been sent there as a special officer to have charge of the epidemic. During the week ending June 11th, there were some seventeen cases reported throughout the province. During the past year Toronto has had twelve cases, and all but three have been imported cases. Vaccination has been pretty general in this city and the vigilance of the health department along with this fact accounts for the comparative freedom of the city from more infection. Toronto's new smallpox hospital will be ready for occupation in about three weeks. The Dominion Government has appointed Dr. McCully, of Itouneau, Ont., medical officer of quarantine at that place on account of there being a ferry service from Cleveland to Itouneau. Collectors and subcollectors of customs on Lake Erie have been warned to keep a sharp lookout for vessels coming from the Ohio port.

Manitoba University is progressing at a rapid rate. Four hundred and seventy-five students wrote at the spring examinations in arts, medicine and law, showing that this, the youngest university in Canada, is doing good work in the west. Last January, the university opened its new science building, costing \$60,000, where the science faculty now lecture to classes formed of the five affiliated colleges. The university receives a very small grant from the provincial government, but retains the right to appoint its professors. The university possesses 150,000 acres of the Manitoba prairie lands, granted by the Dominion Government, which are now valued at from \$750,000 to \$1,000,000

and which are constantly rising in value. It was from the proceeds of the sales of portions of these lands that the science building was erected.

Drinking is on the Decrease in Ontario.—In 1889 the convictions for drunkenness reported in Ontario amounted to 4,797; but in 1899, this had dropped to 1,892, a decrease of 2,905, or over 60 per cent. In 1889 there was one conviction for drunkenness for every 295 persons and for 1899 one for every 826 and the figures indicate that between these years the reduction was progressive. The number of persons to each conviction in the provinces of Canada for the year 1899 is as follows: Ontario, 826; Quebec, 461; Nova Scotia, 448; New Brunswick, 253; Manitoba, 355; British Columbia, 207; Prince Edward Island, 341, and the Territories, 180.

The Hospital Surgeons for the Coming Year in the Hospitals of Toronto were appointed on the 28th of June and, for the first time in the history of the Toronto hospitals, women physicians have received appointments. The appointment of Dr. Helen MacMurchy to the staff of the General Hospital, following on the selection of Dr. Margaret MacCallum for a position on the resident staff of the Hospital for Sick Children seems to indicate that the women surgeons have found a permanent footing in the hospitals of Toronto. A third woman is spoken for St. Michael's hospital. The members of the new staff of Toronto General Hospital are as follows: From Toronto University graduates, Drs. F. A. Cleland, W. H. Cronyn, H. S. Hutchinson, A. J. MacDougal and J. H. Trout; from Trinity Medical College, Drs. Duncan Anderson, James E. Martin, W. J. MacDonald, E. S. Ryerson and W. G. Collison. To St. Michael's staff, Drs. P. W. O'Brien, R. H. Parent and C. R. Elliott.

Infant Mortality in Montreal has commenced somewhat earlier this year than in previous years and the matter is giving the Health Committee of that city no little concern. For the week ending June 22d there were reported ninety-one deaths amongst infants as against sixty-four for the corresponding week of last year and even the latter number was at that time thought excessive. Out of 100 cities in America from which statistics could be secured, Three Rivers, Que., has the highest death rate, while Hamilton, Ont., has the smallest, the figures for the former being 36.1 per thousand, while for the latter they are put down at 12.9. Montreal has a death rate of 24 in one thousand, which equals New Orleans, which is put down at 24.8. The causes of this great infant mortality which annually swells the death rate of the city is put down to ignorance on the part of mothers in feeding their young; overcrowding is another cause; want of fresh air is another; noxious privy pits is another. These privy pits are gradually decreasing. In 1891 there were 8,523 of them in that city; now there are 5,201. Professor Adami considers that badly kept milk is also a strong factor and urges a purer milk supply.

The Annual Meeting of the Executive Health Officers' Association of Ontario was held at Brantford, Ont., on the 25th and 26th of June under the presidency of Dr. W. T. Connell, pathologist to Queen's University. Some very important papers on sanitary matters were presented to the meeting and the question of the control of smallpox received extended discussion. A "well-cleaning" day was advocated by one sanitary scientist, who said that there should be a day for cleaning out the well as for planting trees. He said that in the township of Waterloo this had been tried with great results, one effect being the lessening of typhoid fever. Another advanced scientist deprecated the habit of ladies kissing each other and one another, pointing out that it was a fruitful way of spreading disease. Another important matter was that of appointing a special Committee, one member from each county in the province, who will endeavor to have by-laws for the establishment of sanitarium submitted to the people. The following officers were elected: President, Dr. E. E. Kitchen, St. George; vice-president, Dr. Thomas MacFarlane, Ottawa; Executive Committee, Dr. F. G. E. Pearson, Brantford; Dr. Hoare, Walkerville; Dr. D. Dunton, Paris; Dr. John Herald, Kingston; and Dr. W. J. Arnott, Berlin; Secretary, Dr. P. H. Bryce, Toronto.

MISCELLANY.

No Yellow Fever in Havana.—There have been no cases and no deaths of yellow fever in Havana during the week ending June 17.

Plague in Formosa.—In his report to the Surgeon General

al, Stuart Eldridge, Acting Assistant Surgeon, U. S. Marine Hospital Service states that in Formosa the plague epidemic is showing no signs of abatement. He is unable to present consecutive statistics of the same, but, on May 23, the governor-general of that island reported the new cases and deaths from this cause, on May 21, to have been, respectively, at Tainan, 25 cases and 20 deaths, and at Taihoku, 16 cases and 9 deaths.

OBITUARY.

Dr. John Jury, at St. Louis, Mo., on June 13, aged 33 years—Dr. E. E. Walte, at New Bedford, Mass., on June 20, aged 43 years—Dr. Jeremiah L. Fordham, at Scranton, Pa., on June 28, aged 70 years—Dr. Joseph A. Galloupe, at Beverly, Mass., on June 24—Dr. Lewis M. Eastman, at Baltimore, Md., on June 27—Dr. John G. I. Whitehead, at Crosswicks, N. J., on June 29, aged 73 years—Dr. John W. Wilson, at Chatham, Va., on June 29, aged 75 years—Dr. Musgrove Stone, at East Radford, Va., on June 27, aged 70 years—Dr. W. L. Nichol, at Nashville, Tenn., on June 23 aged 73 years—Dr. G. H. Magness, at White Plains, N. Y., on June 25, age 50 years—Dr. Philip A. Taliaferro, at Tidewater, Va., on June 27—Dr. B. F. Hastings, at Whitman, Mass., on June 28, aged 65 years—Dr. F. L. Huston, at Sante Fe, N. M., on June 24—Dr. John G. Lumpkin, at Richmond, Va., on June 27, 71 years—Dr. Morris Tussell, at Chester Springs, Pa. June 29, aged 75 years—

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended June 29, 1901.

SMALLPOX—UNITED STATES.

		Cases	Deaths
CALIFORNIA:	Los Angeles.	June 15-22	1
DISTRICT OF COLUMBIA:	Washington.	June 15-22	1
INDIANA:	Evansville.	June 22	1
LOUISIANA:	New Orleans.	June 15-22	3
KENTUCKY:	Lexington.	June 15-22	1
MASSACHUSETTS:	Fall River.	June 15-22	6
	Fitchburg.	June 1-8	1
	New Bedford.	June 15-22	1
	Quincy.	June 15-22	1
MICHIGAN:	Detroit.	June 15-22	2
	Grand Rapids.	June 1-22	8
MISSOURI:	St. Louis.	June 8-16	34
NEBRASKA:	Omaha.	June 15-22	5
NEW HAMPSHIRE:	Manchester.	June 15-22	1
NEW JERSEY:	Newark.	June 15-22	2
	Jersey City.	June 15-22	1
NEW YORK:	Buffalo.	June 16-23	2
	Elmira.	June 19	1
	New York.	June 15-22	60
OHIO:	Cincinnati.	June 14-21	4
	Cleveland.	June 14-21	24
PENNSYLVANIA:	Lebanon.	June 15-22	9
	Philadelphia.	June 15-22	2
RHODE ISLAND:	Providence.	June 15-22	1
TENNESSEE:	Memphis.	June 14-21	8
UTAH:	Salt Lake City. . . .	June 15-22	2
WEST VIRGINIA:	Wheeling.	June 15-22	1
WISCONSIN:	Green Bay.	June 16-23	1

SMALLPOX—FOREIGN.

CANADA:	Stanbridge.	June 6, present.	
COLOMBIA:	Panama.	June 10-17. . . .	6
FRANCE:	Paris.	June 1-8.	24
GERMANY:	Hamburg.	June 1-8.	2
GREAT BRITAIN:	Glasgow.	June 7-14. . . .	18
	Liverpool.	June 1-8.	1
	London.	June 1-8.	1
GREECE:	Athens.	June 1-8.	1
INDIA:	Bombay.	May 21-28. . . .	8
	Calcutta.	May 18-25. . . .	25
	Karachi.	May 19-26. . . .	10
ITALY:	Messina.	June 1-8.	16
RUSSIA:	St. Petersburg. . . .	May 24-June 1, 11	6
	Warsaw.	May 18-25. . . .	7
SPAIN:	Corunna.	June 1-8.	1
STRAITS SETTLEMENTS:	Singapore.	May 4-11.	1
COSTA RICA:	Port Limon.	June 13.	1

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 Days Ended June 27, 1901.

C. E. BANKS, surgeon, granted leave of absence for 2 days—June 21, 1901.
HILL HASTINGS, assistant surgeon, to proceed to San Diego, Cal., for special temporary duty—June 24, 1901.
F. B. ADAMS, acting assistant surgeon, granted leave of absence for 3 days from June 23, 1901, on account of sickness—June 24, 1901.
C. W. BAILEY, acting assistant surgeon, granted leave of absence for 10 days from June 21—June 22, 1901.

Changes in the Medical Corps of the Navy, Week Ended June 29, 1901.

P. A. SURGEON E. M. SHIPP, detached from the Michigan and ordered to the Asiatic station via vessel sailing from San Francisco, July 15—June 24.
P. A. SURGEON W. B. GROVE, detached from the Naval Hospital, Norfolk, and ordered to the Michigan, June 28—June 24.
ASSISTANT SURGEON G. C. SMITH, detached from the Vermont and ordered to temporary duty on the Alvarado, July 1—June 24.
Vermont—June 24.
ASSISTANT SURGEON H. M. TOLFREE, ordered to the ASSISTANT SURGEON J. S. TAYLOR, detached from the Manila, and ordered to the Naval Hospital, Yokohama, Japan—June 25.
ASSISTANT SURGEON W. H. BUCHER, commissioned a passed assistant surgeon from April 15, 1901—June 25.
DOCTORS R. T. ATKINSON and A. W. BALCH, appointed assistant surgeons in the Navy from June 22, 1901—June 25.
P. A. SURGEON R. S. BLAKEMAN, ordered to the Naval Hospital, Norfolk, Va.—June 27.

GREAT BRITAIN.

Honorary Degree of L. L. D. Conferred.—The University of Glasgow recently conferred the honorary degree of L. L. D., upon the following foreign members of the medical profession: Prof. A. Barkan, San Francisco; Prof. W. G. Farlow, M. D., of Boston; Prof. Adolf Mayer, M. D., of Worcester, Mass.; Prof. Julius Wesner, University of Vienna; and Prof. Witkowske, of the University of Cracow.

The British Medical Association will meet at Cheltenham, Eng., July 30th to August 30th inclusive.

Hibernation of Anopheles in England.—Dr. G. H. F. Nuttall in reviewing the various observations that have been made as to the hibernation of the several species of anopheles in England, states that he himself had observed the larvae of *Anopheles bifurcatus* to hibernate, while larvae of *Anopheles maculipennis*, which were in the same tank, invariably died as the winter progressed.

CONTINENTAL EUROPE.

Russia's Anti-Alcohol Campaign.—It is now five years since the Russian Government assumed exclusive control of the manufacture and sale of alcoholic liquors. In nearly all the provinces the saloon has been supplanted by the government shops, in which a guaranteed pure article is sold in a limited quantity to each customer. None is sold to those already intoxicated. These shops are located quite a distance apart and no one is allowed to drink liquor on the premises where sold. The system is supplemented by officially appointed local committees in each large town, which are supplied with funds to establish attractive temperance restaurants, reading-rooms, and people's palaces. They are expected to maintain a general crusade against the use of alcohol. A portion of the enormous profits of the liquor monopoly is devoted to this purpose.—(*Carolina Med. Jour.*)

Physicians Suffer from Infection.—In a recent epidemic of typhus and typhoid fever in Elisavetgrad county (Russia) 7 out of 9 physicians became infected with one or the other of the diseases. Many nurses and medical students were among the victims. The epidemic was the outcome of a local famine.

Famine and Pellagra.—The famine, which is periodical in certain parts of Russia, is now affecting the usually fertile south. The peasants of the governments of Kherson and Bessarabia are forced to subsist exclusively on corn meal which is often spoiled by improper keeping. As a result of this diet the Italian leprosy became endemic, over 30 cases having been reported so far.

Results of the Pasteur Treatment in Russia.—At the Pasteur Station in the government of Samara 1108 persons were treated. The mortality was 0.09%. Including the cases which terminated fatally before the treatment was completed as well as one case of death from an unknown disease occurring after the treatment, a mortality of 0.47% is obtained. At the Station at St. Petersburg 587 persons were treated. Mortality 1.2%. Excluding the cases which terminated fatally during the treatment, the percentage is reduced to 0.5%.

Method for Administration of Chloroform.—Dr. Wohlgemuth, of Berlin has constructed an apparatus by which patients inhale chloroform mixed with oxygen. It has been tried by many prominent surgeons with excellent results. It is claimed that the apparatus obviates many of the disagreeable features that are caused during the administration of the anesthetic.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

June 15, 1901.

1. An Address on Hepatic Inadequacy and Its Relation to Irregular Gout. 1 BURNEY YEO.
2. The Croonian Lectures on the Chemical Side of Nervous Activity. W. D. HALLIBURTON.
3. A Report of 620 Cases of Typhoid Fever treated in the Royal Victoria Hospital, etc. JAMES STEWART.
4. The Surgical Treatment of Typhoid Fever. T. J. MACLAGAN.
5. A Case of Typhoid Arthritis Proper. JOHN J. BUCHAN.
6. On Anemia in Typhoid Fever. THOMAS HOUSTON.
7. Simple Continued Fever in South Africa. CAPTAIN F. J. W. PORTER.
8. On the Protection from Water-Borne Diseases afforded by the Pasteur-Chamberland and Berkefeld Filters. W. H. HORROCKS.
9. Hematuria following the Administration of Urotropia. W. LANGDON BROWN.
10. A Fatal Case of Hematoporphyrinuria. H. WALDO.
11. Hibernation of Anopheles in England. GEORGE H. F. NUTTALL.
12. On a Common Source of Diphtherial Infection and a Means of Dealing with It. R. T. HEWLETT AND H. MONTAGUE MURRAY.

1.—By hepatic inadequacy Yeo means such defect or disturbance of the liver functions which, while stopping short of giving rise to what are known and generally accepted as diseases of the liver, leads to impairment of the general health. He includes in this category many, if not all, of those cases spoken of as irregular gout. He believes it is reasonable to infer either that these cases are improperly termed gout and should be termed instead cases of hepatic inadequacy or that hepatic inadequacy is the original cause of gout and that the manifestations of regular and articular gout are the near or remote results of the disturbance in metabolism thereby initiated. It has always appeared to the author that clinical evidence has been opposed to the conclusion that all or the greater part of the phenomena of gout as we now see them are the result of uratic precipitation in the tissues and that the widely spread and popular idea that the treatment of gout consists in the administration of so-called solvents of uric acid is an erroneous one. He has great doubt also whether uric acid has any other relation to gout than that its overproduction in the human body is a result of a gouty state, a state which he suggests takes its origin in disturbed hepatic metabolism. Although calomel does not really cause an increased formation of bile it acts on the bile expelling mechanism and promotes the flow of bile into the intestines, there to carry on the chemical and other changes in the intestinal contents which it is known to produce and it necessarily also promotes bile elimination. Calomel is used as extensively as ever in the treatment of functional disorders of the stomach and liver, in which the author includes many forms of irregular gout. He gives sodium bicarbonate and the other alkali in such cases because he believes that they promote the healthy function of the liver and that they favor metabolism generally. The method of their action, he believes, is by the promotion of osmosis. The remarkable effects of solutions of sodium salts in the hepatic functions is shown by their curative effect in gouty and dietetic glycosuria. They probably exert their remedial influence by a beneficial action on the gastric, intestinal and hepatic functions and on the nutritive changes in the tissues quite irrespective of any direct solvent action on sodium biurate. It is an undoubted fact that attacks of acute gout do occasionally occur while the patient is taking a course of sodium

waters, but certainly not frequently. The symptoms referable to hepatic inadequacy presented by patients with irregular gout are pale and often offensive feces, constipation alternating with more or less diarrhea, some enlargement of the liver with tenderness on pressure, muddy complexion, yellowish conjunctivae, sweetish bitter taste in the mouth, loss of appetite and high colored urine which is of high specific gravity and extremely acid and which has a color reaction that is adduced by adding nitric acid after boiling. The color produced under these circumstances resembles that of mahogany of various shades. The author does not believe that the kidneys are functionally diseased in these cases, but, on the other hand, is of the opinion that they are eliminating excrementitious substances that are normally excreted in the bile. There can be no doubt as to the intimate relation between the liver, the kidneys and the skin, the 3 great eliminating organs. We know that the liver is especially concerned in the metabolism of carbohydrates and of nitrogenous material. We know, also, that in gouty subjects the glycogenic function is frequently disturbed and that it is often restored by alkaline medication. It is not reasonable to conclude then that another function of the liver carried on coincidentally with the glycogenic function is also prone to be disturbed particularly since it is restored clinically by the same means. A third function of the liver is the formation of the bile; and in gouty subjects this is also frequently disturbed. Apart from individual peculiarities, which are common in gouty subjects, the safest diet for such patients is the simplest one that the individual capacity of the patient can dispose of. There is much in the quality and cooking of food and perhaps more than in the kind of food, and this also holds good as to the quality of wines. In the majority of instances the gouty patients that Yeo has seen have been extremely active and energetic people, and it is often difficult to get them to take sufficient rest. This excess of muscular activity constantly leads them to take an excess of food and then trouble arises because their excretory organs can hardly keep pace with the waste produced in the body. This is especially notable after middle age when the activities of the excreting organs become reduced and both liver and kidneys become inadequate. [J. M. S.]

2.—In the Croonian lectures on the chemical side of nervous activity, Halliburton first discusses the general composition of the nervous structures. The grey matter contains between 80% and 90% of water; the white matter contains 70% and the nerves contain from 61 to 65%. The solid materials of nervous tissues are very numerous. The most important and the most abundant and those of which we have the most accurate knowledge are the proteids and the phosphorized fats. In the grey matter the amount of protoid comprises over 50% of the solids. Nucleoproteid is the most abundant, while the other 2 proteids are globulins. One of these globulins, neuroglobulin coagulates at 47° C., and the other coagulates at 70° C. The phosphorized fat is known as protagon. On decomposition it yields lecithin and cerebrin. The cerebrins are nitrogenous glucosides; the sugar obtained from them having been identified as galactose. On hydrolysis lecithin yields not only fatty acid and glycerine but also phosphoric acid and cholin. The cerebrospinal fluid apparently plays the part of the lymph of the central nervous system. It is characterized by its low specific gravity, its clear watery character, its paucity in protoid and the presence in it of an unknown reducing substance which is not sugar. The importance of the cerebrospinal fluid from the pathological standpoint is that in it one would naturally look for the products of brain katabolism. The normal fluid, for example, contains the merest traces of cholin and proteids, but in pathological conditions in which the disintegrating side of metabolism preponderates over the assimilative, these materials, the chemical evidence of nervous breakdown, are much increased in quantity. The evidence is rather circumstantial than direct, that nervous material is,

during activity, in that state of unstable equilibrium which is designated by the terms metabolism. The signs of action that do exist are to be found chiefly at the beginnings and the ends of the fibres. These facts coincide with the arrangements of the vascular supply; the centers are richly supplied with bloodvessels but in a nerve these are comparatively insignificant. The necessity for an abundant supply of oxygen to the brain is seen from the rapidly fatal effects of cerebral anemia. The normal reaction of nervous tissue is alkaline, at death it becomes acid; but there is little or no evidence that acid is formed during activity. Experiments have shown that fatigue cannot be demonstrated in the splenic nerves. Evidence of fatigue products can be found in the central nervous system, however, by examining the cerebrospinal fluid. Chemical theories that explain sleep by the production of soporific substances, such as leukomains and reducing substances during waking hours depend upon the slenderest of evidence which will not stand rigid inquiry. It is within the bounds of possibility that the phenomenon of alternate periods of wakefulness and sleep may in the future be found explicable by the comparatively simple action of inorganic substances or their constituent equivalent. The monilliform enlargements seen on the dendrites are probably not the ordinary cause of loss of consciousness but merely secondary results of changes in the cell body. One should be very chary in concluding that the artificial sleep of a deeply narcotized animal is any criterion of what occurs during normal sleep. The sleep of anesthesia is a pathological condition due to the action of a poison; the drug reduces the chemico-vital activities of the cells and unconsciousness is in a sense dependent upon an increasing condition of exhaustion which may culminate in death. The sleep of health, on the other hand, is not produced by a poison; it is rather the normal manifestation of one stage in the rhythmical activity of the nerve cells, and though it may be preceded by fatigue and exhaustion it is accompanied by repair, the constructive side of metabolic action. [J. M. S.]

3.—Since the opening of the Royal Victoria Hospital, in 1894, 620 cases of typhoid fever have been treated, with a mortality of 5.4%. In fully 93% of the cases the onset was slow and was characterized mainly by frontal headache, *malaise* and loss of appetite. In 7% the onset was sudden and closely resembled that of pneumonia or pleurisy. In 5 or 6 cases the onset was characterized by symptoms similar to those of a sharp attack of appendicitis. In about 10% of cases repeated rigors and chills were reported during the first week of the illness. Epistaxis was an early symptom in about 12% of the cases. Decided symptoms of meningitis were found in less than 0.5% of the cases. Perforation and hemorrhage combined caused 58.8% of the deaths while all others causes combined caused 41.2%. In the 11 cases of perforation which occurred out of the 620 cases reported, operation was attempted in 8 only, but in no instance with a successful result. Operation for typhoid perforation should, if possible, be performed within 12 hours of the accident. The practical difficulty, however, is the recognition of the perforation. Hemorrhage of a decided character occurred in 5.48% and was the cause of death in 26.4% of the fatal cases. Opinion is strongly indicated in the treatment of intestinal hemorrhage, but the reaction following its continuous use in large doses for several days may be very considerable. There were 7 cases of cholecystitis, all of which recovered except one. Relapse occurred in about 9% of the cases. Serum diagnosis was attempted in 370 cases, with a positive result in all but 8. Out of 96 cases in which the reaction was looked for on the day of discharge from the hospital, it was found positive in all but 6. There was one case of typhoid without intestinal lesions. The routine treatment was hydrotherapy, except in a few cases in which contraindications existed. [J. M. S.]

4.—T. J. MacLagan discusses the treatment of typhoid fever recommending to the general practitioner the great

necessity of consultation of the surgeon in case of typhoid fever, showing symptoms indicative of perforation, and calls attention to the good results that have followed the surgical treatment of perforation. The author recommends a new form of treatment for overdistension of the colon accompanied by small fetid stools. It is claimed that when these symptoms are present, the cecum contains a quantity of fetid sloughs which have come from the small intestines. When this condition is present, respiration is greatly embarrassed from the distended colon and the patient is suffering from septic absorption. Under these circumstances it is recommended that the cecum be opened and drained. [J. H. G.]

5.—Buchan reports the case of a boy, aged 11 years, who was suffering from typhoid fever. On admission the patient complained of pain, which was increased on pressure and movement, in the left elbow joint, but no distinct areas of tenderness could be made out. Four days after admission the joint became distinctly swollen. After aspiration 1½ drachms of clear, serous fluid were withdrawn which proved sterile on bacteriological examination. After that the temperature fell to normal. Later, however, the pain was again felt and the swelling reappeared. A second aspiration resulted in the removal of a purulent fluid which contained a large number of streptococci and staphylococci. Careful search was made for the bacillus typhosus and the bacillus coli communis, but neither were found. The joint was freely incised and washed out with 1 to 80 carbolic solution. The patient was cured and the movement in the joint was almost entirely restored. The author considers the case to be one of true typhoid arthritis. [J. M. S.]

6.—In typhoid fever there is a great increase in the bacterial fermentation of the intestinal contents. In the anemia which occurs in a fair proportion of typhoid fever we have an opportunity of investigating the relation between bacterial fermentation with absorption of toxin and the modifications that occur in the blood. Houston gives the history of a patient who suffered from a protracted attack of typhoid fever from the bowels and which was taxis and hemorrhage from the bowels and which was prolonged by phlebitis and abscesses about the anus and in the axilla. During his illness the patient became quite anemic. In the early stage of the disease the blood was practically normal except that the white cells were somewhat diminished in number and the large mononuclear leukocytes were slightly increased. In the second stage, that of commencing anemia with no inflammatory complications, the hemoglobin and the red bloodcorpuscles were considerably diminished, and the lymphocytes and the mononuclear leukocytes were increased in percentage. In the third stage, that of anemia persisting with phlebitis, the hemoglobin was somewhat lower in percentage, the leukocytes had increased in number and the percentage of polymorphonuclear cells had considerably increased. In the fourth stage, that of increasing anemia and diminishing phlebitis the hemoglobin was still lower in percentage and the leukocytes had again diminished in number. The percentage of polymorphonuclear leukocytes had fallen and that of the lymphocytes had risen. In the fifth stage, in which the patient was profoundly anemic and in which abscess formation was present, the percentage of hemoglobin had reached its lowest point. The blood was of decidedly chlorotic type. The number of white cells was somewhat higher and the differential count showed a greatly increased proportion of polymorphonuclear leukocytes. In the sixth stage, in which the patient was convalescent with subsiding inflammatory symptoms, the blood resembled very closely that of the second stage already referred to. In this case the toxins of the typhoid bacillus had no hemolytic power and the loss of hemoglobin per cmm. was merely the effect of an increase in the plasma. The anemia of typhoid fever tends to become of the chlorotic type. The leukocytes are always below the normal and present a

gradual decrease unless inflammatory complications occur. Although there is no very great increase in the number of leukocytes during the existence of an inflammatory complication, the differential count is very materially altered. This peculiarity of the blood of typhoid fever seems best explained by the hypothesis that the anemia is the result of dilution of the blood with excess of plasma. Taking this into consideration, it seems evident that the leukocytes in typhoid fever react normally to inflammatory toxins, but that this reaction is masked to a large extent by the dilution of the blood. Leaving out the inflammatory periods and allowing for the dilution, we find that the absolute number of polymorphonuclear leukocytes remains, roughly speaking, stationary throughout. The lymphocytes, if we take into account the dilution of the blood, have increased in absolute numbers almost identically in proportion to the dilution. The mononuclear leukocytes show considerable increase. The view of Ehrlich that the apparent decrease in the polymorphonuclear leukocytes in typhoid fever is due to negative chemotaxis is not confirmed by this study. The tendency to dilution of the blood in typhoid fever may be due to the increased activity of the lymphatic apparatus of the alimentary canal. [J. M. S.]

7.—In South Africa, Porter has met with a variety of continued fever which is not malarial and not enteric. It is rather sudden in its onset and the temperature may be from 102° to 104° at the end of the first day. There is usually a good deal of headache and considerable disturbance of the gastrointestinal tract. There is more often constipation than diarrhea. There is very considerable difficulty in being certain that the case is not one of enteric fever. The disease lasts from 2 to 8 days, and there is very rapid convalescence. [J. M. S.]

8.—From a study of the Pasteur-Chamberland and Berkefeld filters Horrocks concludes: (1) That typhoid bacilli are not able to grow through walls of a Pasteur-Chamberland candle, and if proper care is taken to prevent the direct passage of the bacilli through flaws in the material or imperfections in the fittings, the Pasteur-Chamberland filter ought to give complete protection from water-borne enteric fever. (2) That typhoid bacilli can grow through the walls of Berkefeld candles, probably owing to the large size of the lacunar spaces and the consequently diminished immobilizing and devitalizing influences. The time required for the typhoid bacilli to traverse a candle varies between 4 and 11 days, and appears to be largely dependent upon the nutriment supplied to the organisms by the medium in which they exist. In order to obtain complete protection from water-borne enteric fever when employing Berkefeld filters it is necessary to sterilize the candles in boiling water every third day. [J. M. S.]

9.—Brown reports two cases of hematuria which followed the use of 10 grains of urotropin 3 times a day, for 8 days. The symptom rapidly disappeared after the drug was stopped. The bladder seems to have been the source of the hemorrhage. [J. M. S.]

10.—Waldo reports the case of a man, aged 33 years, who was suffering from dyspepsia and giddiness. He fancied he could not sleep, and so had been in the habit of taking different kinds of hypnotics, principally sulphonal. A few days later he developed gastritis and his urine resembled Port wine in appearance. It contained neither albumin nor blood, but the spectroscope showed bands corresponding to those produced by hematophorphyria. The patient died. [J. M. S.]

12.—Hewlett and Murray find that the Klebs-Loeffler bacilli and the pseudo-diphtheria bacillus exist in the throats of a large number of cases, especially in children, without producing recognizable symptoms. Out of 385 children under the age of 14, who were admitted to the Victoria Hospital for children for some illness other than diphtheria, the pseudo-diphtheria bacilli were found in 24% and the Klebs-Loeffler bacilli in 15%. They believe that

the presence of children under 2 years of age in a hospital ward increases the risk of outbreaks of diphtheria. It is clear that babies and young children are not the harmless and innocent creatures usually imagined and that kissing and other similar artificial demonstrations of childish affection should be discouraged. It is, moreover, more important and perhaps more practicable that mouth cleaning in infants and teeth cleaning in young children should be insisted upon more vigorously. [J. M. S.]

LANCET.

June 15, 1901.

1. The Croonian Lectures. W. D. HALLIHURTON. (See Abstract of *British Medical Journal* for June 15).
2. Standardization of Calmette's Anti-venomous Serum with Pure Cobra Venom. GEORGE LAMB and WILLIAM HANNA.
3. The Feeding of Diphtheria Patients, with Special Reference to Children and Severe Cases. R. G. KIRTON.
4. Scarlatinal Infection; an Inquiry and an Illustration. J. B. PIKE.
5. Pure Urea in the Treatment of Tuberculosis. HENRY HARPER.
6. Sulphur in the Treatment of Dysentery. G. E. RICHMOND.
7. The Practical Choice of Climate in Phthisis. W. GORDON.
8. Four Cases of Perforation (Gastric and Duodenal) Successfully Treated by Operation. A. CHRISTY WILSON.
9. The Treatment of Puerperal Eclampsia by Saline Diuretic Infusions. ROBERT JARDINE.

2.—Lamb and Hanna write upon the standardization of Calmette's anti-venomous serum with pure cobra venom. These authors state that Calmette employed for the purpose of immunization and standardization, a venom composed of a mixture of colubrine and viperine poisons, which is heated to about 73° C. for one half hour and filtered. The authors review the methods employed by Meyers and Martin, and finally they give a report of a series of experiments upon methods of standardization. In conclusion they emphasize that the dose of fresh serum in every case of cobra bite poisoning should be from 30 to 35 cc. If symptoms set in before the treatment is instituted a larger dose should be given. After a series of experiments they also conclude that anti-venomous serum undergoes deterioration in hot climates. The higher the mean temperature the more rapid is the deterioration. [F. J. K.]

3.—Kirtan contends that feeding is of great importance in the treatment of diphtheria. He considers the various methods of feeding: (1) feeding by the mouth; (2), the nasal tube; (3) the rectum, and (4) subcutaneous injections. He contends that feeding should be performed by the mouth in all cases when practicable. The contraindications to mouth feeding are the following: Great pain produced by faucial swelling; vomiting; food gaining entrance into the larynx by coughing; exhaustion produced by mouth feeding owing to struggling of the patient; continued vomiting. The author states that nasal feeding is indicated when there is an inability to swallow from irritation or when due to a paralysis of the muscles of deglutition, etc.; when feeding by the mouth produces coughing or vomiting, or in cases which are exhausted by mouth feeding, and in some cases the moral effect of nasal feeding induces the patient to take food by the mouth. Rectal feeding is indicated when there is vomiting, difficulty in passing the nasal tube or when nasal feeding induces struggling, fright or epistaxis. The author believes that subcutaneous injections of horse serum are beneficial. In the author's practice he frequently combines the various modes of feeding. This article is concluded with a report of four cases, special reference being made to feeding. [F. J. K.]

4.—Pike reports a case of scarlet fever which occurred in a girl aged 14, in 1898. The patient was isolated together with one of her sisters. After a prolonged illness the patient made a good recovery. The author first saw the patient on October 14th, 1899, when she complained of carache. Upon examination he found that there was a discharge from the meatus, and there was some swelling over the mastoid.

On October 18th an older sister developed scarlet fever. This infection occurred apparently without any outside infection. The patient was operated upon for mastoid necrosis, and after a severe and prolonged illness made a good recovery. During her illness she had an attack of nephritis. The author emphasizes that this case illustrates the following: An inquiry whether the infecting principle of scarlet fever was latent in the middle ear and mastoid cells. [F. J. K.]

5.—Harper maintains that urea is a constructor or builder up when administered in tuberculosis. He has reached this conclusion after studying a number of cases which improved after being treated with urea, and dieting on foods rich in urea—kidney, liver or brain. He further mentions that a few chronic phthisical patients have stated that food rich in urea acted like a stimulant on them. The author contends that there is an antagonism between gout and its allied diseases and tuberculosis. He gives a report of five cases of tuberculosis which were treated with urea in conjunction with other well-recognized modes of treatment. All of these cases improved. [F. J. K.]

6.—Richmond recommends sulphur in the treatment of dysentery, and believes that this drug is a very valuable addition to our stock of remedies for this most distressing complaint. He states that sulphur seems to possess a strong antiseptic action, and induces healing of any ulcerated surfaces of the intestines. [F. J. K.]

7.—Gordon read a paper before the Devon and Exeter Medico-Chirurgical Society on May 17th, 1901, on "the practical choice of climate in phthisis." He divides the cases into two classes. (1) Patients who are to be kept at home; (2) patients who are to be sent away. The author concludes that there are definite indications for the choice of foreign climates (climates for the few). There are no such definite indications, however, for the choice of home climates, and he contends that while sanatoria are of great value, they do not supersede climates, and that the beneficial effects of the English sanatoria depend largely upon their location. [F. J. K.]

8.—A. Christy Wilson reports four cases of gastric and duodenal perforation. The first was a man 28 years of age who was admitted with all the symptoms of an acute general peritonitis. Operation was done four hours after the onset of the symptoms. Perforation was found in the anterior wall of the stomach $\frac{1}{2}$ inch from the pylorus. The ulcer was inverted by two rows of sutures and then a fold of omentum was stitched over it. As the contents of the stomach had found their way to every part of the cavity a second incision was made above the pubes and thorough irrigation done. The patient made an excellent recovery. Case No. 2 was a man aged 21. Symptoms started with a sharp pain in the stomach which was relieved by laudanum. At the time of admission the patient would not consent to operation, which had to be postponed until 92 hours after the onset of symptoms. In this case the contents of the stomach had escaped through the perforation, but had been well walled off by adhesions. This patient recovered. Case No. 5 was a man aged 22. Operation five hours after onset of acute symptoms. A second low incision was also made here after the ulcer had been closed for the purpose of cleansing the pelvic cavity. This patient also recovered. Case No. 4 was a man aged 48 years who suddenly developed symptoms of peritonitis. Operation was done 28 hours after the onset. Perforation was found in the anterior wall of the duodenum. After thorough irrigation this patient made a slow but satisfactory recovery. The cases are interesting because they all occurred in men. The author strongly advises a second low incision in cases requiring thorough abdominal and pelvic cavities, as hernia is much less likely to follow two incisions than a single long one. [J. H. G.]

9.—Jardine believes that we have made some little advance in our knowledge of puerperal eclampsia within recent years. It is now generally admitted that the fits are caused by the action of the toxin which has accumulated in the system of the mother. Some observers have maintained that micro-organisms are the prime factor, but of this no sufficient proof has been advanced. He disputes the statement of the disappearance of the albumen in the urine on the death of the fetus; he has seen three cases of eclampsia and one of severe albuminuria with macerated fetuses and in all the albumen was abundant. Jardine especially favors the action of saline infusions in the treatment of this

disease. The infusions are given under the breast or into the abdominal wall. His experience is leading him to stop the use of antispasmodics. In addition to the infusions he employs various drugs to meet the varying conditions. He reports four examinations of the liver from fatal cases of eclampsia. In each instance the liver-cells showed especial degenerative changes, thus carrying out the statement that this organ is at fault in this disease.

[W. A. N. D.]

MEDICAL RECORD.

June 29, 1901.

1. Clinical Annotations of Five Cases of Right-Side Abdominal Disease. A. A. BERG.
2. Tonometric Examination in Chronic Diseases of the Heart. PROF. THEODORE SCHOTT.
3. Chronic Gonorrhea and Postgonorrheal Urethritis.—A Sketch of their Modern Treatment. FERD. C. VALENTINE.
4. Tuberculous Mastitis. R. A. GIULIANA.

2.—Prof. Schott, of Bad Nauheim, discusses tonometric examination in chronic disease of the heart. The difference in the results obtained by various practitioners who have used the Schott treatment, in that they have observed a decrease in the blood pressure instead of its increase which the brothers Schott have claimed for the treatment, is explained. The Schott brothers believe that this difference in the results has been due mainly to the inaccurate instruments hitherto applied to the body, which in consequence gave varying results. Schott says that the profession has great reason to be gratified with the invention by Gaertner of his tonometer, an instrument which enables us to read directly blood pressure at the time of examination. The paper is mainly taken up with a report of the results of tonometric examinations made with this instrument at Bad Nauheim during the past two years. [T. L. C.]

3.—F. C. Valentine discusses the chronic forms of gonorrhea, and describes their modern treatment. The article goes carefully into these conditions and deals minutely with the treatment. His article is illustrated by cuts of a number of instruments, including his own urethroscope. [J. H. G.]

NEW YORK MEDICAL JOURNAL.

June 29, 1901. Vol. LXXIII, No. 26.)

1. Rabelais as a Physiologist: Reflections Suggested by His Description and Movements of the Blood, in 1564. AUSTIN FLINT.
2. Notes on Ringworm. A. RAVOGLI.
3. Hyperacidity (Superacidity, Hyperchlorhydria, Superaciditas Chlorhydrica). A Clinical Study. H. ILLOWAY.
4. Congenital Malformations of the Upper Extremity. CARL BECK.
5. The Mental Diseases of Childhood. WILLIAM B. NOYES.

2.—A. Ravogli, in Notes on Ringworm, gives M. Sabouraud's conclusion: Under the name of tinea tonsurans trichophytina, have been confounded two diseases, which, although they have some similarity of appearance, yet are different on account of the different parasite from which they are derived. According to Sabouraud, one kind of affection is the result of a parasite which was discovered by Gruby over fifty years ago and named Microsporon Audouini. This causes the kind of ringworm most contagious and most refractory to treatment, which is often seen in the schools of France. The microscopical characteristics are the smallness of the spores of the parasite, and the clinical are that it is limited to children and attacks the scalp only. The other disease is caused by the real trichophyton, which shows large spores. Sabouraud divided them into two groups, according to the location of their spores inside or outside of the hair, calling the first endothrix, and the second ectothrix. The former attack principally the scalp, and only at times the hairless parts, tinea circinata; the latter attack the skin, occasionally the scalp in children and are nearly the sole cause of ringworm of the beard. The endothrix is spread from man to man; the ectothrix is the result of a direct inoculation from animals, such as the horse, the cat, etc. Of both these

varieties of large spored fungus there are numerous species, and Sabouraud explains the polymorphism of ring-worm by the multiplicity of the species. They have one objective characteristic in common, namely, the circinate outline of the epidermic lesions. [T. M. T.]

MEDICAL NEWS.

June 29, 1901. (Vol. LXXVIII, No. 26).

1. The Importance of Recognition of the Significance of Early Tuberculosis in Its Relation to Treatment. E. L. TRUDEAU.
2. A Study of Some Complications and Sequelae of Typhoid Fever. H. A. HARE and H. R. M. LANDIS.
3. Treatment of Diabetes Mellitus. ABRAHAM MAYER.
4. Cutaneous Manifestations in Diabetes. S. SHERWELL.
5. Diabetes in Surgery. ROBERT T. MORRIS.

1.—E. L. Trudeau says that persistent slight cough, with loss of flesh and strength, slight afternoon rises of temperature and constant lassitude, are the symptoms which even without physical signs point in many cases to incipient tuberculosis. These are too often disregarded on account of the patient's desiring to stay at home as long as possible. This and the disinclination of the physician to alarm him, explain in a great measure the waiting policy which is so often adopted and which generally proves fatal.

[T. M. T.]

3.—A. Mayer, in his article on treatment of Diabetes, gives the following complications: Diarrhea, tendency to suppurative, phthisis, gangrene and coma. As diarrhea frequently follows a constipation, the latter condition must be avoided. This diarrhea must be treated by a mixed diet, opium, iron and washing out of the intestines. The tendency to suppurative is met by diminution of the hyperglycemia and glycosuria and antiseptic local medication. Phthisis is very common, causing death in about 25% of the cases. If a case should have phthisis, a change to a milder climate, and large quantities of fatty foods, with some alcohol, must be given. In gangrene the dietetic treatment must be enforced and the gangrenous parts treated with dry dressings and according to modern surgical principles.

[T. M. T.]

4.—S. Sherwell gives the following order of the cutaneous manifestations in diabetes: (1) Generalized xeroderma, which is quite common; (2) Eczematous dermatic manifestations occurring in any region of the skin, especially prone to attack the flexor surfaces, and more especially the genital, anal and inguinal regions; (3) Furuncular and carbuncular manifestations are quite frequent in this condition, and are found generally in the nuchal and gluteal regions; (4) Erythematous lesions, some evanescent, others of the graver kind, as erysipelas, are commonly present; (5) Gangrene; (6) Dermatitis herpetiformis of Duhring; (7) Xanthoma diabetorum; (8) Blastomycotic dermatitis. The last two are the only tumor formations found in this disease. [T. M. T.]

5.—R. T. Morris gives the three principal reasons why diabetes interferes with the surgeon: (1) The sugar circulation in the blood is hygroscopic and it draws water from all the tissues of the body until the tissues are actually too dry. This must interfere with the normal process of repair, and it probably does so in several different ways; (2) The surgeon must give these cases special attention because the fluids of a wound loaded with sugar are, in all probability, excellent culture media and particularly susceptible to the attacks of bacteria. Rigid asepsis is, therefore, demanded; (3) certain anesthetics may precipitate an impending nephritis because of the unusual labor involved in excreting sugar. In these cases the author uses nitrous oxide and oxygen instead of the other anesthetics, especially avoiding the use of ether. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 27, 1901.

1. A Study of the Food Consumed and Digested by Four Members of the Harvard University Boat Crew in June 1900. W. O. ATWATER and F. G. BENE-DICT.
 2. Some Forms of Intestinal Obstruction due to Adhesions. A. T. CABOT.
 3. Catharsis in Abdominal Surgery. L. R. G. CRANDON.
1. Atwater and Benedict conclude their paper on the

study of the food consumed and digested by four members of the Harvard University Boat Crew in June, 1900. The results of the digestion experiments are given in tables. The amount of food eaten by the four men collectively was weighed each day, no attempt being made to learn how much each individual man ate. The amounts of feces excreted by each individual during the whole 7 days were weighed, so that the amounts for each were determined separately. It was found, according to the figures of the table, that 92.5% of the nitrogen, and 92.2% of the protein of the food are available to the body. The diet of the athletes furnished on the average 154 grams of protein and had a fuel value of 3,925 calories, while in the diet of men in an ordinary occupation the protein would not have averaged much over 100 grams, or the fuel value much over 3,300 calories per man per day. The amount and composition of the urine was carefully determined, and the results are tabulated. The nitrogen balance was also determined. These experiments bring out the apparent usefulness of sugar as a supplementary food for men subject to intense muscular strain. A notable feature of the experiments was found in the fact that the nitrogen excreted by the kidneys and intestine was considerably less in amount than the total nitrogen of the food. This means that there was considerable storage of nitrogen in the body. [T. L. C.]

2.—A. T. Cabot describes some forms of intestinal obstruction due to adhesion. Reference is first made to adhesions forming about the stomach and duodenum, such as result from inflammation of the gall bladder and its ducts. Particular attention is paid to chronic obstruction of the intestine such as occurs when this viscus has been overloaded. The seat of the trouble is usually in the ileum or the sigmoid flexure. The author thinks that these portions of the alimentary tract, because of their fixed position, are more liable to become constricted after inflammation about them, because they are unable to adapt themselves to new positions. Appendicitis is a frequent cause of chronic obstruction of the ileum. It is shown that separation of the adhesions and restoration of the ileum to its normal position is not sufficient to relieve the condition. The sigmoid sometimes is attached by a long, loose mesentery which allows it to sag down into the pelvis, and here become kinked by inflammatory adhesions. Cabot has met with 3 such cases in the past 18 months, each of which is briefly reported. The article is illustrated by a number of cuts. [J. H. G.]

3.—Crandon gives the results of observations made during his service as house officer at the Boston City Hospital on the use of catharsis in abdominal surgery. It has been proved by a number of studies in normal intestine and by use of purgatives that peristalsis is almost entirely reflex action. The lower half of the ileum has been determined to be the part where the intestinal contents move fastest. It has been found that the vagus nerve when stimulated reflexly or directly increases peristalsis, and that moderate stimulation of the splanchnic nerve decreases it. Any decrease in the normal activity of the nerves and nerve-centres must result in constipation. The most important conditions under which peristalsis may take place along the small intestines are a relatively healthy condition of the whole thickness of the intestinal wall, and the integrity of the reflex arc. His studies cover a hundred and seventy-nine abdominal or pelvic cases. Of these 148 were cases of peritoneal and pelvic inflammation and ovarian cysts, 8 tuberculosis, 2 malignant disease, and 21 cases of mechanical obstruction. The conclusions which he presents are: (1) In acute pelvic peritonitis both enemata and drug by mouth should be used to produce catharsis before operation; drugs by mouth and oil enemata after operation. (2) In all acute inflammatory conditions of the abdomen in which the alimentary tract is involved, the bowels should be moved by enemata alone, before and after operation, the enema of salts, turpentine and glycerin being the best. [W. A. N. D.]

AMERICAN MEDICINE.

June 22, 1901.

1. The Treatment of Abdominal Aortic Aneurysm by a Preliminary Exploratory Celiotomy and Peritoneal Exclusion of the Sac, Etc. RUDOLPH MATAS.
2. Persistence of the Thyroglossal Duct. DAVID RIESMAN.
3. Myomectomy of Nine Myomas During Pregnancy and Delivery at Term. JOHN DUNCAN EMMETT.

4. Subtrochanteric Osteotomy for the Deformity Following Hip Disease. E. H. BRADFORD.
5. The Hallucination of Digitals, Etc. HARRY ORVILLE HALL.
6. The Treatment of Congenital Dislocations of the Hip-joint. LEONARD W. ELY.
7. Prevention of Disease Infection by Micro-organisms Through the Mouth and Nasal Cavities. ROBERT REYBURN.

1.—Rudolf Matas discusses the treatment of **abdominal aortic aneurysms** by a preliminary exploratory celiotomy and peritoneal exclusion of the sac followed later by wiring and electrolysis with a report of two hitherto unpublished cases. The first case is one of the author's in which an aneurism involving the upper celiac region in a young man, 22 years of age, was treated by various methods without success, the Moore-Corradi method was determined on. The patient's abdomen was opened and it was discovered that the aneurysm presented above the stomach, pushing above it the pancreas which was in immediate contact with the abdominal wall. The splenic vein and artery were stretched over the pancreas, which fact would have made puncture without opening the abdomen a most serious undertaking. The stomach was greatly displaced downwards. The viscera were displaced from over the aneurysm, and sutured to the parietal peritoneum and sutured in such a manner as to leave exposed an area of the aneurysmal wall about the size of a silver dollar. Excepting over this area the abdominal wound was closed and a portion over the aneurysm allowed to heal by granulation. About a week after the operation 12 ounces of sterile gelatine in normal salt solution 10% was injected under the skin. This was followed by a great deal of pain, a rise of temperature to 105° F. These symptoms gradually subsided. One month subsequent to the operation no improvement was noted. In reality the patient was growing worse and suffering more pain. At this time under Schleich's anesthesia needling of the wall of the aneurysm was done. No improvement followed this. It was then determined that the Moore-Corradi treatment should be instituted. Ten feet of drawn silver wire were introduced through an insulated cannula and electrolysis was employed for four hours and twenty minutes. Milliampères varied from 80 to 200. The patient complained of very little pain at any time during the electrolysis. The impression made by the treatment upon the aneurysm was quite marked. Improvement, however, was only transitory, and the patient gradually failed, dying 19 days after the introduction of the wire. During the latter days of his life he suffered a great deal of pain. No postmortem examination was allowed, but through a small abdominal incision it was found that a diverticulum had developed, making a new aneurysmal sac, which had ruptured, producing death. Out of 15 cases of abdominal aneurysm treated by the introduction of wire and electrolysis 3 have been cured. Attention is called to the long electrolysis in this case, and the high milliamperage of the current. In the original aneurysmal sac this treatment had caused an organized clot to form. The author thinks that there is a distinct advantage in a preliminary celiotomy, such as he did in this case. The technique of the operation is then discussed in detail. The statistics of the operation are next gone into. The author thinks that there is only a small percentage of abdominal aortic aneurysm which is to be treated by this method, and that it is a mistake to apply it indiscriminately in this condition.

[J. H. G.]

June 29, 1901.

1.—Matas concludes his discussion of the treatment of **abdominal aortic aneurysm** with a consideration of the applicability of the Moore-Corradi method. It is shown that the cure of the aneurysm, should this be situated in the first or second portion of the abdominal aorta, as is usually the case, may result in obstruction of the circulation through the splenic, renal, mesenteric, or other vessels, and consequent gangrene of the tissues supplied by these. A number of cases are then recited in which it is shown that these results have followed the cure of the aneurysm. It is shown very conclusively that the dangers of this treatment excepting in the last division of the abdominal aorta are very great. The great difficulty lies in the fact that a determination of the situation of the aneurysm even when

a celiotomy is done, is very great. The objections to the method are summarized as follows:

1. The cure of the aneurysm may lead to the death of the patient by obliterating the orifice of important visceral arteries; this is most likely to occur in dealing with aneurysms of the upper or celiac division of the abdominal aortic tract—i. e., in about 50% of the cases.
2. Secondary rupture of the sac from the strain put upon weak portions of the sac in multilocular aneurysms, after partial coagulation of the contents has taken place (particularly likely to occur in subjects of general endarteritis with atheroma.)
3. Escape of wire through a large aneurysmal orifice into the lumen of the aorta, with migration upward into the heart leading to perforation, traumatic endarteritis, endocarditis, with the formation of secondary thrombi and emboli.
4. Danger of perforating the sac by stiff wire or by overcrowding the sac with too much wire.
5. Danger of extension of clot from the coagulum in the aneurysm to the main artery, leading to fatal blockade at the bifurcation, with gangrene of the lower extremities.
6. Danger of rupture of sac from sudden withdrawal of abdominal support and displacement of adherent organs in the course of the exploratory laparotomy.
7. Danger of mistaking a fusiform for a sacciform aneurysm.
8. Danger from emboli and thrombi following incomplete coagulation of the blood in the sac (a very rare and practically unknown occurrence in abdominal cases).
9. Danger of shock.
10. Danger of sepsis.

2.—David Riesman reports a case of **persistence of the thyroglossal duct**. The patient was a man of 56 years, who was injured 38 years ago, while in play. He struck the front of the neck against another boy's knee. There has been more or less constant discharge of a thin or sometimes whitest fluid, occasionally thick, from what appears to be a moist dimple in the median line of the neck. This is the second case of the kind which Riesman has seen. He believes that the traumatism was only an incidental cause of the fistula and a blind tract of congenital origin existed, the distal end of which was near the surface of the skin. The blow merely served to remove the slender partition walls which separated this tract from the interior. As to treatment it is evident that only a complete extirpation of the canal with its epithelial lining can bring about a permanent cure. [T. L. C.]

3.—Emmet remarks, in speaking of **myomectomy during pregnancy**, that Gutiérrez, as quoted by Delagènière, maintains that of 295 myomatous women 51 become pregnant. If these statistics are accurate it would represent the proportion of about 17 pregnancies in every 100 cases of myomata. Durkee, quoted by Howard Kelly, makes this proportion only 2.03%. Fortunately no such proportion even as this later one presents practical difficulties to the gynecologist or obstetrician, for it is an established fact that many myomatous uteri carry their pregnancies to term and through delivery. The myomata in these cases are either pedunculated at the time of conception or become so at pregnancy, as a rule, but a number of cases are on record of subperitoneal sessile tumors in or near the fundus, which have presented no serious difficulty at term. All authorities give the following general rules regarding indications of the various forms of this condition: Small myomata and those situated at or about the fundus, or even lower in the body of the uterus frequently do not interfere with normal pregnancy and delivery if these tumors are pedunculated. Sessile tumors are likely to cause abortions, but if situated at or near the fundus they need not do so. When myomata are situated at or near the uterus or cervix or in the lower third, myomectomy is justifiable and indicated because these tumors will probably interfere with the descent of the uterus into the pelvis and present a serious obstacle to delivery. These data divide myomata of the pregnant uterus into three classes, both in regard to prognosis and in regard to indications. Turner, of Paris, gives the following statistics of myomectomy during pregnancy: Between the years 1874 and 1890, 33 of these operations were reported with 61% fetal mortality and 36% of maternal mortality, but between the years 1890 and 1900, the reported operations are 44 with only 21% of fetal mortality and 9% of maternal

mortality. Emmet records a successful case of this operation. [W. A. N. D.]

4.—E. H. Bradford describes the various methods of performing subtrochanteric osteotomy for deformity following hip-joint disease. The author calls attention first, to the great inconvenience and mortification which accompany these deformities, and endeavors to impress upon the profession the good results which are obtained from osteotomy and correction. Transverse osteotomy will be found satisfactory in cases of flexion without adduction. The division of the bone should here be done at or below the position of the lesser trochanter, the bone being divided from 1 to $\frac{3}{4}$ of its thickness, the remaining portion being fractured by adduction and flexion, though of course the corrector of the deformity must be by the reverse of these motions. Oblique osteotomy is indicated when increase in the length of the limb is much desired. Wedge-shaped resection of the femur has no practical advantage over oblique osteotomy. The success of all these methods depends largely upon the after treatment. It is often-times difficult to put the limb in the desired position and at the same time keep the fragments in apposition. Union, however, after this operation even when the fragments are not in line, is very good and firm. When there is rigidity of the lumbar spinal column it is well to fix the limb in a slightly flexed position, as otherwise with the stiff spine the patient will have discomfort in a sitting position. In older patients, too, slight flexion, not more than 15° is to be employed. The author employs plaster of Paris usually in fixing the limb after operation. Traction, however, by the ordinary weight and pulleys, is to be employed where complete correction is not possible, and it is desirable to stretch the contraction of the soft parts. The patient should not bear weight for ten weeks after the operation. Crutches, however, may be used at the expiration of eight weeks. The operation should not be done on too young or rapidly growing children. Not infrequently severe knock-knee accompanies the hip deformity and requires osteotomy subsequently. The author thinks the operation satisfactory to both patient and surgeon. [J. H. G.]

6.—L. W. Eli discusses the treatment of congenital dislocation of the hip and describes three methods of treatment, first, the closed method, where no incision is made, second, incision in splitting of the capsule and reposition of the head is made; third, the open method with deepening of the acetabulum. The first method of treatment is applicable in children under 10 years of age. The author thinks that the want of success which not infrequently follows this method is due to the fact that it is not carefully carried out by the operator, and that many surgeons approach the condition half-heartedly. The various methods of carrying out the treatment of congenital luxation are carefully outlined by the author. [J. H. G.]

5.—Harry Orville Hall contributes a paper on the hallucinations produced by digitalis. He was lead to this study of the subject in the observing throughout the course of a patient's illness, a delirium which seemed inexplicable. This patient had been taking digitalis prior to an onset of the nervous disturbances. Hall has made an abstract of Dr. Durvlez's paper in which 20 cases were reported in which delirium followed the administration of digitalis. Hall believes the subject one that is worthy of more extended observation. [T. L. C.]

7.—Robert Reyburn discusses the prevention of disease infection by microorganisms through the mouth and nasal cavities. He calls attention to the oft repeated necessity of preserving and maintaining the health of children by good hygiene, and keeping their mouths and nasal cavities healthy and antiseptic, and mentions many common diseased conditions due to infection through the mouth and nasal cavities. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

March 28, 1901

1. A Case of Nephrotomy for Renal Hemorrhage due to Unilateral Hemorrhagic Nephritis. H. LAURENT.
2. Saponin and its Antidote. F. RANSOM.
3. The Epidemic of Typhoid Fever in Goettingen in the Summer of 1900 (Conclusion). P. FRAENCKEL.
4. Experimental Lumbar Puncture for the Demonstration of Tubercle Bacilli. HELLENDALL.
5. A Remarkable Case of Dissecting Aneurysm of the Abdominal Aorta. E. FAST.

2.—Ransom determined definitely the hemolytic effect of saponin on dog's blood and found that the minimal dose which destroyed the corpuscles was 2 mg. in 0.7 cc. of blood. The same amount of saponin would cause some destruction in 0.9 cc., but in 1.5 cc. there was but a slight effect, and in 2 cc. no effect. He found that if the corpuscles were centrifugated saponin was much more active than when whole blood was used. It acted in a dilution of 1 to 200,000 in this case, while with the whole blood it did not act in a dilution of 1 to 40,000. A similar result has been seen in the use of eel serum. Different kinds of blood showed different susceptibilities evidently owing to the presence of different amounts of immune bodies. He found that 0.75 cc. of serum was sufficient to fix 2 mm. of saponin, and that this power of fixation was not lost after heating for half an hour at 55° C. He also found that the red corpuscles themselves fixed saponin. After laking with distilled water and centrifugating the stromata of the red cells, he determined that the stromata themselves fixed saponin. Shaking dog's serum with ether, and driving off the remaining ether left the serum in a condition in which it could not fix saponin, while the ethereal extract had the power of fixation. Investigation of the ethereal extract showed that its chief component was cholesterol, hence he took cholesterol, dissolved it, and found that this solution had active power of fixation of saponin; lecithin had no such influence. A mixture of cholesterol and saponin had no hemolytic effect upon various kinds of blood if the amount of cholesterol used was sufficiently large. He refers to the fact that Phisalix has demonstrated a similarly immunizing effect of cholesterol toward snake poisoning. The cholesterol in the serum, therefore, acts in excreting the poison, but, by combining with the poison, the cholesterol in the red blood corpuscles is active in the production of the poisonous effects; that is, the saponin acts upon the red corpuscles by acting in combination with the important part of the structure, the cholesterol. The action is somewhat slow, however, and there is apparently an incubation period because saponin first acts upon the surface of the red corpuscles, and unless this action is very severe no hemoglobin escapes. So far as has been determined by Ransom cholesterol is active only toward saponin and the members of the saponin group, but not toward other vegetable hemolysis or toward foreign sera. [D. L. E.]

3.—Fraenckel mentions one case of death as a result of complication of typhoid fever with diphtheria. The temperature of the patients was, as a rule high, and the fever was often prolonged as long as nine weeks. In only 11 cases was a definitely subnormal stage to be recognized in the convalescence. In 3 cases subnormal temperature was seen only after relapse, but this observation was of no prognostic importance because the subnormal stage was absent in many cases that recovered without relapse, and one case had a relapse although the subnormal stage was definitely marked; 8 typical relapses were seen, a very high percentage. The relapses were usually milder than the original attacks. In one case convalescence was complicated by a pleurisy, and by a course of fever resembling a relapse. It was doubtful in this case whether the condition was really pleurisy alone, or pleurisy and relapse. No definite causes for the relapses could be determined. In one case relapse occurred 18 days after fever had disappeared; the one suspicious sign in this case in the interval was the absence of the usual convalescent rapidity of the pulse. Nervous symptoms were marked, and severe delirium was seen repeatedly. In one case there was severe melancholia at the onset, and for six weeks a peculiar sleepy condition, with scanning speech and mental confusion and with no subsequent memory of this period. An onset with severe delirium indicated a bad prognosis. One striking sign which was repeatedly observed was tonic spasm of the muscles; when this involved the extensors of the arms it was always a sign of a fatal issue. As to the patellar reflexes, it was found that only 3 of 48 cases examined showed increased reflex; in the other cases the reflexes were decidedly decreased, and in 22 absent. The reflex usually became increased in convalescence. Bleeding from the nose was seen in 33% of the cases. Marked stomatitis was seen in the beginning of one case. Herpes was present twice. Albuminuria was seen in 35 cases. In 24 cases there were casts, and in 8 red blood corpuscles. The diazo reaction was negative in 11 cases at the time of admission, though in 11 of these

cases the diagnosis could be made at once from a clinical standpoint. He thinks that the diazo reaction has no definite diagnostic value. As to acetone, he states that while it is often present in the urine it disappears as soon as a proper amount of nourishment is given; **acetonuria is hence the result of inanition.** In 2 afebrile cases the Widal reaction was negative in the beginning. In one of these cases the presence of enlargement of the spleen, initial diarrhea, and the fact that the patient was a permanent guest of the inn where the cases arose led to the diagnosis. In the other case the diagnosis was made from splenic enlargement, bronchitis, typical tongue and typical stools. In both these cases the Widal reaction was ultimately positive. The Widal reaction was used altogether in 24 cases, was positive 20 times, doubtful once, and negative 3 times. In all the latter cases the negative results were obtained before the 11th day. He considers the Widal reaction extremely valuable, though not absolutely reliable. Under treatment, he mentions the regular use of sodium salicylate in the morning when the temperature was high, and likewise quinine was given in the evening. [D. L. E.]

4.—Hellendall has used cerebrospinal fluid from suspicious cases for injection into the spinal canals of guinea pigs, in the hope that by this method it might be possible to cause a rapidly fatal tubercular meningitis in these animals, and in this way to make the diagnosis of tubercular meningitis in human subjects more rapidly than has been possible hitherto. Before carrying out these injections it is well to try the method on the bodies of dead guinea pigs so that one may determine definitely that he is injecting properly and getting the fluid into the spinal canal. The needle needs to be introduced about 1 cm. The result of these injections was very surprising. Microscopic examination as well as gross examination showed that the brain and spinal cord remained entirely free from tuberculosis, but that there was a general tuberculosis of the other organs. In other words, that the injection of fluid containing tubercle bacilli into the spinal canal had produced a miliary tuberculosis, but that the region injected remained entirely free from disease. He believes that there is no doubt that he actually injected into the spinal canal because of the immediate appearance of signs of increased cerebrospinal pressure after the injection, and because in one case there was at the point of injection into the canal a localized area of caseation in which there were large numbers of tubercle bacilli. This method evidently cannot be used in the way in which it was hoped that it might be. He thinks, however, that it may prove of value because the animals died more rapidly than is customary in experimental tuberculosis, and because smaller quantities of fluid can be used; 2 cc. are sufficient when used in this way, while when used intraperitoneally 4 cc. are required. The latter quantity often cannot be obtained during life. [D. L. E.]

5.—Fast refers to the remarkable case reported in the same journal, 1900, No. XXIII (abstracted in *Philadelphia Medical Journal*), and describes a similar case in which there were the usual signs of aneurysm of the aorta just below its passage from the diaphragm, but a loud almost metallic diastolic murmur was heard over the ensiform cartilage, and decreased in intensity as the stethoscope was carried upward. Pressure on the femoral arteries caused the murmur to become louder. There were no arterial signs of aortic insufficiency, and it was decided that the murmur was produced by the aneurysm. The post-mortem examination confirmed this diagnosis. The aortic valves were found to be entirely sufficient to all tests, and an aneurysm was found in the abdominal aorta in the neighborhood of the hiatus. The portion of the aorta just above the aneurysm was decidedly narrow. He believes that the murmur was produced by a backward flow of the blood from the aneurysmal sac through this narrow portion of the aorta. It was not possible for the murmur to have been produced in the sac of the aneurysm itself, because the sac was nearly filled with clot, and the channel through the spindle shaped aneurysm was only about normal size of the aorta. It had been observed in this case that the arteries below the aneurysm showed no abnormal signs. This led to the thought of the possibility of aneurysm of the celiac artery, but the autopsy showed the absence of any such aneurysm. The post mortem showed a large

effusion of blood into the intraperitoneal space which had not been diagnosed during life. It had caused no signs of acute anemia or other severe symptoms. [D. L. E.]

April 4, 1901.

1. The amount of iron in Solution in Natural Ferruginous Waters. C. BINZ.
2. Galvanocautic Closure of the Vessels in the Nose as a Preceding Preliminary to Internasal Operations. OSTMANN.
3. Remarks on the Treatment of Affections of the Tear Ducts. ALBRAND.
4. Acute Yellow Atrophy of the Liver, with Cure. ALBU.
5. A Word Concerning the Treatment of Recent Cases of Tropical Dysentery. RUGE.
6. Concerning Elastin Staining and the Practical Use of this Staining Method with Sputum. L. MICHAELIS.
7. On the Question of Biological Reactions of the Albumin in Blood and Urine. G. ZUELZER.
8. Concerning the Demonstration of Minute Amounts of Albumin in the Urine. A. PRAUM.

1.—Binz found a considerable amount of undissolved iron in bottles containing natural iron waters. In investigating the amount actually contained in solution and comparing this with the amount that the waters were supposed to contain, he found that losses of from 1½% up to 98% occurred by precipitation. The iron in the mineral waters is present as a carbonate, in solution in an excess of carbonic acid. If the water loses its carbonic acid and oxygen takes its place, the iron salt is oxidized to the oxydrate, and this salt being insoluble is precipitated out. This is likely to occur when the bottles are filled at the springs, and it would require much care to avoid it. Methods should be introduced to prevent the occurrence of this loss of CO₂. [D. L. E.]

2.—Ostmann recommends cocaineizing the area to be operated upon and searing the vessels with the galvanocautery before undertaking various minor operations on the nasal cavities. It is also a useful method of controlling bleeding from the nasal cavities. [D. L. E.]

3.—Albrand recommends that the patients be taught to use the sound themselves after operations upon the tear duct. The difficulty is, however, that they are likely to grow tired of this, and give it up, and so require renewed dilatation. Valpinus' permanent sound is oftentimes used with much satisfaction, but many patients cannot bear it. It not infrequently causes marked pain in the nose. He considers extirpation of the sac most satisfactory in cases of long duration with more or less profuse muco-purulent secretion, in all cases with fistula, in those with changes in the periosteum and with caries of the bone, and in those resulting from the action of caustics or from trauma, in cases with prolonged conjunctivitis, ulcerations of the lids, and in trachoma. It should also be undertaken in less severe cases in which social reasons indicate its use, i. e., in patients who must work constantly for a livelihood. In such cases it saves the patients much valuable time. He has attempted for prophylactic reasons, as for instance, preceding cataract operations, to close the tear duct by touching the openings with a glowing needle. He never succeeded in this, however. He insists that the nose must always be carefully examined in cases of disease of the tear duct, as not infrequently some nasal condition is the cause of the continuous trouble with the tear duct. [D. L. E.]

4.—The patient was a man of 36 who about three weeks before had had marked emotional excitement, which was followed by jaundice, which had persisted. He had been married one week before he was seen by Albu. He was when seen slightly stupid, had decided fever, was markedly jaundiced, the liver dullness was only about two fingers breadths in width, the splenic dullness was enlarged, and two days later large amounts of leucin and tyrosin were found in the urine. Severe delirium appeared. The spleen became palpable. The fever remained high, with decided irregularities from the 24th of June to the 8th of July; after the latter time it quite rapidly decreased and reached normal on the 13th of July. Leucin and tyrosin persisted in the urine, and were obtained pure by Frerich's method. Apparently these substances were still present when the patient left for his home on July 28. There had been a rapid improvement in the symptoms with the decline in temperature, and by the 14th of July it was noted that the liver dullness was considerably wider than before. Icterus

persisted for a long or two months after the illness, but a month later the patient wrote that he seemed to be in absolutely good health and had no signs of any sort of illness. The supposed relation of the liver to the production of urea led Albu to determine the nitrogen and urea in the urine. The excretion of nitrogen was undoubtedly considerably above the intake, but on one day the urea composed 75% of the total nitrogenous substances, and on another day 85%, not far from the normal amounts. Albu expresses his firm conviction that this was a typical case of yellow atrophy in which regeneration of the liver tissue took place. He refers to Wirsing's report, who in 1882 collected 15 similar cases from the literature, and reported a personal case. Only two other cases besides Albu's seem to have been described. [D. L. E.]

5.—The treatment recommended is the old ipecac treatment. Pléhn has recently recommended the use of calomel in large doses. Ruge has found, however, that this not infrequently causes the symptoms to grow worse. He uses an infusion of four parts ipecac in 160 parts of water, giving about 80 c.c. of this at most, and administering oil of peppermint with it. [D. L. E.]

6.—In investigating the use of Weigert's method, Michéls has looked into the possibility of using other oxidizing agents in place of chloride of iron. He found that it was readily possible to substitute the persulphate of ammonia. The results obtained were quite as satisfactory as those obtained with chloride of iron. He could also substitute other phenols for resorcin, positive results being obtained with orcin, pyrogallol and orthokresol; xanthenes, however, could not be used; fuchsin could be substituted for by a large number of other basic stains, methylene blue alone of those tested apparently having been unsuccessful. Colorless aromatic bases could also be used in the place of dyes; for instance stains were obtained with hydrochloride of anilin, dimethylanilin and paratoluidin. All the eighteen dyes with which he has worked must be used in an HCl-alcohol solution. He gives a list of the different colors obtained with the different stains. In staining sputum he advises smearing the sputum on slides, allowing this to dry in the air, then placing the slide in a cylindrical vessel containing Weigert's solution, the alcohol of the solution producing fixation. Other methods of fixation are unsatisfactory, and formalin in particular can not be used. The slide is removed after a half hour and washed in 3% HCl-alcohol until practically colorless; it is then allowed to dry and the smeared sputum is covered with a large drop of cedar oil, and examined directly without cover-glass. Elastic fibers will appear dark violet, and other substances which before staining are easily confused with elastic fibers will show no stain. He finds that with such staining methods one can often show the presence of elastic fibers when bacilli are absent; hence he considers it a very useful diagnostic procedure. [D. L. E.]

7.—Zuelzer states that previous to the appearance of the recent article by Mertens (Abstracted from Deutsche Medicinische Wochenschrift, 1901 No. XI), he had himself been engaged in similar experiments, and had had the same results. The only difference in his work was that he injected urine subcutaneously while Mertens injected it intravenously. The serum of rabbits treated with albuminous urine gave a specific reaction with human albuminous urine. He, however, modifies Merten's conclusion by stating that this indicates that there is in blood and albuminous urine at least one identical form of albumin. He does not think that the conclusion is justified that the albumin in the urine is derived from the blood. He is making further investigations concerning the chemical nature of the precipitated albumin, and has also carried on investigations concerning the iodine combining power of the albumin with the idea of showing in this way also that the albumin of the urine is identical with that of the blood. [D. L. E.]

8.—The method recommended consists merely in adding to the urine in the test tube a reagent for albumin, the author preferring sulphosalicylic acid and then pouring some of the urine into a filter and allowing the filtered urine to run slowly down the side of the test tube so that it forms a layer above the urine containing the reagent. The latter is heavier because of the presence of a reagent, hence the untested urine floats above that containing the reagent. If a reaction occurs it is readily seen, because

the two layers of urine can be easily compared in this way. [D. L. E.]

April 18, 1901.

1. A Contribution Concerning Neuroses of the Heart. A. SCHMIDT.
2. Incomplete Oxidation of Sugar in the Human Organism. P. MAYER.
3. Concerning the Value of Vegetable Albumin as Nutrient. E. ROOS.
4. An Unusual Case of Hysteria. J. ARNETH.
5. Concerning the Question of the Production of Acetone from Albumin. L. SCHWARZ.
6. The Determination of the Freezing Point of the Blood in Typhoid Fever. WALDVOGEL.

1.—Schmidt directs attention to the great tendency to a rapid change in the frequency of the pulse which may be seen in those with neurotic hearts, wave-like changes in the frequency being readily discovered, and being sometimes the only evidence of a cardiac neurosis. The remarkable effect of psychic influences is also notable; many patients indeed by auto-suggestion can cause a marked change in the rapidity of the pulse, the pulse in these persons is readily excited by rapid breathing, by body movements, and by other means. Reflex excitation of the pulse is also frequently noted, as, for instance, pressure on tender points, or slowing when bending far forward. It is also notable that while normal inspiration causes a marked reduction in the force of the pulse, in cardiac neuroses, if the patient inspires slowly and deeply one may often notice an almost complete disappearance of the pulse during inspiration. Sphygmographic curves are given to show this effect. This is apparently largely due to changes in the arterial pressure, but not entirely so. Schmidt believes with Lowit that reflex nervous influences are very important in the production of these changes. Schmidt also directs attention to the frequency with which one may find a crownlike arrangement of enlarged venules about the boundaries of the precordia. These may often be seen along the course of the diaphragm, also in cases of emphysema and similar conditions in which there is a chronic cough, and in persons who have engaged in excessive labor; but he has very frequently noticed the enlargement of the venules about the precordia in persons who have no organic disease, and in such persons it was always learned that their occupation required them to lean many hours a day over a writing table. Schmidt thinks that this position is probably enough to produce an enlargement of the veins, and also to produce the cardiac symptoms. Sahli considers that increase in the pressure of the thoracic contents upon the veins produces the enlargement of the venules, and when a person has an occupation which constantly requires him to bend forward, it may readily be seen that such pressure is much increased. Schmidt also agrees with Hoffmann that the hearts of neurasthenic patients are often extremely movable. He thinks that the position described is probably active in producing an increased movability of the heart as well as in producing symptoms. [D. L. E.]

2.—Mayer notes that glycuronic acid is in chemical composition very similar to glucose, and that it has been strongly suspected by many that it is a product of the oxidation of glucose. It has been said by authorities that glycuronic acid is not found in normal urine. This, he considers, has been shown to be incorrect by the work done by himself and Nenberg, since they were always able to show the presence of considerable amounts of glycuronic acid in normal urine combined with phenol, indol and skatol. He has also investigated the occurrence of larger amounts of glycuronic acid in the urine in certain conditions, and he believes that he has shown that in at least a very large percentage of cases, when the test for sugar is doubtful, or more particularly, when after long heating in the use of the copper test a precipitate occurs, but occurs only after considerable heating, the substance present is really glycuronic acid in excess and not sugar. The most satisfactory method to demonstrate glycuronic acid is to show the bromin-phenylhydrazin compound, but this can be done only when considerable amounts of glycuronic acid are present, that is, when the amounts are pathological. The method which Mayer uses is to heat the urine with acid (as much as 1% of sulphuric acid) in a porcelain dish over a free flame. The boiling should not be continued more than from one to

three infants. The orcin test should then be used, and if the characteristic spectrum is seen one may consider definitely that glycuronic acid is present. Large amounts of glycuronic acid are found after giving glucose for testing the presence of alimentary glycosuria. He mentions 14 cases in which paired glycuronic acid was found with sugar, and 6 in which it was found without sugar, after giving from 100 to 200 gms. of glucose. He has investigated the possibility of discovering glycuronic acid in the blood, and believes that the reducing substances found in the blood are largely of the nature of glycuronic compounds. (To be continued.) [D. L. E.]

3.—Roos presents some studies of metabolism and absorption while plantose was used in connection with a mixed diet, and other periods when plantose was not used. He found that there was a much larger retention of nitrogen when plantose was used than when it was not, and that the substance was well absorbed. He also found that it was well taken by patients, and caused no gastro-intestinal disturbance. [D. L. E.]

4.—The very remarkable case recorded was that of a girl of 23 who had had an injury, but no other apparent cause for the onset of hysteria. She had not chlorosis or other evident serious organic disturbance. The difficulty began with protracted cough followed by marked dyspnea, then by convulsive attacks which became more and more frequent until they occurred almost constantly. They had become somewhat more infrequent, however, a short time before she was seen by Arneith. The most striking fact about the examination of the patient was that she breathed with her mouth open, and purely through the mouth, the breathing being very rapid and being accompanied by a most intense stridor, similar to that seen in marked stenosis of the larynx. There was very striking movement of the alae nasae without the least breathing through the nose. The cause of the dyspnea and stridor was found to be spasm of the aryepiglottic muscles, which drew the epiglottis down against the top of the larynx so firmly that there was only a slight opening through which air could pass. Occasionally she had most terrifying attacks of apnea, each of which was apparently about to lead to death, when after about a minute of the most intense cyanosis and complete apnea breathing began again with the curious stridor, and the previous condition was resumed. During sleep it was noticed that the stridor disappeared completely and air was taken in solely through the nose. An attempt was made to instruct her in breathing through the nose, and after a time was fairly successful, but it had no special influence upon the stridor. The attacks of apnea, became more and more frequent and intubation was adopted, but this did not stop the attacks which were then evidently due to spasm of the respiratory muscles in general. Three days after admission the patient had 38 attacks of apnea within a few hours. The next day the attacks were completely stopped in a most curious manner. v. Leube had ordered inhalations of ammonia in an attempt to increase the respirations during the attack. The result was that the patient sprang out of bed, cried out loudly, and had a most profuse secretion of saliva and mucus from the mouth and nose, as much as a half liter escaping within a short time. It was found that the mucous membranes were of most curiously striking purple red color; evidently the ammonia had had a very intense vaso-motor effect. No attacks occurred that night, but the same stridor recurred, and it was found that it was now due to a bilateral paralysis of the posticus. The swelling of the epiglottis and the intense inflammation evidently made it painful to continue the previous spasm, and a new form of spasm had been adopted for this reason. The old method of production of stridor was, however, adopted once more as soon as the inflammation of the epiglottis had subsided. During the period of inflammation the stomach tube had been used in feeding the patient. It caused her much pain, and she was intensely fearful of it, and threats of the further use of the stomach tube entirely cured her of any tendency to other attacks or to stridor. [D. L. E.]

5.—Leo Schwarz criticizes the recent publication of Blumenthal and Neuberg, (abstracted from *Deutsche Med. Woch.*), who believe that they have demonstrated that acetone may be produced from albumin. The first criticism is that the demonstration of the production of acetone from albumin in the laboratory does not show that such a process does take place in the human organism. Further, the report of the authors mentioned shows that the amounts

of acetone were at best small, and Schwarz believes that the acetone was present in the original gelatin as a contamination, and was probably not produced by the method described. He insists that it is necessary in order to demonstrate their point, that the authors should use a pure crystalline albumin. He has been unable himself with 750 gms. of gelatin to show the presence of any acetone by a similar method, or to produce acetone from egg albumin by oxidation with permanganate of potassium. He has found it impossible to carry out the method described by Blumenthal and Neuberg. [D. L. E.]

6.—Waldvogel, in reply to the criticisms of Rumpel (abstracted from the *Munch. Med. Woch.*, 1901, No. VI), replies that his method was constantly compared with results obtained by the Beckmann apparatus, the latter apparatus being used coincidentally by a colleague. The results were practically exactly the same. Another criticism offered was that there were errors in the dilution. This he believes is not the case, as other dilutions were made coincidentally by colleagues working with him, and their results were compared. He thinks that no error was discoverable. [D. L. E.]

JOURNAL DE CHIRURGIE.

March-April, 1901. (Première Année, No. 3.)

1. The Danger of Morphin Injections After Operation Under Chloroform. LAUWERS.
2. Auto-Intoxication in Intestinal Obstruction. KUKULA.
3. The Pathogeny of Periurethritis. BOISSON.
4. The Treatment of Exstrophy of the Bladder. LORTHOIR.

1.—Lauwers reports the case of a strong man of 18, with a naso-pharyngeal polyp, which obstructed both nares and caused abundant hemorrhage. Operation was performed under chloroform, after an injection of 25 c.c. of antistreptococcic serum the day before. The right external carotid was ligated; the right superior maxilla resected by Kocher's method; the tumor removed; the maxillary bone replaced, with cat-gut sutures; and the wound closed. As the chloroform had been stopped and the patient began to regain consciousness, 1 cg. of morphin was given hypodermatically. Respiration became slower and ceased altogether an hour later. Artificial respiration was at once begun, stimulants and normal salt solution injected, and counterirritation applied to the chest. The patient would not breathe voluntarily, his pupils were contracted, and his pulse 40. After four hours work, without his taking one respiration of his own accord, tracheotomy was performed, and the trachea stimulated, down to its bifurcation, with a gauze tampon, introduced through the tracheotomy opening. This provoked violent expiration, after which breathing began. For an hour this was repeated at intervals; then breathing was re-established. He recovered gradually, the wound healing by first intention. Undoubtedly the morphin, not the chloroform, had produced the symptoms of poisoning. Yet Lauwers believes that the chloroform not only modified the effect of the morphin, but exaggerated it. He reports two more cases, in which death followed the administration of morphin after chloroform anesthesia. From his experience, Lauwers suggests irritating the tracheal mucous membrane as a last resort, when unconsciousness with failure of respiration occurs after chloroform anesthesia. [M. O.]

2.—After a number of unsuccessful experiments, Kukula finally managed to cause intestinal occlusion, by double ligation of the intestine. In seven cases he was able to study the intoxication which followed. Besides, he examined the intestinal contents in a number of human beings who had been operated. In spite of having made over 200 experiments, he does not feel justified in forming any conclusions. It was striking that the intestinal contents, after passing through the Cumberland filter, caused no toxic symptoms in animals. It seems probable, then, that the toxic substances failed to pass through the filter; or they may have been too greatly diluted. Artificial intestinal occlusion showed toxic matter which was not soluble in alcohol. But there is no doubt that unknown toxic substances, injected into the peritoneum of animals, produce intoxication. When any obstacle exists in the intestine, the reaction occurs at once. Yet toxic material exists in the intestines normally. Kukula has found that this material is absorbed in human beings when intestinal oc-

clusion occurs, partly as a gas, and partly as a watery solution. [M. O.]

3.—By *perilurethritis* Holston means any infection which starts from the urethra, and affects the surrounding tissues. In all cases, anaerobic bacteria have been found with or without aerobic microorganisms. The mildest form is follicular *perilurethritis* or folliculitis, small cysts forming along the urethra, with urethritis, easily cured by incision; or acute or subacute circumscribed *perilurethritis* may occur, called formerly *perilurethral abscess*. Prostatitis or *cowperitis* may accompany it. Incision with drainage will be necessary. Chronic or sclerosing circumscribed *perilurethritis* is rare. These forms may become diffuse phlegmonous *perilurethritis* which was formerly called pseudo-urinary infiltration. And this may later become diffuse gangrenous *perilurethritis*, when urinary infiltration occurs. This is always dangerous and needs immediate operation. Most rare of all is chronic or sclerosing diffuse *perilurethritis*, following long standing *bleenorhagia*, etc. All grades of *perilurethritis* are due to microbes traveling from the urethra and setting up infectious inflammation as they go. *Perilurethritis* seems to have a tendency to destroy the aponeuroses and muscles of the perineum on its way to the ischio-rectal fossa. A full review of the literature is given, and the histories of 16 reported cases follow. [M. O.]

4.—Lortholoz, who has seen four cases of *exstrophy of the bladder*, has operated upon three of them. The first case was three months old, a girl who recovered from the operation, with incontinence of urine. At 13 months she died with pneumonia. The second case, a girl of two months, was operated, by a method nearly that of Wood and Segond, successfully, but died with marasmus several months later. In the third case, a boy of two years, the operation was palliative only. He is still alive and well, and wears a urinal constantly. After a full description of the technique of both Segond's and Nota's methods of operating, Lortholoz describes two of Nota's successful cases. Photographs and diagrams accompany the article to explain the technique of the operation. [M. O.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 4, 1901. (No. 9).

1. The Surgery of Gastric Carcinoma. H. LANDNER.
2. Rarer Forms of Syringomyelia. DE LA CAMP.
3. Stramonium Poisoning. H. FRIEDLAENDER.
4. Contribution to the Staining of Diphtheria Bacteria. PIORKOWSKI.
5. The Formation of Sugar in the Animal Organism. M. HAL.
6. Ischia. PATSCHKOWSKI.

1.—A historical review of the operative treatment employed in carcinoma of the stomach.

3.—E. Friedländer reports a case of *stramonium poisoning* occurring in a coachman 44 years of age, who was suffering from asthma. Someone had recommended that the patient should employ dry leaves of *stramonium* to relieve his suffering, but the patient took the remedy internally by mistake. A few minutes later there was a marked burning in the throat and a feeling resembling asphyxiation, followed by unconsciousness. On admission to the hospital one hour later, the face of the patient was cyanotic, respiration 50 per minute, pulse 96, and some mucous rales were heard in the chest. There was some flow of saliva, the pupils were dilated ad maximum, but consciousness was fully restored. Under the administration of coffee and mild alcoholic stimulants he recovered about the fourth day, although the pain in the throat persisted for some time thereafter.

4.—The author believes that diphtheria organisms can be positively demonstrated by methods of staining. He describes the following method: From a culture of bacilli from fifteen to twenty-four hours old, grown, at a temperature of 37.7° C. on either glycerin-sugar or Loeffler's blood serum, dry cover glass preparations are made and stained with methyl-blue for twenty to thirty seconds. Decolorization is effected by holding for five seconds in a three per cent solution of hydrochloric acid alcohol, and the counter stain is produced by dipping for five seconds in a one per cent aqueous solution of eosin. The polar nuclei are

by this method sharply stained, while the central portion takes a red color, which is more marked, than with the vesuvin stain generally used. [M. R. D.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

April 2nd, 1901.

1. The Management of Child-Birth by Version Followed Immediately by Delivery, in Cases of Narrow Pelvis. ALBERT.
2. Contribution to the Biological Recognition of Human Blood. DIEUDONNE.
3. Local Conditions and Effusions in Diseases of the Heart, with Remarks upon the Functional Diagnosis of the Forms of Exudate and Transudate. ROSEN-BACH.
4. Diseases of Employees in the Chromatic Factories. HERMANN.
5. The Bloodless Treatment of Congenital Dislocation of the Hip in Relation to Deformities of the Femur. GHILLINI.
6. Multiple Fat Necrosis. OSTERMEIER.
7. A Case of Aneurysm of the Ascending Aorta Treated With Subcutaneous Injections of Gelatine. BARTH.
8. Drum-Stick Fingers. LACIHER.
9. Urticaria with Albuminuria. GUENZBERGER.
10. Statistics of the Ambulatorium or Internal Disease of the Institute for Clinical Medicine. KERSCHEN-STEINER.
11. Dr. August Brauser. MAYER.

1.—In case of *congenital narrow pelvis* it is important to maintain the integrity of the membranes as long as possible, and to secure, if possible, complete dilatation of the os uteri. For this purpose the *colpeurynter* should be employed without hesitation. The statistics for the Dresden clinic show that in 1187 births in 4 years version was employed 105 times, that is, little less than once in 11 births, and that in 60 of these cases the pelvis was narrow. In the normal cases the results were one death in 45; 2 cases of slight infection, and three of moderate injury to the genitalia. Of the children, 16 were dead at birth, and 2 died in the first 10 days. Twenty-nine were discharged alive. Of these 16, 9 were extracted dead on account of *placenta praevia*. In the cases of narrow pelvis one woman died in 60 cases, and 4 had a moderate infection. Of the children, 9 were born dead, and 3 died a few days after birth. Forty-eight of 60 were discharged alive. Albert calls attention to the fact that in narrow pelvises version is rarely done upon primipara on account of the greater capacity of the head for moulding. [J. S.]

2.—Dieudonne has injected rabbits with human blood serum, albuminous urine and pleural exudate. About 10 ccm. were injected every 2 or 3 days. It was found that when the blood solutions of Uhlenhuth were employed, consisting of one part blood to 100 parts water, the mixture being filtered, and 2 ccm. of this mixed with 4 ccm. of physiological salt solution, and then 6 drops of serum was added, that curious reactions occurred. If the serum of a rabbit treated with human blood was used a precipitate occurred in a few minutes. Normal rabbit serum failed to give this, and the reaction was entirely negative with the serum of guinea-pigs, pigeons and geese. The serum of a rabbit treated with albuminous urine gave a precipitate upon the addition of albuminous human urine, but not with human blood serum. The serum of a rabbit treated with a pleural exudate, showed a precipitate with the fluid of this pleural exudate, but not with the serum of normal rabbit blood. It was also found that the serum of a rabbit injected with human blood serum gave a precipitate with the albuminous urine and the pleural exudate, but this precipitate was not as distinct as with the blood. The same was true of the sera obtained with the urine and exudate. In no case did the sera obtained from the lower animals react with the rabbit sera produced by the injection of human products. For medico-legal use of dieudonne specially recommends the employment of rabbits immunized with human blood serum. [J. S.]

3.—Rosenbach calls attention to the fact that *unilateral pleural transudations* may occur as a result of weakness of the heart, or even isolated congestion of the liver followed by ascites, and an acute congestion of the liver may result from weakness of the heart after such infectious diseases as diphtheria. He has endeavored to find some method of distinguishing between transudates and exudates, and has

discovered that salicylic acid or iodine passed rapidly and in a considerable quantity into transudate and only in small quantities into exudate. He believes, however, that there are transitory stages between hydrothorax and pleurisy. [J. S.]

4. Hermann has studied the disease to which laborers working in chemical factories in which bichromate of potassium is prepared, are exposed. These affect generally the gastro-intestinal tract, the kidneys, and the respiratory apparatus. The most important are those involving the nose. These lead first to irritation of the nasal mucous membranes, then to ulceration, and finally to perforation of the cartilage. Statistics show that after 6 months very few of the workmen have healthy noses, and that perforation occurs in the majority at this time, and in those men who have worked more than a year, perforation is the rule. The cause of the situation of the ulcer is probably the continual application of the dust of the chromium salts to this portion of the nose with the finger. Injuries to the larynx and lungs are exceedingly rare, the commonest other disease being persistent eczema of the hands and feet. In 12 cases in the course of 2½ years slight disturbances of digestion usually associated with diarrhea were observed, and these possibly were not ascribable to the bichromate. In his experience albuminuria did not occur. He suggests as a prophylactic first, that the workmen be instructed in personal cleanliness, and second, that they use some form of respiratory filter, recommending one constructed of albuminum, in which the filter consists of cotton wool. [J. S.]

5.—Ghillini discusses the advantages of operation for the relief of congenital luxation of the hip, and calls attention to a girl of 18 that he presented to the Surgical Society in Rome in October, 1897, who had suffered from bilateral dislocation of the hip, and had been operated upon according to Ghillini's own method 3 years previously. The results were quite satisfactory; the patient was able to walk well, and only limped slightly on the left side. [J. S.]

6.—The patient, a woman of 69, without previous history, had been emaciating for three months. Suddenly, while sleeping, she was attacked with severe pain in the epigastrium with distension of the upper portion of the abdomen, followed by vomiting of liquid masses that had a fecal odor. She refused operation and died in 36 hours of collapse. At the autopsy there was found a purulent peritonitis, and multiple fat necrosis in the serous membranes of the intestines. The pancreas was normal. The interesting features of the case were the typical symptoms of occlusion of the intestine and the existence of peritonitis without assignable cause excepting the fat necrosis. It is probable that some septic complication also existed.

7.—Barth reports the case of a man 55 years of age, who subsequent to an attack of whooping-cough had continual coughing and oppression in the chest. He received at the age of 48 a severe injury to the chest by being trodden upon by a horse, and from this time the oppression in the chest became very severe. Finally the typical symptoms of aneurysm of the ascending portion of the aorta developed. It was decided, therefore, to treat him with injections of gelatine. A one per cent. solution was employed, 100 grms. being injected on alternate days until 12 injections had been made. At the same time the patient was kept in bed and potassium iodide was administered, cold was applied to the chest, and a moderate diet given. The tumor rapidly diminished in size, ceased pulsating, and the rough aneurysmal bruit became very much less. Later he was given a second gelatine cure, using this time a solution increasing in strength from 2 to 5%. The subjective symptoms, with the exception of slight dyspnoea, disappeared completely. [J. S.]

8.—Lacher reports the case of a man who as a result of chronic empyema developed marked swelling of the end phalanges of the fingers and toes, involving exclusively the soft parts. An operation was performed that reduced considerably the size of the abscess cavity, and as a result, the breadth of one thumb diminished from 3.2 cm. to 2.7 cm. and the other fingers in proportion. [J. S.]

9.—Gunzberger reports the case of a boy 13 years of age who had a severe attack of urticaria, which in the course of a few days was followed by edema of the face. An examination of the urine showed a moderate amount of albuminuria. Casts were not found. The patient rapidly recovered. [J. S.]

April 16, 1901.

1. Contribution to the Knowledge of Meningitis Serosa Acuta. J. HEGENELT.
2. The Treatment of Tuberculosis III. E. KLEBS.
3. The Theory of Ferment Processes. C. OPPENHEIMER.
4. The Treatment of Rachitis with Adrenal Extract. M. HOENIGSGERGER.
5. Addison's Disease. L. HUISMANS.
6. Gastric Lavage in Childhood. I. STEINHART.
7. Treatment of Gout with China Acid. SALFELD.
8. Statistical Report of the Royal University Dispensary for Diseases of Children in Kelsingerlanum. C. SEITZ.
9. The Treatment of Fibrinous Pneumonia. HORNUNG.

1.—The following 2 cases of acute serous meningitis complicating disease of the middle ear, are of exceptional interest. The first, a man of 32, had chronic otitis media with perforation of the membrane. He was suddenly attacked with severe headache, which at first was intermittent, but after 10 days became constant. He had vertigo and severe pain in the left ear. An examination of the eyes revealed neuritis of the optic nerve on the right side, with beginning changes of the left side. The ears showed the characteristic changes. There was some vomiting, subnormal temperature, and bradycardia. As operation was indicated both mastoid processes were opened, the brain was exposed, the dura incised and 5 ccm. of clear serous fluid was immediately evacuated. There was instant relief; the pulse increased from 44 to 58 and the temperature rose slightly. An enormous amount of serous fluid was persistently discharged from the wound, probably in excess of 0.5 litre daily. The patient gradually improved and was discharged completely recovered. The 2nd case, a man of 24, had had a discharge from the right ear from childhood. When admitted the temperature was slightly subnormal, and the pulse was 88. A similar operation was performed. The brain appeared to be normal and the dura was not incised. Subsequently the patient's condition grew worse; there were symptoms of pressure and therefore a second operation was performed. The brain was freely exposed, and the tense dura incised. A considerable quantity of cerebro-spinal fluid was immediately discharged, the patient in a short time recovered consciousness, and seemed very much better. An enormous quantity of cerebro-spinal fluid was discharged but the subsequent course of the case was favorable and the patient recovered. The interesting point is the brilliant results of operative interference. [J. S.]

2.—Klebs in discussing infection of the intestinal tract, mentions the frequency with which scrofulous affections of this system precede the actual outbreak of tuberculosis. As the tubercle bacilli are usually introduced in some vehicle, it is not impossible, provided they multiply in this, that a certain amount of toxin has been formed so that an intoxication accompanies the infection. One of the most suspicious of all foods is butter. His experience has been that children habituated to an excessive consumption of butter are either slender or else fat but anemic. Butter also tends to cause furunculosis. He mentions 2 cases of eczema that he observed, produced by a very small diplococcus. Ten years later Klebs, who had been one of the cases of eczema, developed multiple lesions, eczema of the hands and ulcers on the legs, etc., which he ascribed to excessive indulgence in butter. He believes that his system was weakened by the toxins present in that substance. He therefore injected guinea-pigs with liquid butter, and the animals died the same night, without presenting any symptoms at the autopsy. Another pig lived 3 days, the autopsy showing only congestion of the organs. He regards these results as similar to those obtained by the injection of tuberculosis toxins. In both cases there was marked reduction in the body temperature. In the 3rd case the temperature dropped from 38° to 30°. The animal lived 2 days. The paper is still unfinished. [J. S.]

3.—Oppenheimer, after a careful review of the various experiments of Ostwald, Bradig, Fischer, Ehrlich, and others, concludes as follows. If the catalytic action of the organic sub-stratum can be separated from the proper ferment action, and if the ferment processes do not exactly follow the laws of catalysis, then a very essential thing in favor of the specificity of these processes is neglected, that is, the preliminary steric combination of a ferment on the substance. Moreover, the recognition of the ferment as a secretion is entirely overlooked. Ferments have a pecu-

ilar character that belongs exclusively to themselves. It depends upon the preliminary sterile combination of the ferment with the substance, and a subsequent separation for which the selenketon theory gives an adequate hypothetical explanation. [J. S.]

4.—Hollisberger has employed adrenal extract in 20 cases of rickets. He employed the tablets of Burroughs, Wellcome & Co., and administered daily as many centigrams as the child weighed in kilograms. The results were disappointing. A progressive improvement in the symptoms occurred in only one case and in 2 cases the patients grew worse. A temporary improvement occurred in the majority of cases. However, the disagreeable odor of the urine was not improved. In only 3 cases was the cutting of the teeth promoted, but in 10 cases there was a moderate improvement in the shape of the head, and in 3 cases the anterior fontanelles grew smaller. The history of 9 cases follows. [J. S.]

5.—Hulsmans reports a case of Addison's disease occurring in a girl of 20 years of age, who had had tuberculosis of the cervical glands and at the time of death had distinct evidence of tuberculosis of the lungs. There was a brownish discoloration of the skin and extreme anemia. At the autopsy both adrenal bodies were found infected with tuberculosis. The author believes that the object of the adrenal bodies is to absorb certain toxic substances manufactured in the intestines. [J. S.]

6.—Steinhardt believes that gastric lavage is of great value in young children, to control vomiting and diarrhea, particularly when these are the result of acute gastroenteritis. He has employed it altogether in 46 cases ranging from 5 weeks to 2 years of age. Children are usually much less affected by this procedure than are adults. Occasionally they struggle and retch but not often. The tube may be introduced through the mouth when it is rather likely to produce nausea, or through the nose, when it rarely produces any disturbance. An ordinary catheter, either No. 6, 8 or 10, may be employed. He reports 2 cases in which vomiting occurred only once as a result of the prompt employment of the lavage, and others in which the lavage stopped vomiting which had persisted for some time. [J. S.]

7.—Sallid calls attention to *sidenol*, a combination of china oil and piperazin, which, he believes, is very effective in dissolving and rendering innocuous an excess of uric acid. Having first tried it upon himself, and found that in doses of 1 gm. 7 times a day, no unpleasant results were experienced he tried it in 4 cases of gout with excellent results, and in 1 case of acute articular rheumatism without any benefit at all. [J. S.]

8.—In the course of the year 12,700 children visited the Dispensary for Children's Diseases, at Reisingerlanum. The commonest diseases were those involving the organs of respiration and digestion. [J. S.]

9.—Hörning criticizes Passler's article upon the treatment of croupous pneumonia. He believes that the most serious feature of this disease is the intoxication which appears to work directly upon the vasomotors. For this reason alcohol is contra-indicated. He strongly recommends faradism, placing the large electrode over the heart and using a rolling electrode for the rest of the body. This stimulates the vasomotor centres, causing contractions in the small muscles and acts as a sort of massage and is agreeable to the patients. [J. S.]

April 23, 1901.

1. Acute Obstruction of the Intestines at the Junction of the Duodenum and the Jejunum. BAUMLER.
2. Treatment of Intestinal Obstruction with Atropine. BOFINGER.
3. A Severe Obstruction of the Intestine Relieved by Atropine and Olive Oil. ADAM.
4. Treatment of Intestinal Obstruction, with Preparations of Belladonna. R. GAETGENS.
5. A Case of Intestinal Obstruction Treated with Atropine. MIDDENDORFF.
6. The Treatment of Fractures that Have Knit in a Violent Position. C. BECK.
7. Contribution to the Question of the Removal of the Head Remaining in the Uterus. L. KNAPP.
8. Manual Perforation and Extraction of the Infantile Head in Foot Presentations and in Cases of the Separation of the Trunk from the Skull. H. CHAMER.
9. Blood Poisoning and Amputation. H. DOERFLER.

10. Inability to Work in Skin Diseases. J. NEUBERGER.
11. The Period of the Inability to Work in Diseases. R. LANDAU.
12. The Extent and Impairment of Ability to Work. E. KIEFER.
13. Treatment of Tuberculosis. E. KLEBS.

1.—Baumler reports a very interesting case of compression of the intestine against the spinal column with the causation of acute obstruction. A woman 25 years of age was suffering from typhoid fever complicated by hemorrhagic nephritis. She gradually improved but during the 7th week of the disease suddenly developed pain in the abdomen and vomiting. The vomitus contained a considerable quantity of bile. There were no localizing symptoms. On the same day the patient had had two liquid movements. There was visible peristalsis in the region of the stomach, but, on account of the weak condition of the patient, an operation was not attempted. The urine contained an excessive quantity of indican. Life was maintained for 12 days by nutritive enematas and hypodermic injections. At the autopsy the stomach was found greatly dilated, the intestines were collapsed, the transverse colon descended to the upper border of the pelvis. At the junction of the duodenum and jejunum there was an area of necrosis and obstruction. Baumler believes that it is very likely that the dilated and possibly somewhat depressed stomach had compressed this portion of the intestine against the spinal column and that the further dilatation of the stomach and the descent of the intestine into the pelvic cavity had accentuated the obstruction. In such cases it is therefore desirable to adopt the treatment of Schnitz and Müller, which consists of lavage of the stomach and elevation of the pelvis. A second case that was admitted, a man of 36, suffering from severe sciatica, suddenly developed vomiting of masses deeply stained with bile. The examination disclosed a greatly dilated stomach, and as uremia and locomotor-ataxia were excluded, there was reason to suspect occlusion of the intestine. Gastric lavage was therefore practiced for 15 minutes at intervals of 2 hours each, the patient being in a knee-chest position. The stomach readily became reduced in size, the symptoms of stenosis disappeared and the patient recovered. In conclusion the author tabulated the various malformations of the abdominal contents that predispose to this lesion. They are: abnormal lesion of the mesentery of the small intestine; (2) gastropnoia; (3) enteropnoia; (4) the position of the duodeno-jejuno boundary in relation to the spinal column; (5) pronounced lordosis of the lumbar vertebrae; (6) gastric emaculation and weakness from persistent infectious diseases; (7) chronic dilatation of the stomach as a result of congenital necrosis of the pylorus; (8) prolonged lying on the back after operations; (9) extreme evacuation of the intestines before an operation. The exciting causes are: overfilling of the stomach; (2) chloroform narcosis; (3) compression of the biliary ducts; (4) various gynecological laparotomies; (5) compression of the thorax by a plaster corset. The treatment is that already described. First empty the stomach. 2nd, elevation of the pelvis, particularly while lavage is being practiced, so that the intestines can rise to the upper portion of the abdominal cavity. 3rd, possibly the administration of olive oil through the stomach tube after lavage. 4th, very cautious distension of the stomach with air. If all these fail gastric enterostomy should be performed. After recovery the patient should be for a long time careful of the diet—should take small quantities of soft food, and occasionally submit to lavage. As prophylaxis patients who have any predisposing conditions should be careful not to overfill the stomach, and those who have been chloroformed should be watched carefully for some time. [J. S.]

2.—For a year the patient had been losing appetite, had occasional vomiting and irregular bowel movements, was slender and emaciated, with moderate distension of the abdomen. Two days before admission he had had severe pains in the abdomen, and vomiting after every attempt to take nourishment, with complete cessation of bowel movements. On the 5th day of this condition he was given 1-6 gr. of atropine hypodermatically in 3 doses. The patient died the same day. A diagnosis had been made of carcinoma of the intestine, but at the autopsy it was found that there was a carcinoma at the pylorus. Another case, a woman 56 years of age, had had chronic constipation and attacks of colic. When first seen she had had no movement for 3 days and had vomited twice. There was a

large tumor in the inguinal region, tender upon pressure, which could not be pressed back into the abdominal cavity. The patient was given calomel and an enema. The latter produced a large movement. She was therefore given 24 gr. of atropine in two doses on the 5th day, and on the 6th day a third dose of 1-10 gr. On the same day an operation was performed and the tumor found to be an incarcerated gangrenous hernia. The patient was very restless the following night, and succeeded in dislodging the bandage which had been placed over the coil of the intestines, and she died the same evening. Boffinger believes that the atropine exerted a distinctly unfavorable effect upon this patient. [J. S.]

3.—Adam reports the case of a man 67 years of age, who had been attacked with pain in the abdomen, loss of appetite, constipation and vomiting. The ordinary laxatives had had no effect. The patient had a scrotal hernia of the right side. Opium and ice having produced no benefit, the patient was given on the 6th day, olive oil and 1-20 of a gr. of atropine hypodermatically. The following 2 days the olive oil was continued in considerable quantities and well retained, and on the evening of the second the patient had a profuse evacuation of the bowels with subsequent complete convalescence. [J. S.]

4.—Gäntgens reports the case of a woman 64 years of age who had pains in the abdomen and constipation. As there were signs of collapse the patient was given 1-20 gr. of atropine subcutaneously. This relieved the pains, but caused the characteristic symptoms of atropine poisoning. As, however, there was no movement of the bowels, she received a second injection of 1-21 gr. The symptoms of poisoning were still more severe, but in a few hours she had a very fetid evacuation of the bowels. Extract of belladonna was given in doses of $\frac{1}{4}$ gr. every 4 hours by the mouth. The patient recovered completely. [J. S.]

5.—Middeldorpf reports the case of a man 58 years of age who had indican, albumen and bile in the urine, and the characteristic symptoms of intestinal obstruction with fecal vomiting. As lavage of the stomach and colon was without effect the patient was given 1-6 gr. of atropine in three doses. There were characteristic symptoms of poisoning, and a large evacuation of the bowels. The patient recovered. [J. S.]

6.—Beck reports a series of 7 cases in which as a result of neglect fractures had healed in a vicious position. In all of these cases the Röntgen rays were used to make the diagnosis, and to control the treatment. In the first case there was fracture of the neck of the humerus; in the second, of the femur; the third, of the lower end of the humerus; in the fourth, of the elbow-joint; the fifth, of the shoulder, the 3rd and 4th ribs, and the right radius; in the sixth, the right calcaneus; in the seventh, of the lower end of the radius. A series of excellent illustrations accompany the article. [J. S.]

7.—Knapp reports 16 cases of childbirth in which for various reasons it was necessary to amputate the body of the child and then extract the head. This was usually accomplished very readily, either by hooking the finger in the mouth, or by the use of the cranioclast. In the 16th case continued spasms of the cervix rendered the extraction of the child very difficult. Evisceration was finally accomplished by amputation of the body, and finally after prolonged effort, the removal of the head and placenta. The operation lasted 3 hours. The woman died one hour later. [J. S.]

8.—Cramer reports 2 cases. A woman 42 years of age in whom a spasm of the cervix prevented the extraction of the head, perforation of the infantile cranium was therefore made with the fingers through the eyes, and the head extracted. The patient recovered. In the 2nd case, the patient was brought after one and a half hours journey on the railroad to his office, with the history that the body had been amputated at the neck, and the head left in the uterine cavity. This was readily confirmed. The head was extracted by the same method as was the other, that is, insertion of the index finger through one orbital cavity into the brain, and then the middle finger of the same hand through the other orbit. He finally gives a brief report of a 3rd case in which after version spasm of the cervix prevented the extraction of the head beyond the orbits. The child respired and cried, and therefore all efforts at forcible ex-

traction were abandoned for 5 minutes, when the spasm relaxed and the child was born. [J. S.]

9.—Doerfler believes that amputation for infected wounds when there are symptoms of septicemia, is useless. He believes that all punctured or lacerated wounds should be treated with moist aseptic or antiseptic bandages in order to allow free egress to any germs that may have entered. In cases of actually developed phlegmonous infection deep broad incisions are required. He reports the case of a physician who infected himself in making an autopsy, and upon whom incisions were made from the shoulder to the tip of the finger. As the inflammation spread to the breast and back, incisions were also made to the spinal column and to the sternum. The patient ultimately recovered. The paper is still unfinished. [J. S.]

10.—Neuberger calls attention to the fact that under certain circumstances skin diseases may render their possessors incapable of work. This is particularly true of lichen rubar during the paroxysms of pruritus, (Certain forms of treatment, as for example, antiseptic pastes, acetic acid clay) in various parasitic sychoses may prevent the patient from attending properly to his work. In other cases, as in impetigo contagiosa energetic treatment requires the presence of the patient in the hospital. [J. S.]

11.—Landau discusses the various conditions that affect the period of inability to work after severe sickness. All these cases should be carefully examined in order to determine if possible, the amount of depression of the vital forces. Laborers doing their work at home ordinarily can commence sooner than others, because they have a greater control of their time, and can spend a certain portion of the day in rest. [J. S.]

12.—Kiefer discusses a variety of accidents in which it was questionable whether or not the injury could be ascribed to the nature of the work. He believes that cases of septic infection resulting from injuries more or less inevitable in the calling, should be regarded as accidents worthy of damage. It is more doubtful when the patient is predisposed to certain forms of infection such as tuberculosis. Hernias come under this class to a certain extent, that is, the traumatic forms. [J. S.]

13.—Klebs discusses the tuberculides that he believes are associated with tuberculosis. He recognizes 3 types: first the miliary form of lichen; second, a form which occurs as symmetrical red spots, or appears either as erythema, urticaria, or erythema nodosum, and sometimes leads to the formation of blisters, but soon disappears, and finally, third, furunculosis of patients suffering with tuberculosis. Pityriasis seems to precede tuberculosis in many cases. Finally Klebs speaks of a disease form which may vary from an erythema induratum to a condition resembling moist eczema. He reports the case of a boy who had a tuberculide of the eye and face, which was cured by treatment with TC, commencing with the administration of 2 drops of a 1% solution, increasing slowly to 10 drops. He believes that these tuberculides are really the results of toxic infection. [J. S.]

April 30, 1901.

1. The Action of Bactericidal Sera. M. NEISSER and F. WECHSERG.
2. Blood, Body Cells and Bacteria. L. HEIM.
3. Extra-Cranial Disturbance of the Eyes in Syphilis. O. SCHWARTZ.
4. Lobster Poisoning. GEORGH.
5. Suggestion for the Prevention of Spontaneous Extubation. E. SCHLECHTENDAHN.
6. Septicemia and Amputation. H. DOERFLER.
7. The Relation of Accident to Occupation. E. KIEFER.

1.—Neisser and Wechsberg have performed a series of investigations upon the effect of the mixture of various kinds of active and inactive bactericidal sera. Starting with the fact that appears to have been sufficiently established, that in certain cases excessive doses of immunizing serum may have an injurious effect, they commenced a series of investigations using their bioscopic method, and counting the number of colonies on plates. About .0002 ccm. of a one day bouillon culture of the organism in question, was placed in each of a row of sterile tubes. To this were added various amounts of an immune serum that had been rendered inactive by exposure to 56° and then the re-

quired quantity of the completing active serum. Normal salt solution and 3 drops of bouillon were added to each tube. The first organism was the vibrio of Metschnikoff. Immune serum had no effect when added 0.3 of a ccm. of active rabbit serum, but if the immune and the active rabbit serum were both added the germs died. If, however, too much immune serum was employed the bactericidal effect of the rabbit serum was diminished, and in time disappeared completely. If, to active goat serum, inactive immune serum was added in sufficient quantity its bactericidal effect was destroyed. The authors attempt to explain this by a theory which they illustrate with very ingenious diagrams, basing their explanation upon the Ehrlich-Morgenroth hypothesis. If we suppose each bacterium to have a certain number of equivalents, it will, when injected into the body of an animal, cause to be produced in the serum of that animal a certain number of other bodies which are capable of saturating these equivalents. These other bodies have a function of acting as links in the fusion of different things, and therefore may be regarded as having 2 equivalents, one for the bacteria and one for certain other bodies that also develop in the serum, and resembles ferments, and are capable of absorbing the bodies of the bacteria when both valences of the linking bodies are saturated. If now, by the addition of various substances, we increase the number of combined bodies, then it will either increase, decrease, or fail to effect the bactericidal qualities of the blood. The latter will be the case if the excess of combined bodies remain unsaturated; decrease occurs if some of the bodies are combined with the ferments, and others with the bacteria. It may be that in animals that have been rendered excessively immune, this superfluity of combined bodies may sometimes exist, and the manifestations of immunity are therefore prevented. They believe that their experiments destroy the theory of Bordet. [J. S.]

2.—Helm has made various experiments in order to determine the bactericidal action of normal blood, and to what it is due. By a careful study for a series of days, of hanging drops that had been injected with typhoid bacilli, he observed that in some cases in which the blood had been heated to 60°, or in which small fragments of tissue had been placed, that the bacteria became dissolved after a certain period. He ascribes this to the formation in the hanging drops of some substance produced by the bacteria itself, that is, a bactericidal action that is not due to an alexin, and which is not formed until the alexins have been conquered by the growth of the bacteria. [J. S.]

3.—Schwartz discusses briefly the important syphilitic diseases of the eye-lids. Among them are chancre, which is quite frequent; gummas, tertiary papulas, and occasionally acute syphilitic tarsitis which may develop before the outbreak of the general manifestation of the disease, and chronic syphilitic tarsitis which belongs to the gummatous stage. Tarsitis occasionally occurs in hereditary syphilis. The conjunctiva may exhibit papules or follicles, a condition that resembles trachoma and gummas. In the orbit there may be syphilitic periostitis which may cause exophthalmus or paralysis of the muscles of the eye if it involves the orbital fissure, and give rise to ptosis, diplopia, etc. If the optic nerve is involved there may be optic neuritis. If the muscles are paralyzed before the periostitis occurs it is an indication of a basillary meningitis. The tear-glands are sometimes affected by gummatous infiltration. The cornea may show interstitial keratitis either at the border or in the centre, and with or without development of blood vessels. The central type is more common in the acquired syphilis of adults. It is particularly in this disease that the energetic administration of quicksilver is of use. Occasionally punctate keratitis may occur and even kerato-malacia. The latter especially in hereditary cases. Scleritis and gummatous tumors may occur in the sclera. The most common form of syphilitic disease of the eyes is iritis. This occurs in various forms. Irido-cyclitis, gummatous cyclitis and serous iritis and chronic irido-choroiditis. A case of the latter condition is reported. Gummas sometimes appear in the ciliary body. [J. S.]

4.—Georgi reports a case of lobster poisoning that occurred in a group of men varying from 18 to 22 years of age. All recovered. Those who vomited earliest had the less severe attacks. In the absence of a stomach tube, he made them drink large quantities of milk and carbonated water; this produced prompt emesis and the evacuation of the stomach contents. There is much reason to believe that the lobster was spoiled before being served. [J. S.]

5.—In order to avoid extubation Schlechtendahl carries the thread attached to the tube through the nose. The ends are then fastened to the alve with plaster. The manoeuvre is very readily accomplished by means of Beloeq's cannula, after the tube has been put in place, and the thread brought out between the teeth. The advantages are that the child is unable to bite the thread, or dislocate the tube by movements with the tongue. [J. S.]

6.—Doerfler continues his article upon the dangers of septic infection and the relief to be expected from amputation. He believes that the latter operation only contributes to the exhaustion of the patient and therefore to the fatal result. He mentions a case of a man who was injured by a gun shot, a considerable number of foreign bodies entering the wound, who was treated 8 hours later by a physician, who cleaned the wound as thoroughly as possible, and when all appeared to be going well the man developed tetanus and died. The physician was prosecuted for insufficient cleansing of the wound. It is possible that in this case immediate amputation might not have hindered the fatal result, and on the other hand it is possible that the patient might have had a very severe infection with recovery. The author has studied septic infection upon himself, and describes the symptoms as follows. At first a feeling of lassitude, then the following day sometimes no fever, sometimes slight fever with chilliness. On the 3rd day, pain at the point of infection, and usually some swelling of the neighboring glands. On the 4th day either the symptoms are decreasing, or furuncles begin to appear upon the arm. In practically all his attacks the wound was thoroughly cleansed from $\frac{1}{2}$ to $1\frac{1}{2}$ hours after its reception. When these injuries are not treated antiseptically the symptoms rapidly grow worse. In conclusion he states that there is no such thing as local sepsis without immediate participation of the whole organism. Amputation in these cases is not to be considered excepting those parts that have become gangrenous. Therefore the general teaching that it is desirable to amputate in progressive phlegmonous inflammation should be altered. [J. S.]

7.—Kiefer discusses the great difficulty experienced in those cases in which apoplexy or sudden failure of the heart occurs as a result of over-exercise during work. The responsibility of work for the development of aneurysms is also very difficult to determine, because the symptoms usually develop only after the aneurysm has reached a definite size. Among the other conditions that give rise to difficulty are frost bite, various poisonings, and epilepsy. The latter can only be produced by work as a result of some reflex irritation, as injury to the brain or skull; or as a result of some nervous influence upon a person predisposed. Another nervous condition is traumatic neurosis, and in some cases it may be possible that suicide results from accident. The amount of indemnity that a workman should receive depends a good deal upon the nature of his work. Thus, a man engaged in some delicate manual occupation should receive more for a serious injury to the finger than an ordinary day laborer. Moreover, the ability of a patient to work depending upon his age, skill, intelligence, etc., should be taken into consideration. The author calls attention to the extraordinary statements made by some physicians in their certificates, and in conclusion he urges the great importance of more care in this respect and in particular, of a more thorough study of the nature of injuries and their ultimate results, from the fact that more than 400,000 requests for indemnity were received in the year 1899, and over 100,000 indemnities were paid. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

April 25, 1901. (XIV Jahrgang, No. 17).

1. Senile Atrophy of the Brain a Cause of Tumor Symptoms. A. PICK.
2. The Roentgen Apparatus in the Examination of Healthy and Diseased Vertebrae. ROBERT KIENBOECK.
3. The Atropin Treatment of Ileus. F. POLACK.

1.—Pick reports another case of brain atrophy, in which the symptoms closely resembled brain tumor. A woman aged 59 had grown gradually stupid for six years. Her memory failed and aphasia developed. She could no longer talk or read sensibly. There was no paralysis, the pupils reacted normally, the eye grounds, sensibility, knee jerks, etc., were all normal. Pneumonia occurred with death. The autopsy showed general brain atrophy, most marked in the

left hemisphere. Pick believes that brain atrophy, occurring near a hemorrhage, will explain the mixed symptoms often found. [M. O.]

2.—By using the improved Roentgen apparatus, Klenboeck has photographed normal and abnormal vertebrae. The cervical vertebrae may be taken anteriorly, or from either side; the dorsal vertebrae anteriorly or obliquely sidewise; the lumbar vertebrae from in front or from behind. Luxations and fractures, scoliosis, congenital anomalies, ankylosis, tumors, especially gummata, tuberculous spondylitis, etc., are all well understood from the Roentgen photographs. Among the photographs illustrating Klenboeck's article are scoliosis in a child of 8, kyphosis in one of 2, and dorsal and lumbar Pott's disease in other children. The technique of the Roentgen photography is given. [M. O.]

3.—Polack reports a case of ileus in a woman of 68 years, with great weakness, emaciation, and Trousseau's spots. She vomited everything. As she was too ill for operation, Ortner advised giving atropin injections. The bowels were moved soon after the first injection, and she recovered in the next three weeks. [M. O.]

CENTRALBLATT FUER CHIRURGIE.

April 6, 1901. (28 Jahrgang, No. 14).

1. The Treatment of Luxations of the Lower Jaw which Cannot be Replaced. KRAMER.

1.—As treatment for those rare dislocations of the lower jaw which cannot be replaced, modern surgery, in the text-books and periodicals, recommends only the removal of the condyloid process of the inferior maxilla. But Kramer says that this should only be done as the last resort. He reports a case treated two years ago, in a girl of 20, in whom he simply divided the masseter and pterygoid muscles, not opening the joint at all. This dislocation had existed for five weeks. After the skin had been incised, and the muscles divided, the lower jaw was easily replaced, the muscles sutured, and the wound closed. In two weeks she could open her mouth 2 cm., and since then she has wholly recovered. If this should not be successful, then the condyloid process of the inferior maxillary bone should be removed. [M. O.]

April 13, 1901. (28 Jahrgang, No. 15).

1. An Absorbable Anastomosis Button of Magnesium V. CHLUMSKY.

1.—The great failure of the Murphy button in intestinal anastomosis is due to the button not being absorbed. Chlumsky has manufactured such a button of magnesium, which is gradually absorbed, on all sides regularly, very small fragments only being left. This button decreases in the six days following operation to half its size, and disappears entirely from 10 to 16 days. To hasten its absorption Chlumsky advises giving the patient dilute hydrochloric acid. That it works well has been noted in a patient who died with double pneumonia, four days after operation in which the new magnesium button had been used in a gastro-enterostomy. [M. O.]

April 20, 1901. (28 Jahrgang, No. 16).

1. The Surgical Value of the Aluminum-bronze Wire Suture. RUDOLF PICHLER.

1.—Aluminum-bronze wire is composed of about 85% copper, and 5% aluminum. From culture experiments upon Pétri dishes, the presence of both silver and aluminum-bronze wire seems to check the growth of bacteria. This is also noted in the human body, when aluminum-bronze wire is used for sutures. It is as good as silver wire and much less expensive. Pichler recommends it, especially where infection of the stitches, from the skin down, is to be feared; in hernia operations; in plastic operations on the lip; in fact, wherever tension is exerted, or the stitches are to be left in place for a long time. [M. O.]

April 27, 1901. (28 Jahrgang, No. 17).

1. Atropin before Administering Ether. LUDWIG BRAUN.

Braun has etherized 100 times in the past year, in Dr. Fuerth's Sanatorium in Vienna, using Merck's ether, and the Longard-Wagner mask. He says that no more mucus collects during anesthesia than when chloroform is used.

The patients seemed to be quietly sleeping. In only two cases did pneumonia follow, and both of them had been operated before. In giving ether, he always gives a few drops of chloroform first. Subcutaneous injections of morphin were only given three times. Braun considers atropin needless before operation, more especially as it is a dangerous drug. [M. O.]

CENTRALBLATT FUER INNERE MEDIZIN.

April 6, 1901.

- Concerning the Gualacol Treatment of Acute Gonorrheal Epididymitis. BERTHOLD GOLDBERG.

The article is chiefly a review of the literature concerning the treatment recommended by the author; this leads him to the conclusion that the treatment has not been so widely used as it deserves, and that it is the best local treatment that can be advised, and leads almost without exception to satisfactory results. He has seen no unfavorable influences from the treatment. [D. D. E.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.

April, 1901. (Vol. No. 4).

1. The Clinical Value of Astereognosis, and its Bearing upon Cerebral Localization. G. L. WALTON and W. E. PAUL.
2. The Babinski Reflex. C. VAN EPPS.

1.—Walton and Paul state that in hysteria the character of the astereognosis as well as the distribution of anesthesia and its completeness will generally indicate the nature of the disease. For example, a patient in whom a pinch or prick is not noticed and no object is recognized when the stereognostic sense is tested, will handle objects naturally and freely with the affected hand. It has been found that patients suffering from cerebral anesthesia have the stereognostic sense lacking. Cerebral anesthesia of the astereognostic type occurs in both cortical and cerebral disease, between which we are unable to distinguish by this symptom alone. The author thinks that the ability to recognize objects held in the hand with the eyes closed is a matter not of any one simple sensation, but a complex judgment based on correlated memories of various forms of contact sense, spacing, localizing, pressure, together with the so-called muscle sense. It is in cortical or sub-cortical disease that astereognosis is likely to prove of material diagnostic assistance. [T. M. T.]

2.—Epps found that in 68 hemiplegics the Babinski reflex was present. Extension of all the toes, big toe most, 50%; extension of the big toe, small toes flexed, 27%; extension of big toe, no mention of small toes, 22%; extension of small toes only, 1%; extension of all toes, small toes most, 0%. In examining 500 cases he found normal plantar reflex absent on both sides in 19 cases, or 3.8%; absent on one side, 11 cases, or 2.2%. In children, he found the extension, usually of all toes in 50%; flexion, usually of all toes, 20%; irregular flexion and extension, 20%; feet held too stiffly to obtain reflex, 8%; absence of motion, 2%. Out of 213 cases of nervous disease with no manifest disorder of pyramidal tracts, including tabes dorsalis, Friedreich's ataxia, paralysis agitans, progressive muscular atrophy, multiple neuritis, etc., flexion was present in 167 cases, or 78%; no motion in 38 cases, or 18%; constant extension of both feet, 5 cases; in one foot, 1 case; and in two cases irregular flexion and extension in both feet. In hemiplegics and diplegics, of which 118 were examined, extension was present on the paralyzed side in 57%; flexion of all toes in 26%; flexion of the small toes only, 4%; irregular flexion and extension, 5%; no motion, 8%. On opposite side extension was present in 9%; flexion of all the toes, 72%; flexion of the small toes, no motion in big toe, 4%; irregular flexion and extension, 5%; no motion in 10%. In plantar reflex in spinal cord disease with lateral tract involvement, out of 62 cases, extension was present in 63%; flexion in 26%; no motion in 11%. [T. M. T.]

Special Article.

THE EYE AND EAR EXAMINATIONS
OF RAILROAD EMPLOYEES.An Echo From the St. Paul Meeting of the American
Medical Association.By WILLIAM THOMSON, M. D.,
of Philadelphia.Emeritus Professor of Ophthalmology in Jefferson Medical College,
Philadelphia.

At the annual meeting in 1900 at Atlantic City, the writer was added to the Committee on Visual and Aural Qualifications of Transportation Employees, of which Dr. Allport was Chairman.

Shortly before the St. Paul meeting the proposed report of the Committee was submitted to me for my action.

After an experience of over twenty years in agitating the questions involved, I deemed it my duty to our Section to hold out the danger signal, and avert a collision with the officers of the railroads, well knowing what the results would be of any attempt to intrude opinions that would seem to conflict with the rights of railroad officers to manage their business themselves. My views were embodied in a minority report which was sent by mail, in good time, to the Secretary of the Section on Ophthalmology, with a request that it be presented in the debate. After the meeting the Secretary reported that no such letter had reached him. The postal service finally delivered it to him at his home in Memphis, and by him it was sent to the Editor of the Journal of the American Medical Association for publication with the proceedings. A request for its appearance in print from the writer was answered by the Editor in the negative, after consultation with one member of the Executive Committee, on the ground that it had not been presented to the Section. A note from the Chairman of the Committee, and now Chairman of the Section, also claimed that, his report having been unanimously adopted, this had "closed" the incident; and he hoped that it might not be reopened.

From no fault of the writer he is deprived of the chance of discharging his duty to his colleagues, and is hence compelled to offer his opinion to the profession in this manner, or remain a silent supporter of views which he has for years opposed.

Dr. Allport's report must now be read, and will be found in the *Journal* for June 22, 1901, p. 1795. It demands that the work of testing the sight and hearing of railroad employees "must be superintended by this Section," and must be made by eye and ear surgeons, etc.; and in his pamphlet he, in italics, expresses his opinion that it were better if "such examinations were never made by non-professional men."

Having persuaded the officers of the Pennsylvania Railroad, more than twenty years ago, to protect themselves and the public, in conjunction with their most intelligent Division Superintendents and the writer, a system of examination by educated and instructed non-professional examiners was put in force. Slowly it gained the confidence of other

railroad officers, and was adopted by various other corporations estimated in 1900 to amount to 111 in number and controlling 150,000 miles of road, an increase since 1894 of 100,000 miles.

The system demands the supervision on each road of skillful ophthalmic surgeons to see that the tests and examinations are properly made; and these trained observers are the men best fitted to give advice to our Section.

We have on one side those who believe that no layman can be trusted to use the refined instruments required; and, on the other, the highest experts, like Eldredge-Green, in his recent paper in the *Lancet*, on the Shortcomings of Holmgren's Test, stating that even Mr. Nettleship, famous as surgeon and writer, had failed to detect a color-blind man by wool tests.

With such burning differences of opinion, it becomes prudent men to be careful in promoting discord which will at least hold up any further peaceful evolution of the extension of scientific supervision of optical defects to the entire railway system of the country.

This minority report is so mild that one may wonder why it should be so hindered in its effort to appear. With this discharge of duty to my colleagues of the Section, the writer deems the matter now "closed." The following is the report:

MINORITY REPORT.

Mr. Chairman and Members of the Section of Ophthalmology of the American Medical Association.—

I may be unable to be present at our meeting at St. Paul to discharge the duty laid upon me at our last meeting to aid in advising the Section what action to take upon the report of the Committee on "The Visual and Aural Qualifications of Transportation Employees," of which I am a member, and Dr. Allport is the Chairman.

The substance of a report has been submitted to me by the Chairman, and in my inability to confer with the Committee, and other colleagues, I feel constrained to object to its wholesale condemnation of examinations made by instructed but non-professional persons; and to the demand that they should be made by none other than ophthalmic and aural surgeons.

It is well known that twenty years ago the Pennsylvania Railroad adopted, and has kept in use since, amended and improved, a system of non-professional examinations, and that it has been adopted by other corporations estimated to control about 150,000 miles of track.

Our Section might well pause before the task of overthrowing so useful a beginning, instead of trying to improve it by further evolution. In such an issue some members of our Section might be brought into antagonism with the officials of great roads of which of which they are now valued advisers.

We possess little or no power, except that of persuasion, to enforce any changes we might demand.

The officers of roads having now any system would hesitate, in the present condition of the labor market to invite struggles with their employees by re-opening questions so full of danger.

It must also be remembered that the well-described dangers from defects of color and form no longer exist, except on those roads which have never adopted any system. On the P. R. R. the dangerous men were eliminated twenty years ago, and the system now suffices to prevent their admission. So well satisfied are the officials of that road—controlling 15,000 miles of track and 120,000 employees—that no influence of mine would suffice to overthrow their confidence in it; and I shall remain content with the system when my recently improved lantern has been adopted generally as an addition to the color stick and wools, since it will detect those doubtful cases of green-red blindness which have caused distrust in the Holmgren method so well described by Eldredge-Green in the April number of the London *Lancet*.

The ophthalmic surgeons of our great roads are best fitted by their experience and influence with the officials of those roads to guide us aright, and I would suggest that the present Committee be increased by the addition to it of a sufficient number of them to decide as to the possibility of pressing upon the roads the necessity of using only specialists as examiners; the division of employees into classes; and the consequent frequent re-examination of all signal men.

I will conclude by adding an extract from a letter of May 3rd, from the General Manager of the Pennsylvania Railroad:

"I am in receipt of papers sent by you, and desire to say that, so far as our system East of Pittsburg and Erie is concerned, we have no desire to change the method inaugurated by you for the examination of employees in connection with color sense and acuity of vision. The method has been entirely satisfactory, and with such improvements as you have made and are making we are entirely satisfied.

"In order to ascertain the views of our Western Lines upon the same subject, I asked their General Manager for his views, and he advises me that the present method of examining employees for color sense and acuity of vision, as prescribed for by you, has been found entirely satisfactory on his lines. He received copies of pamphlets issued by Dr. Allport, of Chicago, and had them gone over by the oculist of his company, and it was recommended by him that they make some slight changes in their practice; the changes, however, being minor ones, and not affecting the principle of their present practice."

An experienced Division Superintendent also writes me:

"So far as Dr. Allport's attitude is concerned to the arrangement in existence on the Pennsylvania Railroad, for examination of employees, I would say that I do not think you will get any of our operating officers to agree that our present plan is not effective. Personally, I prefer it to any other that has thus far been suggested. It is a clean, concise, and definite way of ascertaining the condition of a man's sight and hearing, and I prefer it to taking the judgment of those who are interested solely in making the examination. I believe I have on one occasion told you that one of the greatest advantages of our present method of examination is that we, as examiners, have no interest in any particular

employee, and our sole object of examination is that we may not place employees in positions in the service that would jeopardize life or limb."

"I am unalterably opposed to local surgeons having charge of this work. The layman can secure as effective results with your apparatus as the surgeon, and there is no probability of the layman being influenced to give anything but actual facts—in fact, he must, or make himself a party to the complications that would arise in employing those unable to pass the examination properly.

"Our present methods keep 'politics' out of the transaction. We need no professional assistance other than that which you are this week giving my train-masters."

Respectfully submitted,

WM. THOMPSON, M. D.

The Treatment of Otitis Media and its Complications.—W. A. Niemtschenko (Bolshechnaia Gazeta Botkina, Vol. XII, Nos. 10-11) treats this very obstinate and almost incurable affection in the following manner: In mild cases he employs a 2% solution of phenol in 50% alcohol. Of this solution 10-15 drops are placed into the auditory canal, while the patient's head is inclined toward the healthy side, and by means of a small pledget of cotton the walls of the canal are rubbed energetically so as to bring the solution in intimate contact with every portion of the canal. The solution is allowed to remain for 2-3 minutes, when the patient inclines the head towards the diseased ear to permit the exit of the fluid. This solution answers a two-fold purpose: In the first place, it dissolves out the fatty material coating the walls of the canal, permitting the medication to come in direct contact with the inflamed tissues, and second, it acts as an antiseptic. The applications are made daily at first and at greater intervals as the suppuration diminishes. When marked improvement takes place, the applications are discontinued, for the reason that the antiseptic is liable to injure the new-forming tissue. Many cases of otorrhea of long standing were cured by this treatment. In the graver forms of the disease, especially those accompanied by an elevation of temperature or meningeal complications, the author injects a 5% solution of carbolic acid into the surrounding tissues of the middle ear, in the following manner: The auricle is pulled forward so as to put the retrahens muscle on a stretch; the needle is inserted into the squamosmastoid fissure and carried along the cartilaginous wall of the external auditory canal until it reaches the middle ear, and a syringeful of the solution injected. The solution acts not only as an excellent antiseptic but is also an anesthetic, the patient experiencing almost immediate relief. Following the injection, the exudate soon becomes serous in character and disappears entirely on the 12th day. However, should the disease be still lingering, the injection is repeated. The recovery is usually so rapid that in no case did the author have to resort to more than three injections. This treatment was employed in 36 cases (9 acute and 27 chronic) with uniformly good results. [A. R.]

Cesarean Section on a Girl Thirteen Years Old.—The pelvic measurements of the girl were: Interspinous, 19.5; intereristal, 24; external conjugate of Baudelocque, 16; diagonal conjugate, 11; vertical height of symphysis, 4.5; conjugata vera of brim, 9.2 centimeters. The vagina was so small that the introduction of two fingers caused pain. The patient was found bleeding profusely from the vagina, the amniotic fluid had escaped, the umbilical cord was prolapsed into the vagina and the os was dilated to the size of a dollar and filled with blood clots. The hemorrhage being alarming, the vagina was packed and Cesarean section done. The fetus lay transversely and the placenta was attached posteriorly, one-fourth being in the lower segment. The case was notable because of the fact that conception took place at 12. The fetus was well developed and had entered upon the ninth month. Patient recovered without incident.—*American Journal of Obstetrics*.

Original Articles.

DYSTOCIA FROM COILING OR OCCLUSION OF THE
UMBILICAL CORD.

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of Philadelphia.

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A complication which may prove fatal to the child and considerably interfere with the mother's labor is coiling or occlusion of the umbilical cord. Where the cord is excessively long and the fetus active, the child may coil the cord about the neck several times, over the shoulder and under the axilla or pass it between the lower limbs. Upon the occurrence of labor, tension upon the cord interferes with the passage of blood, asphyxia develops, and the fetus is threatened with death. In rare cases, the cord may be so tightly coiled as to amputate a limb before labor occurs.

The diagnosis in this condition is made by recognizing a murmur or souffle in the cord. Clinical observation appreciates altered movements in the fetus, and the mother may report fetal movements more slow and feeble or for a short time excessively strong. In some cases the movements become so feeble that the mother fears that the child is dead.

While the danger in this condition is primarily to the child, the mother may also suffer. Partial separation of the placenta has resulted from traction upon the cord during labor, and in some cases inversion of the uterus is thought to have been favored by this complication.

Rupture of the cord is occasionally observed in cases in which the mother is delivered while standing, the child falling upon the floor. Rupture of the cord does not happen during birth in the recumbent posture, although the cord may be tightly drawn about the child.

This complication is of sufficient importance to call for recognition and for prompt interference during labor in the interests of the child and of the mother. The following cases illustrate the points in question:

CASE 1st.—A young primipara came into labor with the child in the first position, vertex presentation. Upon auscultation the heart sounds could be distinctly heard in the usual location. Between two and three inches below this point and toward the median line was heard a short, sharp hissing murmur, slower than the fetal heart sound and quicker than the uterine or placental bruit. The fetal movements were not excessively vigorous, labor proceeded slowly, the fetal heart sounds remaining strong and slow. The child was evidently of good size, and in view of the condition of the cord and the danger of asphyxia, it was thought best to interfere so soon as the head had descended into the pelvic cavity. The patient's husband was informed of the complication and that it might prove fatal to the child.

So soon as the head descended upon the pelvic floor, the heart sounds remaining good, the child was delivered by forceps. The cord was found coiled three times about the neck, passing over the shoulder across the body underneath the axilla of the opposite side. The child was asphyxiated, but was revived without especial difficulty.

CASE 2nd was that of a multipara, whose pregnancy proceeded normally until the usual limit. She summoned her physician, stating that she had been suffering for a day with nagging labor pains without progress, and that the child's movements had grown slow and feeble.

On examination, no murmur could be heard which could be ascribed to the cord, the heart sounds were slow but distinct and strong. Labor occurred within a few hours of the time when the physician was summoned, and spontaneous expulsion resulted. The cord was wrapped about the neck over the shoulder and beneath the opposite axilla. The child was asphyxiated, but readily resuscitated. In this case, the condition was recognized so soon as the head came down upon the pelvic floor, and it was possible to loosen somewhat the upper turn of the cord and thus prevent its complete occlusion.

It is evident that the conditions prevailing when the cord is coiled about the fetus are different from those in cases where the cord is short without coiling or where it is occluded by prolapse or by amniotic adhesion. If the cord be coiled and the child be so low in the birth canal that it can be delivered with forceps, there is always the probability that the cord may be stretched sufficiently to allow the head to escape without separating the placenta. If the cord were short without coiling, the child could not be rapidly delivered without separating the placenta or injuring the cord very materially. In distinguishing between the two, the cord murmur is valuable. A short uncoiled cord gives rise to no murmur, while a normal cord coiled about the fetus produces the murmur described.

If the head be expelled with the cord coiled about the neck, and the cord be drawn so tightly that further expulsive effort on the part of the mother ceases, the cord should be clamped by two hemostatic forceps and cut between. In such cases, the cord is drawn so tightly that it is impossible to loosen it and slip it over the child's head.

The writer was called in consultation to a tedious labor and entered the patient's room just as the head of the child was born. The cord was tightly coiled about the neck and stretched to the utmost, and expulsive efforts failed to deliver the shoulders. The cord was immediately clamped and cut when the child was delivered and resuscitated. Here very prompt action was necessary to save the life of the child.

Prolapse of the cord often occurs in contracted pelves, in transverse presentation, and in cases where the descent of the fetus is prevented by deformity or the presence of tumors. The indication is to replace the cord as soon as possible and to deliver the patient as readily as is consistent with safety.

To replace the prolapsed cord, the knee-chest or lateral posture, the introduction of the hand, the carrying of the cord above the brim of the pelvis, followed by the performance of podalic version form the most effective method of treatment. Anesthesia, partial or complete, is usually necessary. The advantage of introducing the hand is not only to perform a satisfactory version, but also because it enables the operator to make a complete and accurate diagnosis of the condition present. Pelvic deformity, the presence of a tumor, or an abnormal condition of the child can be detected by this means.

In cases where it is impossible to introduce the hand, an attempt may be made to replace the cord by Braun's repositor or by a catheter stiffened by a stylet. A loop of sterile twine is passed through the catheter and out at the eye, then about the cord and the loop is caught over the tip of the catheter and pulled snugly down upon the cord. With the patient on the back or in the knee-chest posture,

the catheter is gently introduced, carrying the cord above the brim of the pelvis. The posterior extremity of one of the oblique diameters of the pelvis should be selected for this manipulation. When the cord has been introduced, the twine is loosened, the catheter withdrawn, when the loop of twine slips over the tip of the catheter, thus releasing the umbilical cord. Should it be impossible to replace the cord, the patient should be delivered, and if labor be delayed, she may be placed upon her side with the pelvis elevated.

Remarkable success sometimes attends the attempt to save the life of the child, although the prolapsed cord is without pulsation. If the cord can be carried above the pelvic brim and left absolutely free from pressure, circulation is sometimes established in apparently hopeless cases.

Knots in the umbilical cord may be fatal to the fetus by occlusion. In some cases, their formation is preceded by very active fetal movements recognized by the mother. In others, the mother may complain of pain and sensitiveness in the uterine wall with gradual cessation of fetal movements. Weston¹ reports two cases occurring in the last months of first pregnancies. In one case, the patient stooped to lift a heavy object and felt unusual motions within the abdomen, which soon ceased. In the second case, the patient's first symptom was nausea, which occurred at night. This was followed by unusual sensations in the abdomen with failure of fetal movements. The case was one of twins, and one child had passed through a loop in its cord, tying a knot about the other cord and stopping the circulation in both.

Occlusion of the umbilical cord by bridles or adhesions of the amnion is sometimes observed. Couvelaire² reports the case of a multipara in labor in whom no fetal heart sounds could be heard. The fetus was dead when born, but not macerated, and had evidently perished not long before delivery. Upon examination, the cord was large and edematous and 20 cm. from the placenta, strangulation had been produced by a bridle of amniotic membrane. The lumen of the cord was reduced to 7 millim. at that point.

A short cord may also result in the death of the fetus or the separation of the placenta. Brickner³ describes the case of a primigravida with no history of illness or accident. The patient's labor was tedious and her pains infrequent and weak. When the cervix was almost dilated the membranes were ruptured in the hope that labor would proceed. The head finally came upon the pelvic floor and could be seen at the vulva, but was retracted as soon as uterine contractions ceased. In the intervals between the pains, bright blood escaped in small quantity. The patient complained of pain over the left side of the uterus and voided urine freely between the pains. The child was asphyxiated, but resuscitated. The placenta was easily and quickly removed and was found to have been separated for some time and covered by a large and thick clot. The cord measured $10\frac{1}{2}$ inches in length. The child had an umbilical hernia from which it recovered without operation. Attention is drawn to the bleeding which occurred, and urination between the pains as symptoms of this condition. The recession of the head, pain over the placenta site, inertia of the ute-

rus and the patient's desire to sit up are also symptoms noticed in these cases.

In seeking indications for treatment in these cases, our experience and observation have led us to conclude as follows: The situation of the placenta should be ascertained as nearly as possible before labor in each pregnant woman. A study of the fetal heart sound, the placenta bruit, the uterine bruit and the beating of the mother's aorta will enable the physician to recognize a murmur in the umbilical cord. If this can be plainly distinguished, it is excellent evidence that the cord is coiled about the child. In the absence of a murmur, tedious labor in which no other cause for delay can be assigned, recession of the presenting part between the pains, ceasing or slowing of fetal movements, and the sensation of pain referred to the body of the uterus form strong presumptive evidence that the cord is coiled about the fetus. In cases of coiling, the patient should be delivered as soon as possible and the use of forceps is justifiable.

Where, however, the cord murmur is absent, but recession of the presenting part, arterial hemorrhage between the pains, pain in the uterus, uterine inertia and delayed labor are present, a cord anatomically or practically shortened is present. In such a case, the use of forceps is not indicated.

The patient's labor pains should be stimulated, her strength maintained, the child delivered so soon as the head is born, and the placenta removed as soon as possible.

In knots or occlusion of the cord by amniotic adhesions, nothing can be done to save the life of the fetus. In the interests of the mother, the uterus should be made to expel its contents so soon as fetal death is positively diagnosed.

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EMPHYEMA OF THE FRONTAL AND ETHMOIDAL SINUSES AND ORBITAL ABSCESS.*

By THOMAS R. POOLEY, M. D.,

of New York City.

The following case seems to me worthy of record, for divers reasons, which I will enumerate and dwell upon to some extent after reporting its history and the operation done for its radical cure:

The patient, a young gentleman of 19, was admitted to my hospital March 25th, at 5 P. M., suffering the most intense pain in and around the right eye and over the entire side of the head.

The eyelids both upper and lower were enormously swollen, red, and shiny, so that they could hardly be opened to inspect the eye, especially as they were exquisitely sensitive to the touch. Inspecting it, however, there was found to be some chemosis, most prominent at upper inner angle—slight ptosis and some restrictions of the movements of the eyeball inwards and upwards. In the upper inner angle just above the insertion of the tendon oculi was a minute fistulous opening, but there was no discharge from it.

*Read before the American Laryngological, Rhinological and Otological Society, in New York, May, 1901.

His temperature was 104 F. and pulse 120° and there seemed to be some mental disturbance, which, however, might be due to the narcotics he had taken to relieve the intense pain. The following history was obtained from his mother's statement.

Ever since he had scarlet fever, six or seven years ago, this eye has been affected, being at times painful and watery, but no severe trouble occurred until six years ago, when while staying in Boston he felt his eye uncomfortable, and by the time he reached home the lids had swollen a little. A diagnosis of erysipelas was made and hot applications applied. He was treated by several physicians, but there was no improvement.

Dr. O. F. Wadsworth was called in consultation and made an incision below the margin of the lower lid. This caused subsidence in the swelling of the lids to a minimum extent, but some pain and swelling still remained. Four years ago he was operated upon in the Massachusetts Eye and Ear Infirmary by Drs. Standish and Jack. This operation, which seems only to have been evacuating the contents of the swollen sinus, was followed by temporary relief, the swelling remained in the inner angle, and a permanent fistula. For about a year past he had suffered very little inconvenience until the present trouble. A few days before I saw him he was treated by Dr. Coe who referred him to me.

Taking into consideration the antecedent history, in conjunction with the present condition, I was led to make the following diagnosis. Chronic empyema of ethmoidal and frontal sinuses, acute exacerbation and abscess of the orbit. For immediate relief of the patient's pain, I made with a Graefe's knife an incision into the fistulous opening, but no pus escaped, nor did it do any good. The following day, with the assistance of Drs. Myles, Spence, and Cook, the house surgeon, I proceeded to operate, the patient being fully under ether; the skin shaved and the region of the wound washed with green soap, then with ether, and bichloride 1-5000.

An incision was made beginning at the outer third of the orbital ridge to the internal canthus, thence downwards and inwards along the nose to the lower border of the orbit, carefully avoiding the superior oblique muscle. The dissection was made close to the bone, the periosteum reflected fully exposing the upper and inner surfaces of the orbit. An examination showed a fistulous opening in the anterior wall of the frontal sinus through which a probe could be passed into its cavity. The frontal sinus thus discovered was enlarged by means of chisel and gouge so as to admit free access thereto, and was found to be filled with polypoid granulations which were thoroughly removed by means of a sharp spoon. The sinus seemed to be dilated much beyond its usual size. The ethmoidal cells were then explored and found to be soft and infiltrated with pus. The incision was then carefully carried along the inner wall of the orbit and an exploration of the cavity made. It was done partly by dissection with a scalpel, using mainly the handle thereof. Upon entering the depth of the orbit a large cavity of pus equal to one or two drams suddenly escaped. The opening was made through the anterior ethmoidal cells into the naso-frontal canal and the infundibulum and down through the nose. On the end of the probe was an eyelet through which a thread was passed, attached to a soft rubber catheter which was then drawn through, carrying the tube with it, one end coming through the opening in the sinus, the other through the nose. The ends of the tube were tied together to keep it in place. The cavity and antrum were packed with strips of iodoform gauze. The wound was carefully packed around the tube and five sutures taken in the wound, over this a wad of absorbent cotton, and the whole held in place by a firm roller bandage.

Immediately following the operation there was subsidence of the swelling of the eyelids and the following day the temperature was normal.

During his stay in the hospital, about three weeks, after the operation, there was a continued and uninterrupted progress toward recovery. The wound was dressed twice daily after irrigation being made into the opening in the frontal sinus, and through the drainage tube into the nose, there being used at different times therefor saturated solutions of borie acid and normal salt solution and occasionally a 1/10,000 solution of bichloride.

The first drainage tube introduced was allowed to remain in position for about two weeks, it was then removed and

a Myles frontal sinus drainage tube introduced in its place, to which was attached at its upper extremity a thread which came out the wound, and to the lower another which came out through the inferior meatus of the nose. This tube with which you are no doubt familiar, has a flange at its upper extremity which projects from the opening into the wound and is introduced into the nose about as far as the superior or middle nasal meatus.

At the time of his discharge from the hospital, the wound with the exception of the point where the drainage tube entered, had healed by primary union. An examination of the nose made at this time by Dr. Myles, showed a large number of nasal polyp. After his discharge from the hospital the patient came daily to my office in order to have his wound dressed, which dressing consisted in packing the frontal sinus first with iodoform and afterwards with sterile gauze, and in irrigation through the nose and drainage tube. This was continued for about four weeks, at the end of which time the drainage tube was removed through the nose, and for some time after its removal irrigation of both the frontal sinus and nose were continued until at the expiration of about two months after the operation the wound had entirely healed.

An examination of the nose made just before he discontinued treatment showed that the nasal polyp had entirely disappeared.

At this time as you will see by looking at the patient, there remains some edema of the upper lid and a slight scar which is somewhat drawn inward at the inner angle. The patient is now quite free from inconvenience or trouble of any kind and has returned to his usual avocation.

The feature in this case, which is the most interesting and worthy of comment, is the sudden invasion of an acute exacerbation upon a chronic sinusitis of both the frontal and ethmoidal sinuses with severe constitutional symptoms, i. e., intense swelling of the lids, chemosis, protrusion of the globe and restricted movements of the eye ball, clearly pointing to the presence of an abscess in the orbital cavity. This no doubt was superinduced by an extension of the inflammatory process which began in the one or both sinuses, extending into the orbital cavity, and which was clearly diagnosed before the operative procedure was begun, and rendered immediate surgical interference imperative.

Another interesting point to which I wish to call your attention is the apparent connection in the affection of one or both sinuses with scarlet fever, in the paper which I read before the Eastern Section of this Society, in Philadelphia, February 17th, 1900. I reported a case of necrosis and empyema of the frontal sinus, which was also attributable to this cause. The patient had been otherwise in good health until the age of 16 years, when he had an attack of influenza, followed in two weeks by scarlet fever, resulting in the development of an abscess in the orbital region associated with considerable orbital cellulitis. I mention these two cases in connection because of the apparently causal relation existing between this exanthema and affections involving both the orbit and the accessory sinuses. This is, perhaps, not to be wondered at when one considers the inflammation of the mucous membrane of the throat and nose so characteristic of this disease.

In the case which we are now considering, it was the neglect, or rather inefficient treatment of the chronic process, which resulted in the severe acute symptoms which ensued when the patient came under my notice, and suggests the necessity for a more radical operative procedure in all cases where the inflammatory process manifests itself by external swelling in the upper inner angle of the eye, with

tenderness and swelling of the lids, which is a sure indication of an empyema of the ethmoidal and probably of an implication of the frontal sinuses as well.

The mere opening of such swelling and evacuation of pus can only give temporary relief, and permanent relief is only to be obtained by an operation which will permit of a free exposure and thorough exploration of the condition of the frontal and ethmoidal sinuses and the establishment of free drainage through the nose.

Without such interference a fistula may exist, as it did in this case for years, and brain complications may ensue at any time.

Upon the different methods of operating to accomplish this result, I have dwelt more at length in the paper to which I have already referred (loc. cit.).

A very interesting fact in this case to which I wish to call your attention is the complete and entire disappearance of the numerous nasal polypi after the operation, which goes to show what I think has been pointed out before, that the appearance of these polypi is dependent upon disease of the ethmoidal cells. The specially interesting and intimate connection existing between the disease of the nasal sinuses and the ocular affections, has attracted the attention of both oculists and rhinologists, and it would, perhaps, be difficult to add anything new in this particular. Cases of both frontal and ethmoidal disease of the sinus nearly always exhibit some ocular manifestations, but it is particularly those cases with the involvement of this organ which come under the care of the ophthalmologist. I have observed cases in which neuritis and subsequent atrophy of the optic nerve, have been the result of such processes by an extension of the infection along the sheath of the optic nerve.

An interesting article bearing upon this question has been recently published by Broeckart (*Revue Hebdomadaire de Laryn. et de Rhin.*, Jan. 5th, 1901). In this article he enumerates a number of ocular complications, sometimes only slight, passing troubles, sometimes serious, very often grave complications, such as inflammation of the orbit, paralysis of the muscles, narrowing of the visual field, atrophy of the papilla, iridocyclitis, panophthalmitis. These conditions have been the object of numerous studies, and I do not intend here to dwell upon them as they are enumerated in the article to which I have referred, and which are easily explained on the ground of the close proximity of the eye and the sinus, as in this case it is easy to conceive that affections of the anterior ethmoidal cells may easily extend to the orbit, since ethmoidal sinusitis is almost always accompanied by frontal sinusitis. We all know, too, how often disease of the nose and adjacent cavities may react upon the eye by the nervous route, the trigeminal and cause phenomena which are purely reflex. As is shown by the author, I have already quoted, even iritis and opacities of the vitreous and retinal detachment follow in the wake of these affections. Without any attempt to more than merely suggest by these brief enumerations the dangers which may result by extension of the diseases of these accessory sinuses to the organ of vision. I leave the matter for your further study and observation.

In conclusion, I wish to express my sense of obligation to Dr. Myles for his most able assistance and valuable suggestion which contributed so much to my success in this case.

SPINAL ANESTHESIA.*

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This subject has been very prominent in the minds of many surgeons for the past ten months. It has, also, been discussed freely in the leading medical journals of the world and is still a subject of active interest. Like all new themes, it has its enthusiastic supporters as well as those who criticize its administration. I believe that it will maintain a useful position in the field of surgery, but just what the boundaries of its uses are has not yet been decided.

The domain of cocain as an analgesic is gradually increasing. First, it was used as a local external application on mucous membranes; secondly, a few minims of the stronger solutions were used subcutaneously to a limited area; thirdly, it was used in a diluted solution, combined with morphine and salt (Schleich's formula) to extensive areas; fourthly, it was injected into nerve trunks; fifthly, it has been introduced directly into the spinal canal, that it might have a direct action on the lower portion of the spinal cord. It is to its use in the latter position that we will confine our remarks in this paper.

Spinal Cocainization is an American idea. Attention was first called to it by Dr. Leonard Corning, in his experimental work, as early as 1885. Prof. Bier, of Germany, took it up about two years ago and did some work with it. This was followed by Prof. Tuffier, of Paris, who demonstrated its applicability in all operations below the diaphragm. Since August, 1900, it has been used in all the medical centres of this country. Its application consists of injecting into the lumbar region of the spinal canal an aqueous solution, containing from 1-5 to 1-3 of a grain of cocain hydrochlorate, preferably a two per cent. solution. Many needles have been devised for this purpose. Some are made of platinum and gold and are quite expensive. I have always used a needle of finely drawn crucible steel, with a trocar inserted, that I have made by the J. F. Hartz Co., Detroit. It is an inexpensive needle, and has always proven very satisfactory. The all-glass syringe and the glass syringe with rubber-tipped piston are the most satisfactory, for they can be sterilized by boiling. They are, also, inexpensive, and can be discarded after use if desired. The needle is inserted through the lamellar space of the fourth and fifth lumbar vertebræ. This is the usual space, though a space or two above will answer. The tip of the spinous process of the fourth lumbar vertebra is taken as a guide. This is on a level with the crests of the ilia. The patient is in a sitting posture with the spine well flexed. The needle is inserted about one-third of an inch from the spinous tip (laterally) and directed inwards and to-

*Read before the Surgical Section, Michigan State Medical Society, held at Battle Creek, Mich., May 15th and 16th.

ward the medium line until it enters the spinal canal. If the needle is in the proper position the spinal fluid will flow through it when the trocar is withdrawn; this is evidence of its being in the canal. This was thought necessary at first, but some surgeons have succeeded in producing analgesia without entering the canal; simply injecting it outside the subarachnoid membrane, absorption taking place through the membrane. The cocain may be prepared in different ways: By dry sterilization in small envelopes and dissolved in the proper amount of sterilized water, when required; by means of the water bath, or by filtration through a Chamberlain filter. By careful sterilization of the needle, syringe and solution I do not think there is much danger of infection. I have not seen nor heard of any cases of sepsis following its introduction. The injection affects patients differently. Some will succumb to its analgesic effects in from eight to twenty minutes, while it will take from twenty-five to thirty minutes to produce the same symptoms in others. Analgesia begins in the soles of the feet and extends upwards to the umbilicus and as high as the clavicle. I do not know just why this difference should be, but have thought it might be due to the location of the cocain in the canal, or to the amount of cerebro-spinal fluid present. It not only differs in its analgesic properties, but it produces general symptoms that differ greatly. Some patients will become pale and nauseated in a few minutes, and a little later will vomit. This may be accompanied by tremor of the lower extremities with the expression of a slight shock. Other patients will show no signs of gastric or circulatory disturbances or distress of any kind for the first few hours. They appear to be stimulated by its action and become quite talkative. The most constant and annoying distress that follows is that of headache, and this is frequently severe in the occipito-cervical region. It comes on from three to six hours after the injection and continues from twelve to eighteen hours, as a rule. In severe cases it may last three or four days. In one case I had it lasted for four days. It was confined to the occipito-cervical region and accompanied by rigidity of the muscles of that locality, which was not relieved by bromides, codiae, etc. Tropococain hydrochlorate does not produce the unpleasant after effects that cocain does. Willy Meyer (*Medical News*, April 15) reports using it in genito-urinary surgery with perfect satisfaction. Schwarz (*Centralblatt f. Chirurgie*, March 2, 1901) reports its use in sixteen cases successfully. The dose of this drug is from $\frac{1}{2}$ to 4-5 of a grain. I have used this preparation in two cases, but the analgesic effects were not satisfactory. It did not appear to produce complete anesthesia. Spinal narcosis was one of the subjects for discussion at the Thirtieth Congress of the German Surgical Association held in Berlin this year. At that meeting Mikulicz reported its use in forty cases with satisfactory results. He predicted that it would be one of the most important methods of anesthesia in the future, when it becomes perfectly understood. Bier, at the same meeting, had collected records of 1200 cases which had been operated on by this method. He pointed out that a great difference existed as to the amount of cocain required to produce the desired effects. The amount varied from one to three cgm. He has tried encain, tropo-

cocain, and other drugs, but these did not prove satisfactory. He stated that in many cases symptoms of cocain poisoning developed, such as nausea, dizziness, vomiting, chills, rise of temperature, circulatory disturbances, paresis, and in a few cases collapse and death had followed. He believes it requires further investigation before it is adopted in general.

In my experience the most annoying symptom that follows its use is the severe headache. This is somewhat relieved, however, by bromide, codiae, hyoscine hydrobromate, and nitro-glycerine. Just what this pain is due to has not been settled. Bier lays great stress on the point that the equilibrium of the spinal fluid be maintained, that is, that the same amount of cerebro-spinal fluid be allowed to escape that you intend to introduce of your cocain solution. I have seen severe headache follow when this precaution was closely adhered to. Prof. Laborde, of Paris, in experimenting upon animals, has shown that the injection of cocain produces two periods of intoxication. "In the first there is extreme hyperexcitability, the animal trembles, is agitated, and even has convulsions; the second period is analgesia without tactile anesthesia." He states that through the motion of the cerebro-spinal fluid the cocain may extend to the medulla, and believes it dangerous. Dr. Tuffier, its leading advocate in France, says: "Injection by this technique does not show imperfections." He continues his method and believes it to be harmless." Many obstetricians have used it in labor cases. They all report favorable results, and believe it a great advantage to the accoucheur. Intrarachidian injections of cocain are finding other fields of usefulness. It is being used as a therapeutic agent in sciatica. Dr. Archard has injected as much as three-tenths of a grain into the spinal column in cases of sciatica. Prof. Marie has been trying it in the same manner and reports great improvements from small doses introduced into the spinal canal. Judging from the above statements, it can be seen that the future limitations of lumbar puncture are still in doubt. For this method to supersede the use of general anesthesia it must be shown that it is less dangerous and distressing in its effects. That there are cases when it is indicated in preference to general anesthesia has been conceded. These are: when the patient is suffering from general peritonitis, distention of the stomach and intestines, disease of the kidneys, diseases of the lungs, and advanced disease of the heart.

I have operated by this method about twenty-five times, and I believe it is about as difficult to select the patient who will act favorably under its use as it is to select beforehand the patient who will act well under general anesthesia. I have seen the strongest men suffer most severely from its after effects. On the other hand, I operated on a feeble lady, aged seventy, for senile gangrene, amputating above the knee, and she did not suffer the slightest from the cocain; upon returning to her room, she immediately asked for a cup of tea and relished it; she sat up in bed during the day, as though nothing had happened. In the cases I have operated on there have been no symptoms of sepsis or spinal irritation following. I have recently seen some of those that were operated upon six months ago and they have no sequela whatever following.

As previously stated, I believe that lumbar puncture will have a useful position in the field of surgery, but I do not believe that the boundaries of its domain have yet been marked out. This cannot hope to supersede general anesthesia in all operations below the diaphragm until some method of technique or preparation of cocain has been selected that will be followed by less distressing after symptoms than we have from it as used at present.

REPORT OF A LIPOMA REMOVED FROM THE CHEEK UNDER MEDULLARY NARCOSIS.

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This case is of unusual interest on account of the position and enormous size of the lipoma. It not only demonstrates that the cocain analgesia can extend over the entire body, but it tends to show the superiority of this form of analgesia over that of

ble from its weight and throbbing as well as its appearance. The patient has consulted a number of surgeons during the past five years, with a view to having it removed, but all objected to the operation, as his heart would not stand a general anesthetic. One surgeon sent him to a hospital and kept him under observation for three weeks and discharged him with the advice never to take an anesthetic.

It was only because of my belief in the safety of cocain that I decided to operate. Half an hour before the cocain injection the patient received $\frac{1}{4}$ gr. morphia and 1-30 gr. strychnia, hypodermically.

The injection was made in the second lumbar space, with the needle pointing upward, and twenty drops of a 2% solution of cocain were injected as rapidly as the piston of the syringe could be pressed. Analgesia was complete in the lower extremities in three minutes; to the fingers in ten minutes; over the head in twelve minutes. The tumor weighed nearly two pounds, after the blood was removed. I also removed the hemorrhoids by cautery. The patient was free from pain during the operation. He was slightly nauseated just before the operation. There was no emesis. The patient did not appear to suffer from shock and to all appearances was in much better condition at the close than at the beginning of the operation.



Figure 1. Lipoma of the Cheek.

a general anesthetic, especially in such cases as the following:

Mr. T., aged 65, clerk by occupation, height 5 ft. 8 in., weight 210 lbs., American born. He has had a lipoma of the left cheek of 25 years' standing; also internal and external hemorrhoids from childhood, varicose veins of the lower extremities, aortic insufficiency, enlarged, dilated, irregular heart and chronic nephritis; his urine was loaded with casts and albumen. His lower extremities were dropsical. The patient had been a constant drinker for the past fifteen years.

The tumor during the past year has caused much trou-



Figure II. After the Operation.

For days before the operation the pulse rate had varied from 100 to 120; at the time of the hypodermic injection, the pulse was 126; respiration 18. At the time of the cocain injection, the pulse was 128; respiration 22; fifteen minutes after injection, pulse rate 60; respiration 24; pulse rate was regular, full and not intermitting and varied during the operation from 60 to 64, which was normal and remained same after operation; respiration, deep and full, varied from 22 to 26. The patient took some whiskey during the operation and expressed himself as all right.

The wound closed by primary union, save at the center which closed by granulation.

THE RECOGNITION OF EARLY SYMPTOMS INDICATING DANGEROUS FORMS OF INSANITY.*

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Of the many problems which confront the physician, none present such peculiar difficulties as that of mental alienation; determination of its existence involves decision upon a course of action which often profoundly influences the future prospects and the life of the patient. On the other hand, unwarranted delay in diagnosis may precipitate avoidable suffering or calamity upon the patient, his friends, or society. It becomes necessary to protect the patient, as well as society, from results of the essential and peculiar manifestations of his malady; the duties and responsibilities of the physician should therefore be as clear as in his dealings with other diseases which threaten the safety of the public. In a recent paper, Dr. Edward C. Runge admirably sums up the matter as follows: "In our times the sovereign state exercises its police power by enacting stringent health-laws, which have for their chief aim the protection of the many against the few who are considered a source of danger to their fellows. The threatened advent of cholera meets with rigid quarantine regulations at the seaports; millionaire and pauper alike are subjected to the same inconveniences for the sake of public safety. An outbreak of smallpox calls for immediate confinement of the victims in pest houses. Diphtheria and other infectious and contagious diseases cause the sufferers' isolation and the public stigmatization of his abiding place. There is an ever-growing tendency to deal with tuberculosis in an equally vigorous manner. In all these instances the common weal is considered paramount, the suffering individual having to submit patiently to inconvenience and possibly to considerable losses. With regard to the insane, the conditions are identical, for not a single case, be it ever so mild, is not to some degree harmful to some other unaffected members of society. The daily contact with an insane person, in families bearing so often the imprint of an hereditary predisposition, must exert a baneful influence on others about them."

Determination of the character and degree of mental alienation becomes a matter of importance as to the patient's being treated at home or whether commitment to a hospital is necessary; the latter is usually a measure of last resort through the feared disgrace or stigma attached to the admission of mental infirmity. With regard to those cases in which actual danger is threatened, however, there can be no difference of opinion, and early separation from home surroundings and isolation in a hospital especially intended for the care and treatment of the insane becomes imperative. Made to appreciate the existence of danger, relatives of the patient will usually be found quite willing to have the physician assume the weight of responsibility and to abide by his decision; though here, let me say, there may be need of all the weight and force of confidence in

diagnosis and conviction born of conscious knowledge which the physician can bring to bear.

There are difficulties in the way of dividing the insane into a harmless and a dangerous class, as there are in drawing within the narrow limits of definition a description of such a variable condition as insanity. Locke's oft-cited observation that "madmen do not appear to have lost the faculty of reasoning, but having joined together some ideas wrongly, they mistake them for truths, and they err, as men do that argue right from wrong principles,"² is to-day applicable to the majority of cases.

A practical advantage of definition is that it directs our attention to certain prominent features or complications attendant upon the disease, and one which I shall use, as serving the purpose of this paper is the following: "An insane person is one who is a menace to himself, to property, or to the peace and safety of others." From this view-point the psychic symptom is the essence of the disease, though we know it to be, in the great majority of cases, the outgrowth and final culmination of conditions and causes which have been operative for years.

Early diagnosis best enables us to control disease-processes wherever found; let us see whether there are indications by which we may early determine, as well, that danger is threatened to patient, property or others, that we may inaugurate proper precautionary measures, at the same time placing the patient under the most favorable conditions for the cure of his malady. We must first realize that morbid mental states (ideas, emotions, and even hallucinations and delusions), may exist unsuspected by those closely associated with the patient, though they may for a long time have been victims of his *bizarre* actions; this need not surprise us when of normal man it has been said that "no mind is wholly revealed to us. * * * No man is ever perfectly revealed to those who best know him. No man knows himself wholly. The higher the man the less can he be entirely acquainted with that self, the less can the world know him." (Weir Mitchell.)

It is a principle of normal psychology that we can interpret the consciousness of others only by their actions. Modern medical psychology reveals to us something of the mind of the psychopath according to this principle, and increasing knowledge of brain structure and function, with modifications due to disease, enables us not only to form conclusions with greater precision regarding the significance of such actions, but points the way to proper remedial measures. In addition, it explains the rationale of that plan of treatment systematized, and for so long a time successfully employed, by him who has in such large measure contributed to our knowledge of mind in its manifold morbid phenomena: To our reproach be it said that the French were the first to apply the broad principles of the Weir Mitchell rest cure to the treatment and management of the insane; and then we now extol, instead of its author, when dilating upon the advantages of "Séjour au lit,"—sojourn or rest in bed.

In hospitals for the insane we have the exaggerated forms of mental defectiveness; but careful study of these leads to clearer comprehension of the milder grades which often are never confined in

*Read before the Pittsburg Academy of Medicine, January 2, 1901.

hospitals, though they may constantly menace society. In general delirium with incoherence of speech, numerous and varied illusions and hallucinations, alternate weeping and laughing or intense maniacal furor: In melancholia with exaggerated sense of ill-being, profound emotional depression, and uncontrollable impulse toward suicide: Or in the patient presenting frightful hallucinations and delusions of persecution; who screams with terror or attempts suicide or homicide that he may escape from the horrors of the situation³—these present no difficulties in diagnosis, and it is but necessary to see them in order to decide what to do. Scarcely one patient in a hundred, however, presents this vivid picture; the majority, even when fully developed, often manifesting but slight deviation from the normal. In cases so obscure that we cannot feel sure of the existence of any of the cardinal symptoms of insanity, how may we justify a decision which, acted upon, so seriously affects the patient in deprivation of personal liberty, social standing and legal responsibilities?

In a general way, it may be said that just as we weigh and estimate the significance of symptoms representing known anatomical lesion, connecting disturbance of function with abnormality of structure, so we recognize causal relations between morbid psychic states and developmental, nutritional or structural change in the brain cell, with etiologic factors of heredity, neuropathic disposition, toxemias (metabolic and others), or extreme fatigue or exhaustion; we deal with clearly defined symptoms or symptom groups of disordered sensations, images, emotions and ideas, which form well-known types of mental disease progressing through a definite clinical course to partial or complete recovery, chronicity or death.⁴ In our psychological survey of the supposedly insane person we employ methods similar to those in sizing up the mentality of our saner fellow-men; as in the multitudinous relations of life, our estimate of others is determined by their actions, from observed actions assuming the existence of certain guiding principles or impelling forces (instincts, desires, emotions, ideas); so we may reason that, given certain tendencies, beliefs or convictions, we may expect of an individual under given circumstances a certain course of conduct.

Binet likens the mind to a vast polypus of images, as he does the body to a polypus of cells, and says that mental activity results from the activity of images as the life of an organism results from the life of its cells.⁵ This vast collection of images,—varying with the organization, environment, and degree of culture of the individual,—received by the several avenues of sensation, registered by the memory, compared, classified, and continually reinforced and modified by later sensations, may be influenced by the imagination, transformed into emotion, and finally into muscular action,—how, we are yet unable to say, though we begin to understand the mechanism of such transformation. In abnormal mental states these processes are brought vividly to light, and it is here that psychological and medical science must meet if resulting phenomena are to be correctly interpreted. It is not my intention to stray far into the field of psychology, but reference to a few principles is necessary if I am to attempt even meagre

explanation of a few phenomena of the morbid mind. Ribot teaches that in health, all higher development of intellect is along the lines indicated by the complex of emotional conditions in the individual;⁶ ideas lingering in consciousness and attracting other ideas in harmony with them and with the general emotional tone. He has shown that the feelings are the most tenacious of all forms of mental activity;⁷ without them man would have few motives for action, nor would he desire to act. In many forms of mental disease we find that certain emotional states are not only the invariable accompaniment, but also the chief characteristic of the mental state and, even more manifestly than in health, they here represent the real forces which govern conduct. With progress of the malady we see the gradual but progressive waning of conflicting and opposing ideas, which less and less vigorously exert their inhibitory influence, until the emotional element predominates, all processes originated by the one morbidity active group tending to work out their definite results with a precision and certainty unknown in normal life. In estimating the tendency to dangerous acts, we therefore direct attention to the emotional element, outward manifestations of emotional processes becoming the important indices to these inner hidden forces, and their systematic study must go hand in hand with that of the defective, perverted or diseased physical states with which they are so intimately associated.

Regarding the different images as preserved and reproduced sensations, we discern important relations with physiological phenomena of the senses and their underlying cerebral basis. We may therefore reason concerning the mental phenomena of images precisely as we would about their physical basis;⁸ and in this we do not go beyond the limits of demonstrable knowledge, since the experiments of Féré and Binet prove the image to be a phenomenon resulting from an excitation of the sensory centers of the cortex.⁹ Further observation along psychological, clinical and pathological lines tends to confirm the findings of these investigators, and the argument that there is between perception and image identity of nature, identity of seat and only difference of degree; that every image contains a tendency towards action because of the motor elements included in the image (Ribot), gives us a sound working hypothesis which we can, and do apply practically in estimating the tendencies of the morbid mind with its invariable tendency to translate images into acts.

Since every psychic action presupposes previous nervous action,¹⁰ we cannot separate disorder of the brain from antecedent defect, disturbance, or perversion of nerve functions, and we aim, in estimating the significance of morbid mental phenomena, to interpret them in the light of the patient's past, seeking for evidence of previous abnormalities. Tracing back the patient's history for years may be necessary, but in this we find much that aids us, and though it is difficult to separate the morbid from the normal in individual cases, or to say definitely what is symptomatic of mental abnormality and what consistent with mental health, we begin to understand the significance of morbid tendencies, impulses, emotions, obsessions, etc., experience daily

confirming the observation that the variable manifestations of impaired or perverted nerve function which we class under the general term of neurasthenia, are common antecedents of mental disease;¹¹ and when cerebral symptoms of neurasthenia predominate in any case hampered with slight but manifest developmental defect, burdened with psychopathic heredity, or who carries with him some toxic substance of the extrinsic, bacterial or autochthonous class productive, as shown by Van Gersen, of degenerative change in the tissues of the brain in precisely the same manner as other organs,¹² it behooves us to early recognize more serious mental defect into which it develops and to inaugurate necessary precautionary measures against dangerous acts.

Ordinary life reveals many predictions of the most serious forms of insanity, as well as variations which show the transitions from the normal to the morbid state;¹³ this because every individual has his own habit of intellection, imagination and feeling depending on the nature of his organism.¹⁴ It has often been said that in mental aberration the patient presents ideas, beliefs and sentiments widely differing (or, indeed, quite opposite) from those entertained when in full possession of his faculties: This is misleading, since, in practice, careful analysis shows the psychical abnormality to have developed along the lines of nervous action peculiar to the individual when he was considered well in mind. Thus, the depressive forms of insanity are apt to occur in reserved, timid, scrupulous individuals,¹⁵ while those forms in which we meet with exaltation of the mental functions, attack by preference subjects of expansive and excitable temperament, young persons.¹⁶ Even more clearly is this shown in partial, or progressive systematized insanity, which affects, by preference, those of gloomy, suspicious, irritable character, and inclined to pride and misanthropy. Or, again, in the various forms of insanity associated with certain periods of life, we find the psychical symptoms taking their coloring from mental states normal to such periods, i. e., they are modifications, distortions, or perversions of such traits. In the insanities of puberty and adolescence, for instance, there is emotional disorder, loss of self-control, and impulsive violence. If of the depressive form tending to solitude, moroseness, excessive timidity, vague longings, tears and sadness. If of the exalted form, there are varying degrees of excitement manifested in excessive activity, turbulence, insomnia, continual tricks and annoyances, dissimulations and falsehoods. In the insanities of old age, we find psychical symptoms in keeping with the querulousness, suspicions and melancholy of senility.

The morbid mental state, whether of long or short duration, is marked by emotions either pleasant and agreeable or unpleasant and painful. Ribot has shown that as symptoms reveal to us the existence of a disease and not its essential nature, which must be sought in the hidden lesion of tissues and organs, so pleasure and pain are only effects which guide us in the search for causes hidden in the domain of the emotions;¹⁷ they depend upon the manner in which the nerve centers of the individual react to stimulation from without and on the inten-

sity of that reaction. Of the pleasant and agreeable mental states we encounter all degrees from the slight expansiveness, with the usual accompaniment of ideas of excess of physical vigor and mental accomplishment (singing, dancing and incessant muscular activity), to those of delirious grandeur, as fabulous wealth, great power, Divine inspiration, etc. These states are characterized by corresponding disorder of the emotions, instincts and acts; but through incoherence, mobility and incessant change, such patients are usually incapable of planning evil, and danger is menaced only through their impulsive acts.

Unpleasant and painful mental states are marked by depression, sadness and discouragement, with morbid ideas of poverty, ruin, weakness, disease, persecution, etc. There is concentration of the mind upon sad or painful ideas, this limitation and fixedness contrasting strongly with the mobility and diffuseness observed in pleasurable states. We may regard them as due to fatigue of exhaustion of the nervous centers, since a variable degree of motor inactivity is constantly their accompaniment. They are present in many forms of mental disease, and may lead to danger through suicide, self-mutilation, and, through convictions bringing as a result modes of living or of action, directly affecting the health of the patient.

Since painful mental states are the earliest manifestations of many forms of insanity, as well as the invariable and characteristic accompaniment of melancholia, it follows that they are frequently seen by the general practitioner; indeed, many cases run their entire course outside a hospital under the family physician's care. Often no thought of mental disease is seriously entertained until after attempt at suicide has been made. There are few cases of melancholia which do not, at some time during their course, entertain notions of suicide, and though no attempt may be made to carry them into execution because of the characters of indecision and inertia or motor inactivity peculiar to the mental state, it must not be forgotten that under sudden impulse, or unforeseen access of energy, these patients make way with themselves suddenly and without hesitation.

In the widely varying forms of melancholia, we note a fairly constant order of psychical symptoms; the basis is depression or dejection, and, though there may be some foundation of fact in death of relative, serious illness, loss of property, etc., it has been as its distinguishing features that "*it is excessive and out of proportion to its apparent cause.*" Whether originating in this manner or entirely causeless and motiveless, it is early accompanied by mild thought inhibition or inhibited association; there is inability to fix the attention upon anything not in keeping with the emotional state, and soon, everyday occurrences and ordinary experiences come to be interpreted in the light of existing morbid emotions. This state may long precede sense deceptions and delusions, which are accidental and non-essential attendant symptoms (Ziehen) being developed secondarily from the dejection. The dejection, always primary, remains constant throughout the course of the disease, though its intensity may vary within very wide limits. Next appear

anxious states which also may be continuous, but are usually paroxysmally intensified; they may be regarded as exacerbations (attacks of anxiety), which occur at different times and vary in duration from minutes to hours. At such times the inhibited association may be prominently manifested in retarded flow of thought as well as in retarded voluntary movement, but the ideas and movements induced by the anxiety, are unaffected by the generally inhibited association,¹⁹ and, at these times, the morbid train of thought may rapidly translate itself into appropriate, accompanying acts upon so slight a determining circumstance as the sight of a weapon or the presentation of opportunity. The danger of suicide in melancholia becomes one, the gravity of which cannot be overestimated. Peculiarities in the manner of attitude of the patient may be the only signs pointing to the existence of morbid tendencies; but, while the patient's mental state is unmistakably shown by actions, in themselves, these afford no indication of the degree of danger. From that classification of melancholia, based upon the diverse character of the motor reaction to the emotional disturbance, we note that the form which presents the slightest outward manifestation of the mental state is one in which exists the greatest danger of suicide: Thus, while attempts occur in melancholia passiva, melancholia agitata and melancholia attonita, danger is greatest in the last-named because the apparently calm manner of the patient is apt to find one off guard, and the deed may be accomplished before disposition to suicide is suspected. Tendency to sit and brood, apparent apathy, attitude of dejection, evidences of apprehension of imaginary danger manifested by "fear in all its varieties, from simple scruple to panic terror" these become important criteria of the depressive mental states which threaten danger and should prove sufficient warning.

As threatening danger to property and to others, we must include all subjects of "falsified impressions of the outer world" in the way of suspicions and ideas of persecution, which may or may not be accompanied by the cardinal symptoms of insanity; hallucinations and delusions may precede or accompany the earlier emotional manifestations, but usually they follow them. These peculiar emotional manifestations are found in many forms of insanity, but are oftenest seen by the physician as accompaniments of epilepsy, imbecility, and the chronic intoxication psychoses. The invariable tendency in epileptics to painful feelings, manifested in moroseness, susceptibility to groundless dislikes, impulsiveness and irascibility, is so prominent that the note of their character has been summed up in the word "irritability": It follows, therefore, that epileptic insanity is marked by tendency to acts of violence. Berkley writes: "A large proportion of cases of sudden maniacal excitement of a violent, impulsive character, but of transient duration, lasting only a few hours or a day, are nothing more than instances of masked epilepsy, followed by blind, furious excitement".²⁰ Impulsiveness, equally with the irritability, becomes a characteristic feature of epilepsy, and, in the various forms of alienation which accompany it, leads us to expect the sudden acts of violence which are invariably the

outcome of this form of insanity. Here, again, we note their harmony with the emotional states which characterize the psychosis; we continually see unfounded aversions toward relatives, friends, or attendants, developing into conscious anger, thence passing into uncontrollable fury with the commission of homicidal acts under varying conditions of complete or clouded consciousness.²¹ In agreement with other authorities, Berkley writes: "No form of insanity more frequently gives rise to assaults and murders than epilepsy, and in no form of alienation is the physician so frequently called to the witness-stand to determine the responsibility of the criminal."²² Characteristics distinguishing this from other forms of insanity are: unfounded suspicions and aversions, ideas of persecution with a tendency to fits of passion and especially to irresistible impulses (homicide, suicide), and finally its co-existence with terrifying hallucinations.

The manner and attitude of these patients indicate their chronic mental state of suspicion and distrust, even more clearly than their expressed aversions and suspicions. It is important to remember that these may not differ very widely from normal manifestations of emotion, nor is the starting point of a paroxysm of rage always an imaginary injury; anger, originating in some trivial circumstance, may develop in much the same way as a common manifestation of this emotion, but soon reaches a stage of blind and violent motor excitement, with overwhelming fury. Among epileptics we find all gradations from the patient manifesting but slight surliness and irascibility to the one with frequent outbursts of fury accompanied by brutal and violent actions. It is important to remember that the victim of this psychosis may at any time suffer such violent attack, though previous manifestation of his malady has been atypical and obscure. With unmistakable points in family and personal history, and proof that dangerous tendencies have once been shown, we can, with confidence, predict a further development of his malady, when attacks of rage and fury, and proclivity to impulsive acts of violence will necessitate commitment to some place especially designed for his care and safe keeping.

In estimating the tendency to commission of violent and dangerous acts, this class, with that of imbecility, presents problems of comparatively easy solution: the chief elements to be considered are the character and intensity of the emotional state, remembering that any sudden, intense emotion, whether originating in fact or fancy, is promptly translated into appropriate action.

A class of cases oftenest coming under the care of the psychiatrist after the commission of some act which brings them within the cognizance of the law, is that of imbecility in its various grades. In cases of manifest defect early coming under the notice of the family physician, important points to remember—after determination of its degree—are: that they are incapable of a consecutive course of conduct and of doing anything in earnest; are capable of showing only the less elevated sentiments and affections, and the lower instincts dominate them. They are liable to be seized more or less suddenly with maniacal or melancholic attacks, at which times they are particularly liable to commit acts of

violence, robbery, suicide, or homicide.²⁴ Experience teaches that even in ordinary cases of neurasthenia, anxiety or excitement, in fact, any emotional stress, is fraught with danger to the individual. We can, therefore, readily appreciate the disturbing influence of emotion upon the defective, in whom the higher controlling or inhibitory forces do not operate because they have never been developed. In the imbecile, as in other forms, it is a matter of indifference whether the disturbing emotions have some basis in irritating circumstance, or whether they are imaginary as regards their causes; we have only to note their effects which are too often calamitous as regards society.

The following variety of insanity, not infrequently seen, in its simpler forms, runs a course so uniform and distinct that it should present few difficulties in diagnosis. Not rarely, however, fully developed and typical cases are objects of hard fought controversies in the criminal and civil courts, while the milder and less apparent ones render life almost unbearable to those who are subjected to their eccentricities and revengeful disposition; in immature, incomplete and mixed forms, however, they may confuse even the expert psychiatrist. The beginning of partial, persecutory, progressive, systematized insanity or paranoia, as it is variously called, is very often supposed to date from the time of commission of some act, which should be regarded as simply the final expression of a previous stage of longer or shorter duration. At the present time, I have under my care a typical case, who, for thirty-five years, wandered from state to state, driven hither and thither as a result of his delusions, yet certified as insane only six months ago.

Early recognition of persecutory insanity is of the greatest importance because the affected individual is highly dangerous to society. Regis writes: "Equally with the epileptics and possibly even more than these, the persecutory insane are, of all lunatics the most dangerous. The greater part of crimes committed outside of the asylums by the insane, and nearly all those committed within them, are to be credited to this class. Moreover, it is not only homicides that they commit; they may attempt arson, poisoning, and occasionally, contrary to general opinion and in exceptional cases, suicide." During the last four years, of three successful suicidal attempts occurring at the Western Pennsylvania Hospital for the Insane, two were of this class.

The evolution of partial, reasoning or persecutory insanity is so gradual that the significance of early symptoms is rarely appreciated. Since it attacks by preference those of gloomy, suspicious, irritable character, the earliest observed manifestations, in one of this type, very frequently have apparent foundation of fact in some slighting circumstance, neglect or aversion of relatives and friends, and consequently they are not given the importance deserved as symptoms of mental aberration. That there should be exhibition of aversion on the part of those who have suffered most from the patient's whims, eccentricities, and suspicious and revengeful disposition, is not surprising when we consider that incipient insanity is usually the last explanation to be given them; but they play no insignificant part in confirming and fixing his delusions. We thus

early have manifested the essential mark of this form of insanity, which, in its complete development, is the "idea of persecution," and we find all grades from apparently well founded suspicion of conspiracy coupled with resentment to the most elaborately systematized, though preposterous ideas of influence by hypnotism, poisons, electricity, X-rays, etc. Its origin depends upon peculiarities of organization: modifications of this, whether due to disappointment or emotional stress of any kind, exhaustion, bodily disease or indulgence in intoxicants and narcotics, bring about endeavor on the part of the sufferer to explain disordered sensations which thus originate in some imperfect adaptation of his organism. The evolution of the idea of persecution can often be traced to some disordered sense-impression, attributed by the patient to his environment; morbid sense of injury develops into a belief that he is defrauded, conspired against, acted upon by unseen agencies. A vindictive feeling next becomes manifest and danger now threatens. Regis writes: "The greatest peril any one can incur is to be taken by a persecutory lunatic for the head of the conspiracy that surrounds him, for the person against whom he must avenge himself; a peril that is the greater, since the victim is ignorant of it, and the patient in full possession of his mental resources, puts in the service of his enmity an astuteness and a cruelty truly Machiavellian."²⁵

Early manifestations of this form of insanity are few; indeed, they may not be apparent to those most intimately associated with the patient. Though influenced by the most violent imaginings and emotions in keeping with his morbid or insane ideas, it is the rule that he keeps to himself and gives slight outward demonstration of suspicions, hallucinations or delusions. The character of his morbid ideas may be inferred, however, from the objective marks of the accompanying emotional state; these are:—cold, harsh and suspicious manner; short and surly speech, often limited to a few characteristic phrases, such as: "I have nothing to say to you." "You know it better than I," etc.²⁶ As the disease develops, he may often be seen in silent converse, or even replying to himself, frowning or smiling at his own remarks, answering them, or giving way under their influence to sudden acts of eccentricity or violence.²⁷ Reticence, secretiveness, cunning, are such prominent traits as to form characteristics of their condition; and, for some time after commitment to an asylum or incarceration in prison as a result of the commission of some overt act (when they usually exert all the self-control of which they are capable), these may be their only diagnostic features.

Bearing in mind the character of the emotions accompanying this form of insanity, which, even as exhibited by normal man, are those most apt to overcome all higher restraining considerations and to terminate in overt acts, we can better appreciate their significance when manifested by the morbid mind, with the higher functions of the will weakened or abrogated, and how they must eventuate in action,—either in the blind, brutal sort, born of the instinct of self-preservation and determined in its manifestation by the most fortuitous circumstance, or that which is the gradual outcome of resentment,

rancor and hatred—the “deferred aggression” resulting in milder persecutions of the suspected one, or possibly suits at law. The various phases of this form of insanity, e. g., religious, political, erotic,—are evolved in much the same manner as the persecutory form and present dangers indicated by the prevailing emotional state.

Because the frequency with which they are encountered, as well as their instructive phases, those forms of insanity produced by the use of intoxicants, and narcotics, deserve more detailed consideration than can be given them in this paper. In none are the varying disorders in mechanism of intellect, emotions and instincts more clearly seen or more readily followed to their final exploiting in action. From the case of acute intoxication, produced and disappearing within twenty-four hours, to that of chronic alcoholism with accompanying characteristic brain changes, we constantly note morbid psychical manifestations, the variety and extent of which are measured only by individual variation and the complexity of man's nervous organization. To the early and profound involvement of the perceptive and emotional faculties is due, not only the pronounced tendency to exaggerate everything, but also the instantaneous acceptance of the false testimony of the disordered senses. The wrongly interpreted sense-impressions give rise to the illusions so common in delirium tremens: later, the more forcible continuation of the feeble image of internal origin giving rise to the vivid image which appears as an external object; further developing into the ideal and emotional phenomena where we see unfounded doubts and suspicions becoming certainties to the patient: All these evidenced early by accompanying emotional states so characteristic as to be unmistakable, in whatever form they may be manifest. In the maniacal form, we note the familiar phenomena of delirium tremens. In the melancholy form, all the dangers common to depressed mental states confront us, and these in exaggerated form; a tendency to suicide is the rule and often shows itself by a sudden unpremeditated attempt.²⁸ Impulses to destructive violence and ruthlessness characterize it, as they do epileptic insanity, originating in the unreasonable irritability common to both forms. In development of the chronic intoxication psychoses, symptoms common to both epileptic and persecutory insanity are observed, these varying phenomena being explained by familiar psychopathological laws.

In states of dementia, including paralytic and senile, the main tendency is towards weakness, and dangers which may arise are usually the outcome of failure in memory, mental confusion, extravagant conduct, and marked departure from the normal in appreciation of the fitness of things in domestic relations and in sense of propriety; they may occasionally exhibit suicidal, homicidal or self-mutilatory tendencies, but these develop as the result of underlying melancholy, hypochondriacal or suspicious states and are manifested as in other forms of

insanity. The knowledge that such tendencies frequently accompany the devolutional insanities is sufficient warning to bring the proper precautionary measures.

In all forms of insanity the morbid mental phenomena, which vary so greatly in character and intensity,—in so many cases obscure and apparently without order or system,—are, nevertheless, manifested according to well-defined psychopathological laws; interpreted by their light, resultant actions become comprehensible to us, and, in so far as they conform in their principal features to definite, known types of mental disease, their meaning is made entirely intelligible.

In this fragmentary and incomplete manner I have attempted to indicate the mechanism of the processes of feeling and acting which precede, as well as accompany, the cardinal symptoms of insanity and to point out the irrational procedure of suspending judgment until after the appearance of said cardinal symptoms in the potentially dangerous psychopath. My object has been to indicate those mental states which oftenest threaten danger, and to emphasize the import of emotions and their objective marks considered as symptoms, with their tendency to be translated into acts. I have omitted reference to accompanying physical states; these, it must be remembered, are inseparable from the psychical symptoms, the foundation of which they form: I shall not further dwell upon them except to say that in practice, the psychiatrist deals with mind in its morbid manifestations plus defective or diseased physical conditions. It is a statement of Weir Mitchell's that “the thinking general practitioner knows that what he has to deal with is not disease, but a disease plus a man.” This is deeply true of insanity. Nowhere is it more needful to study the human soil in which the disease exists.”²⁹ This involves questions of heredity, developmental defect, predisposition or vulnerability, incidental or exciting causes as toxic substances—either chemical poisons (alcohol, lead, etc.), microbic poisons (syphilis), together with the innumerable influences of environment.

From the view-point of the physician, the essential features of any case of mental aberration have their origin in the underlying morbid conditions which cause the disease, and early appreciation of these, with the significance of early psychical symptoms, brings practical results. *First:* In the prevention of mental disease in one predisposed by proper regulation of his life and placing the individual beyond the reach of diverting and disturbing circumstances. *Second:* In early placing him under the most favorable conditions allowing his weakened cerebral centers to recuperate. *Third:* The better performance of our duty to society in more effectually preventing danger to patient, property and to others.

Not always does the psychiatrist or neurologist have these opportunities of prevention. The incalculable advantages of knowledge of family his-

tory and inherited conditions, diseases of early life and modifications of the organism thereby, variations in metabolic and nutritional functions, together with the influences of education and environment, are all given to the family physician, and, it is no exaggeration to say, place him in position to prevent, or to combat and control morbid mental conditions before they are fully developed.

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DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

April, 1901. (Volume 59, Nos. 3 and 4).

11. A Sebaceous Adenoma in the Umbilicus. WILHELM von NOORDEN.
12. Antiperistalsis. ENDERLEN and HESS.
13. Some Operations upon the Large Intestine. ERWIN PAYR.
14. Strumitis after Pneumonia. SCHLENDER.
15. Tuberculous Peritonitis. J. LAUPER.
16. The Statistics and Treatment of Carcinoma of the Rectum. KARL VOGEL.

11.—Von Noorden reports a **unique case of sebaceous adenoma of the umbilicus**. A woman, aged 38, with excellent family and previous history, noticed an unevenness in her navel two months before operation. Upon examination a tumor was found in the umbilicus about the size of a pea. This increased in size and was removed by operation two weeks later. A stitch abscess resulted, but recovery followed, and three years afterward she was quite well. Histological and microscopical examination showed distinct sebaceous glands in the abdominal wall removed with the tumor; the tumor had a covering like that about the sweat glands; the epithelium was that of the sebaceous glands; and its character was tubulous above, and cystic below. It was diagnosed a **fibro-cystic sebaceous adenoma**. The tubulous character of its upper layers and the retention cysts below were especially noticeable. There seems no doubt that the tumor developed from the sweat glands, but from causes unknown. A full review of the literature of benign and malignant tumors of the sebaceous glands and of the navel is given. Von Noorden suggests that the yolk-sac of the embryo may have left some tissue in the navel which might later form an adenoma or carcinoma of the umbilicus. Such tumors are very rare. But this case shows that a benign adenoma arising from the sebaceous glands can exist in the umbilicus. [M. O.]

12.—After a review of the experiments performed to determine the normal intestinal movements, both peristalsis and rhythmic contractions, with a full resumé of the literature of the subject, Enderlen and Hess describe their own experiments upon dogs. The intestines were reversed, yet digestion occurred quite normally, and the animals kept in good health. Thus antiperistalsis undoubtedly occurs. Antiperistalsis is also seen with vomiting when intestinal obstruction occurs in man. [M. O.]

13.—Payr reviews the **technique of several operations upon the colon**, quoting the work of many operators. His own ideas are illustrated with diagrams. In resection and amputation of the rectum, the proximal end of the intestine will be kept in good condition by employing a **large, specially made Murphy button**. Great care must be taken to operate rapidly; not to permit the end of the intestine to be drawn back into the abdominal cavity; and to prevent infection, either peritoneal or external. This special button

is serviceable for colectomy or colostomy. It can also be used in the formation of an intestinal fistula by any method. On account of the rapidity of the operation when this large button is employed, it is especially of use when colostomy is necessary for intestinal occlusion. Many technical details are given.

14.—Schlender reports a case of strumitis which occurred in a man of 52, who had first noted symptoms twelve years before. Some years later vertigo and headache appeared. This year croupous pneumonia appeared suddenly. Four days later the thyroid began to swell perceptibly. Dyspnea appeared, and became almost asphyxia. The pain in the neck also grew worse. Exploratory puncture of the thyroid revealed pus. This was then incised and irrigated. A diastolic murmur was audible all over the heart, the pneumonia cleared up, and he died. The autopsy showed abscess of the thyroid gland, malignant verrucous endocarditis of the aortic valve, a tumor and anemic infarct in the left kidney, and hyperplasia of the splenic pulp. The temperature did not fall after operation. Such cases of general infection following strumitis are rare. Both **diplococci and streptococci** were found in the pus. After reviewing the literature Schlender concludes that the prognosis in strumitis is uncertain before operative interference; that it depends upon the sort of bacteria found in the pus; and that those cases of metastatic strumitis which appear late will run a more favorable course than those which appear early. [M. O.]

15.—Lauper reports 22 cases of tuberculous peritonitis, 14 of which were operated, the other 8 being tapped and treated medically. The histories of these patients are fully given, illustrated with diagrams. Tuberculous peritonitis is more frequent in women due to the susceptibility of their internal genitalia to the tubercle bacillus. Sixteen of his cases were women. The great majority became ill between the ages of 25 and 30. Heredity plays an important predisposing role. Over 80% of the cases showed marked pain at the beginning of the disease. From his cases, Lauper believes that the occurrence of fever is of no prognostic significance. Nor is fever ever a contraindication to operation. To a certain extent, tuberculous peritonitis recovers spontaneously. Those cases give an especially favorable prognosis in which the source of the infection, as a pyosalpinx, has been removed by operating. Laparotomy is indicated in the serous, exudative, and adhesive forms of tuberculous peritonitis. Operation will be followed by the best results when attention is paid, besides, to better hygiene, rest in bed, strict diet, and the treatment of the other complicating tubercular affections. Of Lauper's operated cases only three showed no improvement at all, and two of these had outspoken pulmonary tuberculosis. [M. O.]

16.—Vogel reports 61 cases of **cancer of the rectum**, 48 of which were operated upon by Schede. The rest were treated palliatively. Thirty-five were in men, of whom 25 were operable. The average age of the men operated upon was 60, of the women, 50. The women who were treated palliatively were younger. The main complaint on admission was the passage of blood and mucus from the bowel, with or without defecation. There were also pain, tenesmus, constipation, etc., for some months. The only contraindications to operation are great weakness, and metastases or growths into important organs. Vogel prefers operation by the perineal method, with resection of the coccyx, which was done in 26 cases. Five of these were again operated. Out of these 31 operations, only 7 patients died. The tumor recurred in 10 cases, after an average of 10 months. The other 22 operations were through the sacrum, after Rydygler's temporary osteoplastic resection of the sacrum. In these cases, hemorrhage, stercoral fistula, disturbance of the bladder, etc., followed. There were no deaths from peritonitis. Of the 22 cases, 10 died, mostly from collapse. There was recurrence in three others. The histories of the 61 cases are given in full, with detailed descriptions of the operations. Statistics of other operators are compared with Schede's results, which were 17 deaths from 66 cases; recurrence in 13 out of 32 patients; and 6 cases of the 48 cases operated upon are alive and well over three years after operation. Of the 13 inoperable cases, colostomy was done in 10 patients. Vogel has filled the article with interesting comparative statistics. A long bibliography follows. [M. O.]

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The Hot Weather.—Such weather as the country has suffered from recently is almost as bad as a pestilence. On Tuesday, July 2nd, the official record for Philadelphia was 103 degrees, a range of temperature which has been equalled but rarely in this city in the experience of living men. This phenomenal day, however, was merely the crisis of a prolonged overheated period, which was almost if not quite unprecedented. The cost of such weather in life and treasure is hard to estimate. The death rate in Philadelphia was increased very greatly, but is not easy to determine the exact number of deaths due to the heat. In the midst of a "hot wave" almost every sudden or speedy death is attributed to the weather. Many deaths are doubtless due to other direct or contributory causes, such as apoplexy, alcoholism and heart and kidney diseases; still the mortality in large cities from such heat is evidently very great. The Bureau of Health from Monday until Friday is reported to have issued death certificates for 208 persons who are said to have died from the effects of the heat. At one time in the week there were 49 dead bodies in the Morgue. The highest death rate ever recorded in this city during a heated term was reached during this period. This death rate, in fact, is little less than appalling. The total number of burial permits issued for all cases for the week was 1088—the greatest number issued in one week since the establishment of the Bureau. Five hundred horses died from heat in this city in the two hottest days, according to one veterinarian.

The hospitals have been severely taxed, but have met the emergency nobly. The public should understand that this means a great additional expense to these institutions. By way of scientific treatment, something new is claimed for saline infusion. This method is said by some to give better results in thermic fever than the cold bathing. It is too early for us to reach any judgment, but we trust some accurate reports will be forthcoming with reference not only to this, but every other form of treatment.

More About Anesthetics.—The problem of anesthesia will not stay down. Ever and again it rises in

one form or another to prove to the world that, despite all study and apparatus, it has not yet been thoroughly solved. There can be no question that ether is not an ideal anesthetic, although in this country it is, and to an interesting extent in England and on the continent of Europe it is becoming, the favorite of surgeons. The objections are obvious. The irritation of the throat, with consequent excessive secretion of mucus and saliva, resulting in difficult respiration and occasionally in cyanosis; the slowness with which the anesthesia is produced; the difficulty in producing it in alcoholics; and the fatal subsequent effects of the form of inspiration pneumonia and renal irritation, and possibly weakness of the heart, must always be taken into account. On the other hand, chloroform, which has so few of these disadvantages, has the fatal defect of causing not infrequently paralysis of the heart or respiration during administration. Recently, Braun (*Muenchener Medicinische Wochenschrift*, May 14, '01) has suggested a modification which to his mind solves the problem; as many men have thought to solve it before, by the introduction of some modification. But Braun's method deserves much credit for its ingenuity, and the results which he reports are quite imposing. He believes that a mixture of the vapor of chloroform and ether, well diluted with air, will anesthetize the patient very rapidly, irritate the fauces but slightly, and avoids most of the immediate dangers of either method alone. Simple mixtures of ether and chloroform cannot be used with advantage on account of the fact that in the early stages the proportion of the ether vapor is greatly in excess of the chloroform vapor, and in the latter stages the chloroform vapor becomes predominant; exactly the reverse of the condition that would normally be desired. He has, therefore, contrived an apparatus which he believes furnishes a constant supply of diluted vapor in uniform proportion. This consists essentially of two bottles of different sizes, each with a cork perforated with two holes. Through one of these holes a long tube is passed which is united with another tube passing through the cork of the other bottle by two rubber tubes and a "T". To the free end of the T another rubber tube is at-

tached at the end of which there is a rubber bulb and a balloon, so that air can be pumped into the bottles. The capacity of the bulb should be about 90 ccm., of the larger flask 200 ccm., and of the smaller flask 100 ccm. Through the other holes in the corks two other tubes are passed, stopping above the level of the liquid, and also connected by two rubber tubes and a "T". The other end of the tube communicates with a metal mouth-piece supplied with a valve on one side. The ends of the long tubes are supplied with stop cocks regulating the amount of air that is admitted into the mouth. The mouth-piece is placed over the patient's mouth and nose, the stop-cocks arranged, and air pumped in at the beginning of each inspiration. When both stop-cocks are open, about 4 parts of ether vapor to one of chloroform vapor well diluted with air, are administered. Usually it is desirable, as soon as the patient loses consciousness, but before the corneal reflex is lost, to close the stop-cock in the chloroform flask and to continue narcotization with the ether alone. If the patient begins to recover during the operation, a small quantity of chloroform should be again employed. In cases in which operations are performed upon the mouth, the metal funnel is replaced by a small tube passed through the nose into the pharynx, and the vapor is delivered directly to the larynx.

Braun has used his method in 250 cases. The average duration of narcosis was 47 minutes, the maximum, however, was $3\frac{1}{2}$ hours. The average amount of ether used was 54 ccm.; of chloroform, 12 ccm. Usually it required from 6 to 8 minutes to render a patient unconscious. Whether this method, which appears to have something to recommend it, will succeed in obtaining general employment or not, remains to be seen. The fear of chloroform in this country is so great that it probably will require more than 250 cases (even though these all terminated very satisfactorily) to secure its recognition.

The Influence of Diseases of the Aorta upon the Development of Pulmonary Tuberculosis.—Although all individuals are more or less exposed to infection by the bacillus tuberculosis, only a few develop tuberculous disease. Why it should be that of two persons exposed to the same infection one should contract the disease and the other escape, has been explained by the greater resistance of the tissues of the one who remains healthy. Beuchet, in his *Paris Thesis* (*Gaz. Heb. de Med. et de Chirur.*, May 12 1901), calls attention to the fact that diseases of the heart in general have a varying influence upon the course of pulmonary tuberculosis. This influence depends upon the circulatory

modifications which the heart lesion produces in the pulmonary apparatus. When the cardiac lesion produces blood stasis in the lung, the course of the disease is retarded and takes on a more benign character. When, on the other hand, cardiac disease produces ischemia of the lungs the pulmonary lesion is made more extensive and its course is more rapid. Aneurysm of the aorta may cause compression of the bronchi and of the lungs or compression of the pulmonary artery and the pulmonary nerves. These effects may exist singly or in combination. If there is a tuberculous process in the lungs in addition to the aneurysm, the pulmonary disease may be influenced in its course, and its evolution by the arterial lesion. Aortitis and arteriosclerosis favor the development of tuberculosis by slowing the blood stream on account of the loss of elasticity and of the narrowing of the caliber of the vessels, thus creating a deficient blood supply, defective nutrition and an anemia favorable to the multiplication of the tubercle bacilli. It is inexact to think that in such patients the pulmonary lesions should tend to sclerosis alone, for, although these lesions do not progress in some cases beyond the stage of induration and take on a fibrous form, they also frequently become soft and end in ulcerative lesions with loss of lung substance. This relation between pulmonary tuberculosis and diseases of the aorta is worthy of further study, and it would be interesting to know the percentage of patients who die from pulmonary tuberculosis who also present aortitis.

An Apology for the Bath.—Florence Nightingale once said that a person could wash and be clean with only a quart of water, but she spoke probably from necessity, not choice, for she had been a nurse in the Crimea, where water doubtless was scarce. When she was in England, we suspect, she took to her tub. Now comes Dr. C. W. Lyman, in *The New Voice*, and tries to make us believe that bathing is only a compromise of civilization. In a real state of nature, according to some German professor whom he quotes, man would require no bathing. His skin would be exposed constantly to the sun and wind and rain, and would be "brushed by dewy branches and grasses." This sort of thing, according to Dr. Lyman and the German professor, would be sufficient to keep a man clean. They take no account of the fact that many primitive people are great swimmers and bathers in the rivers, lakes and sea. Where they find the "state of nature" about which they talk so glibly, we do not know. They think that "we need constantly to work back toward the superb skin circulation of the savage"—in order to do which they imply that we should all

go naked and never bathe. The skin, they claim, when exposed to all the vicissitudes of the weather, develops a vastly more extensive circulation than is seen in the clothed men of civilization.

From all which it appears that only wild men do not need to bathe, and that the bath-tub is derided and avoided only by savages and theorists.

The Army Nurses.—If newspaper enterprise could be restricted to exploiting the simple truth, it would be not only more profitable but also more interesting. This thing of printing bogus interviews (especially on medical subjects) has become a crying evil. Thus a Philadelphia newspaper recently published what purported to be an interview with Mrs. D. H. Kinney, who is absurdly called the "Acting Assistant Surgeon General of the Army Nurse Corps," but who is in reality the superintendent of nurses. Mrs. Kinney has taken the newspaper roundly to task, and contradicts it especially as follows: The office was created by Congress, and not by another woman who once held it. There is not, and there never will be, a training school connected with a United States military hospital. The employing of trained nurses in United States military hospitals was never thought of before the Spanish-American war. There has never been any difficulty in securing competent nurses; the trouble has been to select from among the thousands who have applied. Of 7769 applicants, 1500 have been employed. The Surgeon General does not approve and has never allowed nurses on the battlefield or near the firing line. The highest percentage of sick in the hospitals under favorable conditions is not more than 9% to 10%. There are at present only about 200 members of the army nurse corps.

The sensational reporter had misstated or exaggerated all these simple details in order to make a more "readable" bit of copy. Now his newspaper is obliged to eat his words, but this does not remedy the evil that may come from misrepresenting an important arm of the medical service, neither does it enhance the reputation of newspaper reports on medical subjects.

Diphtheria in Epileptics.—Fradin (*Gaz. Heb. de Med. et de Chirur.*, May 26, 1901, *Paris Thesis*. No. 277) has studied the action of diphtheria upon epileptic crises during an epidemic of diphtheria in the Salpêtrière during the past year. He has found that during the height of the attack of diphtheria the epileptic crises are completely arrested and that during convalescence the seizures gradually return. An infectious process like diphtheria, while it modifies the epilepsy for a time, does not influence its general course. If an epileptic patient who is suffering from an infectious disease has a convulsion,

or if he has an attack of vertigo, the nervous phenomenon will usually be accompanied by a rise of temperature. The treatment of diphtheria in epileptics presents no particular indication. The therapeutic use of antidiphtheritic serum in degenerates gives rise to complications that are more marked the lower the individual is placed in the intellectual scale.

Narcolepsy.—Narcolepsy is clearly distinct from all other varieties of pathological sleep. Furet, in his *Paris Thesis* (*Gaz. Heb. de Med. et de Chirur.*, June 2, 1901), advances the opinion that narcolepsy is a symptom of autointoxication. The condition is observed in the course of diseases of nutrition, such as diabetes and obesity; during the acute micro-organismal diseases, such as influenza, typhoid and typhus fevers; as a complication of the intoxications, such as alcoholism, all of which may be considered as producing autointoxication. Often other symptoms of intoxication, such as epileptic seizures, are coincident with narcolepsy. The narcotizing action of toxic substances, such as opium and its derivatives, chloral, etc.; the fact that there are cases on record in which narcolepsy disappeared at the same time as did the disorders of nutrition; the toxic theory of Breyer and Léo Eréra, partly confirmed by the experiments of Bouchard on urinary toxicity, are arguments in favor of the author's view that narcolepsy is a symptom of autointoxication. The gravity of the condition depends upon the affection in the course of which it develops. The treatment consists in suppressing the cause of the intoxication, such as alcohol or excessive eating, and of favoring the elimination of the toxin by milk diet, purges and injections.

Uniform Medical Legislation.—The preliminary report of the Committee on Organization of the American Medical Association (see *Journal of the American Medical Association* of May 25th, 1901), while speaking of the reorganization, mentions prominently medical education and medical legislation and reciprocity. We sincerely hope, not only that these two most important questions will receive due consideration on the part of the House of Delegates, and of the General Meeting, at Saratoga, but also that material progress will be made by advocating and endorsing such steps as may be recognized as commendable. It appears to us that a high standard of preliminary education, and a thorough medical course in a well equipped and continually inspected medical college, should be insisted upon. The example set by the New England Medical Boards, which formed a working group, should be recommended. These and similar considerations suggest themselves to the American Medi-

cal Association. Although a sub-committee on uniform medical legislation was appointed by the Conference of the Committees on National Legislation of the American Medical Association and affiliated societies, the responsibility, we think, rests upon the House of Delegates, and upon the General Meeting. Circumstances place the reorganized Association face to face with great problems. We feel assured that the American Medical Association will be equal to the task.

Hereditary Transmission of Acquired Immunity.

—Probably one of the most important problems confronting the bacteriologist is that of immunity, a problem which so far seems to baffle all efforts at a satisfactory solution. We know what the manifestations of immunity are, but as to the whys and wherefores we are still in the domain of theories which at best are only plausible hypotheses. Immunity is usually divided into natural and acquired; the latter again into active and passive. So far as the immediate effect on the individual is concerned, both natural and acquired immunity are alike in protecting him against infection, but there is a sharp dividing line between the two, indicating that they are distinct biological phenomena. Natural immunity is racial and transmitted from the parent to the offspring, while the acquired is confined to the individual, and may be transmitted in the form of a passive immunity which is but of brief duration, from a few days to 2-3 months. Accepting Weismann's theory that acquired characteristics are not transmitted, we can well conceive how acquired immunity, being an acquired characteristic, dies with the individual. On the other hand, natural immunity owes its existence to the survival of the fittest, an evolutionary process by which the individuals susceptible to a given infection are gradually eliminated. The passive immunity conferred upon the offspring by the immunized parents has been observed by Wernike in the case of diphtheria, Ehrlich in the case of tetanus, and a number of other investigators. It has also been noted that the immunity is transmitted by the mother, but not the father. Experimental proof, as well as an explanation of this phenomenon, is found in a recent contribution to the *Archiv. Biologischesch. Nauk* (Vol. VIII, No. 3) by C. K. Dzerzhowski. This author found that the testicular fluid of a horse possessing a high degree of active immunity, is practically devoid of antitoxin. On the other hand, the fluid of the Graafian follicles of immunized mares is very rich in antitoxin, equalling in some instances the blood serum. Similarly, the secretions of the prostate and Cowper's glands are very poor in antitoxins, while those of the uterus are but slightly inferior to the antitoxic serum. The

fertilized ovum, therefore, is constantly surrounded by an antitoxic medium and is consequently subjected to a process of passive immunization. This, however, is possible only up to the time of the formation of the placenta, for as soon as the direct interchange between the mother and embryo ceases, owing to the intervention of the placenta, the antitoxin no longer penetrates the tissues of the developing ovum. Experiments performed by the author show that neither the placental blood nor the amniotic fluid contains any antitoxin. Moreover, the remarkable fact was established that the placenta has a selective action, permitting neither toxins nor antitoxins to filter through. Any immunity, therefore, that the offspring of an immunized mother may possess is due entirely to the passive immunization acquired during the preplacental period.

Huxley and Owen.—In 1858 Huxley delivered the Croonian Lectures on "The Theory of the Vertebrate Skull," in which he proceeded to combat the opinion that the skull is formed of segments which are homologous to the vertebrae of the spinal column. This theory, if we remember correctly, was first suggested by the German poet Goethe. Huxley demonstrated from the embryological studies of Rathke and others, that after the first step, the whole course of development of the segments of the skull proceeded on different lines from that of the vertebral column, and that the imaginative theory of the skull as modified vertebrae was not in accord with the facts as he had observed them. Sir Michael Foster, in his obituary notice of Huxley, spoke of this "fantastic doctrine" as having been advocated by Owen, and said that Huxley, in criticising this doctrine, while acknowledging that the spinal column and the skull start from the same primitive condition, yet pointed out that they immediately begin to diverge, and that it is "no more true that the adult skull is a modified vertebral column than it would be to affirm that the vertebral column is a modified skull."

This controversy has special interest because, as pointed out by Huxley's recent biographer, it was a bold step for so young a man to challenge Owen, who was the acknowledged "autocrat" of science in Britain. Owen held to the theory of an "archetype" in anatomy, but such an idea was evidently repugnant to Huxley's whole philosophy. Moreover, Huxley had early conceived a dislike for Owen, as is clearly shown in his biography, and came to consider himself more than the latter's equal in morphology. He was not the man, either, who would tolerate an "autocrat" in science. For him science was a pure democracy—a conception

which it were wise for all of us to foster. The two scientists, Huxley and Owen, eventually broke off all personal intercourse, and their estrangement grew out of circumstances in which Owen seems to have been the aggressor. But Huxley's opinion of this "fantastic doctrine," which is still held by some morphologists, should be of interest to all medical readers.

The Index for Volume VII.—Owing to some alterations in the press room, the publication of the index for the last volume of the *Journal* has been temporarily delayed.

Reviews.

The Feeding of Infants. Home Guide for Modifying Milk.

By Joseph E. Winters, M. D., Professor of Diseases of Children, Cornell University Medical College, New York. E. P. Dutton & Company, 1901. Price 50 cents.

The book before us for comment is designed for the use of mothers and guardians who are obliged to feed their babies artificially. The author divides the milk as obtained in bottles into top milk and bottom milk and gives formulae for preparing percentage mixtures by the combination of these two varieties of milk with cream and water. The author is an advocate of the use of lime water in the mixture to render the acid cow's milk alkaline. He does not believe in Pasteurization. He states that tested by the standard of human milk there is not one of the so-called Infant Foods that fulfils one of the conditions required of a substitute for human milk. It has been repeatedly demonstrated that every infant food on the market is deficient in fat, milk, sugar and albuminoids. We recommend this attitude concerning Infant Foods and we believe that the use of lime water in making mixtures is of decided advantage. There are arguments in favor of Pasteurization as well as facts against the use of that process. If one is sure of his milk supply Pasteurization may be dispensed with; but in the promiscuous milk supply of a great city this process is probably the lesser of two evils. On the whole, the book is a safe and conservative home guide for Infant Feeding. There are blank pages at the end of the book for recording the baby's weight, etc. [J. M. S.]

Nursing Ethics for Hospital and Private Use. By Isabel Hampton Robb, J. B. Savage, Cleveland, 1901.

This little book, however much we may cavil at the title which has been selected for it, is a work painstakingly done, and written by a competent nurse who has ideals, and wishes to impart these ideals to others, who essay to fill the same professional career. There is a great deal of excellent advice given to those who are contemplating taking up the study of nursing, and especially valuable is that portion of the book dealing with the relations of graduate nurses to physicians, to other nurses and to the public. [T. L. C.]

Correspondence.

DANGERS TO THE LAITY.

Doctors Repudiate Professor Atwater's Theory of Food Value of Alcohol.

By T. D. CROTHERS, M. D., of Hartford, Conn.

To the Editor of the *Philadelphia Medical Journal*.

The American Medical Association has just held its annual meeting in St. Paul, Minn. During its sessions, the American Medical Temperance Association, composed of eminent physicians and teachers in medical colleges, members of the American Medical Association, always holds

one or more meetings for the special purpose of promoting scientific study and investigation into the action of alcohol in health and disease. The meeting this year shows a great advance in the scientific study of alcohol and its action on the body. In the ten years of its existence its membership has grown to over two hundred, and the number of papers and discussions, all of a scientific and technical character, is increasing, so that literally this is the most authoritative organization studying the alcohol question in this country. Of the ten papers read at the St. Paul meeting, three of them discussed Professor Atwater's experiments and conclusions, and the members then passed the following resolutions as the unanimous opinion of the Association:

"Whereas, the American Medical Temperance Association, the members of which are physicians and medical teachers who have devoted years to the study of alcohol and its effects, and who are conversant with the work done by scientific men the world over to determine the effects of alcohol when given in any quantity, have noted the teaching of Professor W. O. Atwater, of Wesleyan University, upon the food and medical value of alcohol as set forth by him in the pages of the influential lay press, be it

"Resolved, that this Association utterly repudiates the pro-alcoholic doctrine of the said Professor W. O. Atwater as being contrary to the evidence deduced by scientific experimentation, and that his conclusions are unwarranted by the evidence resulting from his own experiments. Be it further

"Resolved, That this Association regards the teaching of Professor W. O. Atwater as erroneous, and a source of danger to the laity inasmuch as such teaching contributes towards the increased consumption of alcoholic beverages by giving supposed reason for their safe use."

(Signed)

N. S. DAVIS, M. D., President, Chicago, Ill.

T. D. CROTHERS, M. D., Secretary,

Hartford, Conn.

Two other papers pointed out the evils from the use of cigarettes and tobacco on neurotics and young persons. One paper critically reviewed the school-book teachings of alcohol, sustaining their claim to scientific accuracy in nearly all the books used.

The address of both the President and Vice-President described the folly of efforts to check disease and degeneracy by ignoring alcohol as one of the active causes, also the conflict of experience with theory and tradition. The other papers read discussed the causes of the popularity of alcohol as a beverage, and its danger in high altitudes; also the substitutes for its use in medicine.

The value and reliability of these papers are evident from the fact that eight of the ten authors are active or emeritus professors in medical colleges. Four of them are medical journalists, two of whom are in active practice.

AN ERRONEOUS REPORT.

By GUSTAVUS M. BLECH, M. D., of Chicago.

To the Editor of the *Philadelphia Medical Journal*:

I deem it my duty to warn the medical profession not to depend on a reported decision handed by Judge Kavanagh, of Chicago, in a suit for damages against Dr. Franklin N. Martin and the Chicago Post-Graduate School. The notice has been published in the prominent medical weeklies of the United States and is not in accordance with facts—therefore misleading and apt to bring some surgeons into trouble.

The case in question is this: Prof. Martin undertook to operate on a woman for umbilical hernia. On opening the peritoneum he discovered a tubercular peritonitis and ovaritis. While this patient was still under the influence of the anesthetic, Dr. Martin, in order to save her life, extirpated her ovaries.

As so frequently happens in this country, where life and limb is estimated by juries in dollars and cents (including love-fractured hearts) ingratitude was shown and the patient entered suit for damages.

Judge Kavanagh maintained that the plaintiff made out no case in that she did not prove that the removal of the ovaries was not necessary. Council for the plaintiff contends that a negative fact cannot be proven and will appeal the case. Judge Kavanagh therefore never decided that a surgeon can perform additional operations without the consent of the patient and I would advise every

surgeon not to operate on any case without first receiving a written consent from the patient or relatives giving full authority to do whatever seems necessary to save life.

COCAINE ANESTHESIA.

By ELLAS SAWAHINI, M. D., of Boston, Mass.

To the Editor of the Philadelphia Medical Journal.

Dear Sir—With great interest I have been reading the articles on Cocaine Anesthesia that have appeared in your journal.

I have had a fairly good experience with cocaine and used it almost exclusively in Minor Surgery. I injected it locally in what I think is termed the "blocking" method in strengths varying from 10% to 2%. But in the greater majority of my cases I got swelling of the part, sometimes in quite a marked degree, so much so that the stitches would cut through from the second day, or I had to cut one or two to relieve the great tension and pain. I have used the Esmarch and operated without it but the results have been about the same.

I shall be very thankful if you or any of your readers would enlighten me as to the theory and how this thing might be prevented.

RATTLE-SNAKE VENOM.

By JOSEPH McFARLAND, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

In the course of some investigations which I recently conducted with rattle-snake venom there came into my possession a small quantity of dry venom which had been kept in an ordinary homeopathic phial, carelessly corked since the time of the researches of Mitchell and Reichert, which were made and published in 1886. The venom had therefore been dry for approximately 15 years.

I made a solution of it, and tested its strength upon rabbits and found it approximately as active as venoms which I had collected and dried a few weeks before. This is, I think the oldest dried venom that has been tested and the observation surely proves how very stable the venom is in the dry state.

GLENARD'S DISEASE.

By ACHILLES ROSE, M. D., of New York.

To the Editor of the Philadelphia Medical Journal:

In the issue for June 15th, of your esteemed journal, there is an editorial, "Gastroptosis," which contains some errors. To begin with the author of the editorial says, "Gastroptosis, or Glenard's Disease." This is the first time that I have seen Gastroptosis (which should properly be called Gastroptosis) identified with Glenard's Disease.

[We are fain to admit that the term "Glenard's Disease" is strictly not correctly used when applied to Gastroptosis. According to Glenard it is really a condition found in splanchnoptosis, but as gastroptosis is a mere characteristic feature of this disease, it is customary sometimes to use the part as standing for the whole. We agree, however, with our correspondent that splanchnoptosis would have been a better term.—Editor.]

Resection of the Wrist by Double Longitudinal Dorsopalmar Incision.—Dr. Francis Villar discusses the modes of resection of the wrist in the *Journal de Médecine de Bordeaux*, (1901, No. 17). The great objection to most of the methods advanced is the fact that they do not open the joint wide enough to see the extent of the lesion. But this objection will not stand against the transmetacarpal method of Studsgaard of Copenhagen, by double longitudinal dorso-palmar incision. It is easier than all other methods, and gives better results, both therapeutic and functional. It is indicated in osteo-arthritis of the carpal and metacarpal bones, and tuberculosis of the wrist, and it may save amputation. After describing the technique of the operation in detail, Villar concludes that it is easily executed; that it permits sufficient light to enter to follow both tendinous and osteo-articular lesions; that on this account it is indicated in widespread processes; and that the results obtained have been excellent. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Emergency Quarters.—During the excessive heat of last week the hospitals of Philadelphia were overcrowded, and many were obliged to erect tents for the purpose of quartering patients that had been overcome by the heat. Many business establishments fitted out portions of their buildings with all the necessities for the restoration of those suffering from heat prostration.

Enteric Fever in West Philadelphia.—It is stated that enteric fever is spreading, and that the Health Board has been quite active in endeavoring to trace the source of infection.

Free Hospital for Consumptives.—A movement is in progress for the establishment of a free hospital for consumptives in the mountains near Wilkesbarre, Pa. The donor of the land is said to be Dr. Trimmer, of White Haven, the land being situated on Green Mountain, overlooking White Haven and the Lehigh River. Dr. Lawrence F. Flick, President of the "Pennsylvania Society for the Prevention of Tuberculosis," and Dr. Thomas, who is a member of the "Committee on Plans," recently visited the proposed site, and believe that a bill appropriating one hundred thousand dollars for the project will meet with the approval of the Governor.

Pennsylvania State Medical Society.—The date of the annual meeting has been changed from September 17th to 19th to September 24th to 26th; the meeting is to be held in Philadelphia.

Pest House at Marcus Hook.—At the State Quarantine Station at Marcus Hook an emergency pest house has been erected, which will accommodate 500 patients. A new crematory has also been added to this plant.

Lehigh Valley Medical Association.—The Summer Meeting of the Lehigh Valley Medical Association will be held on Thursday, July 25th, at Mauch Chunk, Pa.

Vital Statistics of Philadelphia for the week ending July 6, 1901.

Total mortality	857	
	Cases.	Deaths.
Inflammation of the appendix 1,		
bladder 2, brain 32, bronchi 7,		
kidneys 23, larynx 1, liver 4, lungs		
21, heart 5, peritoneum 1, stomach		
and bowels 31		134
Marasmus 14, inanition 21, debility		
13		48
Tuberculosis of the lungs		58
Apoplexy 25, paralysis 17		42
Heart-disease of 36, fatty degenera-		
tion of 3		39
Uremia 13, Bright's disease 12, dia-		
betes 4		29
Carcinoma of the breast 1, liver 1,		
stomach 11, throat 1, uterus 2 ..		16
Convulsions 50, puerperal 1		51
Diphtheria	43	7
Brain-disease 4, Softening of 6		10
Typhoid fever	106	17
Old age		16
Scarlet fever	46	10
Abscess of liver 1, abscess of ovarian		
1, alcoholism 1, asthma 2, anemia		
3, burns and scalds 1, casualties 12,		
cholera infantum 75, cirrhosis of		
the liver 5, consumption of the		
bowels 1, croup 1, cyanosis 2, di-		
arrhea 3, disease of the hip joint		
1, drowned 4, dropsy 1, dysentery		
3, erysipelas 1, puerperal fever 1,		
gall stones 2, gangrene 1, hernia		
1, jaundice 1, locomotor ataxia 2,		
measles 1, obstruction of the bow-		
els 5, poisoning 2, rheumatism 1,		
sclerosis, spine 1, sclerosis, arter-		
ial 2, shock, surgical 1, septicemia		

Case Deaths

4, sore mouth 1, suffocation 1, suicide 1, sunstroke 298, sarcoma of the kidney 1, of the stomach 3, tetanizing 1, tetanus 2, tumor 2, pelvic 1, ulceration of stomach 2, unknown cases 2, whooping cough 5

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NEW JERSEY.

State Board of Medical Examiners of New Jersey.—At the annual meeting of the State Board of Medical Examiners, held at Newark, N. J., July 5, 1901, the following officers were elected: President, Dr. Charles A. Groves, East Orange; Treasurer, Dr. A. Uebelacker, Morristown; Secretary, Dr. E. L. B. Godfrey, Camden. Of the candidates examined, 29.4 per cent. were rejected.

NEW YORK.

Dr. Frank L. Christian, of New York City, has been appointed medical superintendent of the Elmira Reformatory.

Dr. Paul F. Munde, of New York, has resigned the chair of gynecology in Dartmouth College, which he had held for twenty years, and has been elected an emeritus professor of gynecology by the trustees.

Dr. Herbert M. Tolfree, of Buffalo, has been appointed to the medical corps of the navy and will be commissioned as an assistant surgeon.

New Hospital for Babies.—It is stated that plans have been filed at the Building Department for a seven and eight-story brick hospital for children to be erected in New York City, at a cost of \$50,000.

Appointment of Dr. Theodore Walser.—The New York Board of Health has appointed Dr. Theodore Walser, of New Brighton, the oldest physician on Staten Island, sanitary superintendent for the Borough of Richmond, to fill the vacancy caused by the death of Dr. John L. Feeny.

For University of Buffalo Alumni.—The Medical Department of the University of Buffalo announces that a "Pan-American Bureau of Information" for use of alumni exclusively has been established by the Faculty and Alumni Association. The office is located at 24 High street, Buffalo, in the library of the University Building. The bureau provides for accommodations, in advance if desired, and attends to mail, information, etc., all gratis.

A New Tenement Law in New York City.—The Health Department of New York City has issued and distributed the following circular letter: "A tenement house shall be subject to a fine of \$1000 if it or any part of it shall be used for the purpose of a house of prostitution or assignation of any description, with the permission of the owner thereof or his agent, and said penalty shall be a lien upon the house and the lot upon which the house is situated. A woman who resides in or commits prostitution in a house of prostitution or assignation of any description in a tenement house, or solicits any man or boy to enter for such purpose a tenement house, shall be deemed a vagrant and upon conviction, shall be committed to a county jail for a term not exceeding six months. If a tenement house is used for the purpose of prostitution or assignation or any part thereof, with the permission of the lessee or his agent, the lease shall be terminated at the election of the lessor. A tenement house shall be deemed to have been used with the permission of the owner and lessee if summary proceedings for the removal of the tenants of so much thereof as is unlawfully used shall not have been commenced within five days after notice of such unlawful use served by the Department of Health. Whenever the liens upon a tenement house shall amount to \$1000 or over, the Department of Health shall appoint a receiver of the rents and profits of said property."

NEW ENGLAND.

Donation to Harvard.—J. Pierpont Morgan has promised to build three of the five buildings desired by Harvard Medical School, at a cost of a million dollars. The buildings are to be devoted to biological research.

WESTERN STATES.

College of Physicians and Surgeons, of Chicago.—We are informed that the damage done to the College of Physicians and Surgeons in Chicago which was recently struck by lightning, as mentioned in the Philadelphia Medical Journal

of June 29, in no way interferes with the work of the college. The college has just obtained possession of a very large building adjacent to it, formerly the West Division High School property which it has recently purchased, and it was able to continue the operation of its summer course without interruption, by transferring its students to the new building. The building which was struck by lightning was not seriously damaged below the fourth floor, and it will be in better condition than ever by the beginning of the next fall term.

A New Publication.—*The Family Doctor* is the name of a new publication that has just been published. The editor is Dr. John L. Short, of Oklahoma City. This little journal is written for the laity, and is intended to instruct them what to do in case of accidents.

Changes in the State Charitable Institutions of Illinois.—The following changes have been made in the State Charitable Institutions of Illinois: Dr. Joseph Robbins, of Quincy, becomes superintendent of the Central Hospital for the Insane at Jacksonville. Dr. F. C. Winslow, formerly at Jacksonville, becomes superintendent of the Hospital for the Incurable Insane at Bartonville, Peoria. Dr. Samuel H. McLean, of Hillsboro, becomes superintendent of the Institution for Feeble Minded Children at Lincoln. Dr. W. E. Songer has been appointed superintendent of the Asylum for the Criminal Insane at Chester. Dr. J. C. Corbus remains superintendent of the Eastern Hospital for the Insane at Kankakee. Dr. R. F. Bennett remains superintendent of the Southern Hospital for the Insane at Anna. Dr. F. S. Whitman remains superintendent of the Northern Hospital for Insane at Elgin. Dr. W. E. Taylor remains superintendent of the Western Hospital for the Insane at Watertown.

Chair of Anatomy at the State University of California.—A chair of anatomy has been established at the State University of California, and Dr. Joseph Marshall Flint, instructor of anatomy in the University of Chicago and a graduate of Johns Hopkins University, has been appointed to the professorship.

Dr. O. J. Veline, who has been practicing at Kirkhoven, Minn., has returned from Europe, with a degree from the Royal University of Berlin.

Dr. L. Blake Baldwin, who recently received the appointment of professor of clinical dermatology in the College of Physicians and Surgeons, of Chicago, left for Paris, where he will spend three months studying skin diseases in the larger hospitals.

Northwestern University Medical School (Chicago Medical College).—N. S. Davis, Jr., has been elected Dean, and Arthur R. Edwards, Secretary of the Faculty. Wesley Hospital, in close connection with the College, has been informally opened to the profession, and after complete equipment the formal opening will take place. The Hospital will accommodate three hundred patients. Plans are completed and the money is raised for a Twenty-two Thousand Dollar amphitheatre and operating rooms at Mercy Hospital, with a seating capacity of four hundred. Drs. C. L. Mix and P. T. Burns have been appointed Assistant Professors of Anatomy.

The South Dakota Medical Society at their recent meeting in Huron, decided to meet next year in Scotland, South Dakota, and elected the following officers: Dr. C. C. Cross, of Yankton, president; Dr. Dugent, of Springfield, and Dr. B. A. Bobb, of Mitchell, vice presidents; Dr. J. L. Stewart, of Irene, secretary and treasurer; Dr. H. B. Scofield, of Scotland, assistant; Dr. H. E. McNutt, of Aberdeen, and Dr. Brown, of Parkston, trustees.

Dr. Robinson Resigns.—Dr. John A. Robinson has resigned the Assistant Professorship in Medicine in Rush Medical College.

Chicago Society of Internal Medicine.—At the annual meeting, held June 27th, the following officers were elected for the ensuing year: President, Dr. Edward F. Wells; Vice-President, Dr. George W. Webster, Secretary, Dr. Robert B. Preble; Treasurer, Dr. M. L. Goodkind; Censor, Dr. John M. Dodson.

The Medico-Chirurgical Medical College and the Columbian Medical College, both of Kansas City, Mo., recently consolidated their interests and are now building a new college.

SOUTHERN STATES.

Negro Physicians Organize.—Fifteen negro physicians organized the McRoo-Chirurgien Association of Mississippi, at Jackson, Miss., on May 17. In the past thirty years six medical schools for negroes have been established, and a total of 941 graduated students has been the result.

Recreation Building for the Insane.—The trustees of the Sheppard and Enoch Pratt Hospital for the Insane in Maryland will erect a recreation building for the use of the patients at a cost of about \$15,000.

The University of the South.—The new addition to the medical building at the University of the South, located at Seawater, Tenn., gives a seating capacity in the amphitheatre of 250, enlarges the chemical laboratory and adds a complete new lecture room and doubles the floor space in the dissecting rooms. The pathological and bacteriological laboratories have added a new equipment and the pharmaceutical laboratory has moved into new quarters. The present year promises to be the most prosperous in the history of the college.

CANADA.

Ontario Medical Association.—The twenty-first annual meeting of the Ontario Medical Association was held in the Educational Department, Toronto, on the 19th and 20th of June, 1901, the president, Dr. Angus McKinnon, of Guelph, in the chair. The secretary read the minutes of the last session of last year, which were adopted.

The report of the committee on Papers was presented by Dr. MacNeill, of Toronto, and the report of the Committee on Arrangements by Dr. Bruce L. Riordan.

Three Recent Gall-Stone Cases.—Dr. Wm. Oldright, Toronto, said these cases had occurred recently in his practice. They present features of interest to the profession. The first case occurred in a woman about fifty-five years of age. He was rather surprised to be called upon to see her in a hurry, to find symptoms of gall-stone obstruction. The late Dr. Little had seen the patient and had endeavored to obtain purgation without effect. Powerful cathartics were unavailing. About nine months previous she had a similar attack, but Dr. Oldright had heard nothing about it until this attack. The symptoms were somewhat elevated temperature (about 100 to 101), constant vomiting, obstruction, and, of course, intense pain. He supplemented Dr. Little's catharsis, but without any effect. On examination he could map out a distinct tumor, and told her that she had a distended gall bladder; he advised her to go into the hospital, which she did that night. She was operated on in the afternoon, and removed some gall-stones and endeavored to establish patency of duct. He could feel no stones left behind, but there was some stenosis of the duct. There was a great deal of inflammatory action in this case. The gall bladder was stitched into the abdominal wall and drainage established in the usual method; bile flowed freely. The patient made a good recovery. The second case was one Dr. Oldright saw in consultation with Dr. McLean, of Woodbridge. She was sixty-five years old. The prognosis was certain death without operation, and provided there was no malignant trouble she would probably recover. In this case one could imagine the difficulty there would have been had it been his first case of operation, as he could not locate the gall bladder. He came to the conclusion that it was not a case for further interference. Within twenty-four hours she succumbed to the shock and probably to some hemorrhage. There was no doubt after passing the finger in that it was malignant. If this woman had been operated on some years before, Dr. Oldright thought that malignancy would not have occurred and her life would have been saved. The third case occurred in a woman forty years of age. Upon her the surgeon operated last February. Here was a case in which there had been gall-stone symptoms, obstruction, for about eighteen months. She consented to an operation. The obstruction was in the cystic duct. He opened the gall bladder and took out the stones which he exhibited to his audience. The operation occupied about forty minutes. The patient made an uneventful recovery, and left the hospital thirteen days after the operation.

Excision of Upper Jaw for Sarcoma—with exhibition of patient and specimen.—Dr. Herbert A. Bruce, Toronto, presented this paper, whilst Dr. G. Silverthorn exhibited

the specimen. Dr. Bruce also presented the patient, a woman thirty-four years of age, from whom he had removed the upper jaw for sarcoma. The patient had been sent to him by Dr. Bowles, of Woodhill. The history of the patient is, briefly, as follows: During the last week of January of this year she felt, for the first time, a slight swelling over the alveolus of the left jaw, which she thought to be a gum-boll. She consulted Dr. Bowles at the end of March, and Dr. Bruce saw her about the middle of April—that is, less than three months after the first symptoms. Dr. Bruce operated upon her on the 29th of April, exactly three months after she had the first symptom. On examination he found a very hard swelling just behind the second bleuspid tooth and extending backwards to the full extent of the jaw. Internally it had not extended to the middle line and bulged externally to the extent of half an inch beyond what would be the line of the teeth. It extended backwards toward the antrum, but the latter did not seem to be implicated externally. The growth in the roof of the mouth was covered by a mucous membrane. On looking into the nose a polypoid mass was seen, and the patient had some difficulty in breathing through the left nostril. The cheek on the affected side was slightly more prominent, and it moved freely over the growth. No prominence of the eye on the affected side was to be made out. A small portion of the growth was removed under cocaine, and Dr. Silverthorne reported to Dr. Bruce that it was sarcoma. The patient left the hospital on the 18th of May and made an uninterrupted recovery.

Dr. Silverthorne presented the specimen to the members of the Association. It was the size of a large-sized orange, containing spindle cells with a cartilaginous basis.

Dr. Bruce stated that the history of the patient showed that a polypus had been removed about eight years ago, and he thought that it must have been a simple polypus.

Ectopic Gestation.—Dr. R. W. Garrett, Kingston, extended his thanks to the Committee on Papers for placing under his care a subject of such great magnitude. The subject is one of vital importance to every practitioner, for at any time he might be called upon to differentiate the condition from others with which it might be confounded. The responsibility of a life was in his hands and demanded accurate diagnosis, medical acumen and judgment and ability to conduct the case to a favorable termination. He entered at considerable length as to the causation and earlier changes consequent upon ectopic gestation, and stated that every physician is expected to make a correct diagnosis of tubal pregnancy on the occurrence of rupture; and in a fairly large proportion of cases, to make a diagnosis before the occurrence of the rupture. Theoretically, the arrest of a fructified ovum may occur first in the ovary; second, in the abdominal cavity between the ovary and tube; third, within the tube; and fourth, between the tube and the uterus. He would direct the attention of his audience to but one kind only; arrest within the tube, or tubal pregnancy, as all other varieties are but merely developments of this kind, owing to secondary invasion of the Fallopian tube. These he divided into three groups: First, tubo-abdominal, or simply abdominal pregnancy, in which there is a secondary invasion of the abdomen; second, tubo-ligamentary in which there is a secondary invasion of the broad ligament and sub-peritoneal tissues, and, third, that sub-division of the tubo-uterine in which there is rupture into or secondary invasion of the uterus. At considerable length he discussed the etiology, then the symptoms, pointing out the difficulties that lie in the road to making a diagnosis owing to the absence of many, if not all, of the classical symptoms generally enumerated. Having dealt in a masterly manner with these he recited a very interesting case in illustration of his contention of the difficulties of diagnosis.

MISCELLANY.

Dr. Agramonte has been appointed Professor of Experimental Pathology in the University of Havana.

Obituary.—Dr. Charles E. Pinkham, at Sacramento, Cal., on June 20, aged 62 years—Dr. John Curwen, at Harrisburg, Pa., on July 2, aged 80 years—Dr. Thomas Taylor, at Leesdowntown, Va., on July 1, aged 67 years—Dr. Charles A. Leuthstrom, at Hartland, Wis., on July 2, aged 83 years—Dr. Henry M. Revell, at Annapolis, Md., on July 3—Dr. Laurence S. Smith, at Haverhill, Mass., on July 2, aged

49½ years—Dr. James H. Conway, at North Seltuate, Mass., on July 2, aged 17 years—Dr. Edmund Weston, at Washington, D. C., on July 4, aged 71 years—Dr. J. William Stokes, at Orangeburg, S. C., on July 6—Dr. J. W. Watt, at Lafayette, Ore., on July 6—Dr. A. C. Isaacs, at Rockdale, Tex., on July 7—Dr. Frederick F. Diether, at Baltimore, Md., on July 8, aged 79 years.

Changes in the Medical Corps of the Navy, Week Ending July 6, 1901.

SURGEON T. A. BERRYHILL, detached from the Naval Laboratory, Brooklyn, N. Y., and granted sick leave for three months—June 29.
ASSISTANT SURGEON J. H. IDEN, detached from the Naval Hospital, Chelsea, Mass., and ordered to the Lancaster, July 8—July 3.
ASSISTANT SURGEON G. L. ANGENY, detached from the Lancaster and ordered to the Naval Laboratory, at Brooklyn, N. Y., July 8—July 3.

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 Days Ended July 4, 1901.

G. W. STONER, surgeon, granted leave of absence for 30 days from August 3—July 2, 1901.
J. J. KINYOUN, surgeon, directed to proceed to Yokohama, Japan and Hongkong, China, as inspector—June 28, 1901. Granted leave of absence for 4 months upon completion of duty as inspector—June 28, 1901.
J. B. GREENE, passed assistant surgeon, granted leave of absence for 2 days from July 5—July 2, 1901.
Hill Hastings, assistant surgeon, granted leave of absence for 2 months from July 15—June 28, 1901.
H. B. PARKER, assistant surgeon, relieved from special temporary duty at San Francisco, Cal., and directed to rejoin station at New Orleans, La.—June 29, 1901.
W. C. BILLINGS, assistant surgeon, relieved from duty at Baltimore, Maryland, and special temporary duty at San Francisco, Cal., and directed to proceed to Los Angeles, Cal., and assume temporary command of the service during the absence of medical officer in command, reporting to him for duty upon his return to station—June 29, 1901.
Dunlop Moore, assistant surgeon, relieved from duty at Port Townsend quarantine, Washington, and directed to proceed to Nome, Alaska, for special temporary duty—July 1, 1901.
CARROLL FOX, assistant surgeon, relieved from duty at Portland, Oregon, and directed to proceed to Port Townsend quarantine, Washington, and report to medical officer in command for duty—July 2, 1901.
G. C. ALLEN, hospital steward, relieved from duty at Mullet Key, Fla., and directed to proceed to Norfolk, Va., and report to medical officer in command for duty—June 29, 1901.
F. H. PECK, hospital steward, relieved from duty at New Orleans, La., and from special temporary duty at San Francisco, Cal., and directed to proceed to St. Louis, Mo., and report to medical officer in command for duty and assignment to quarters—June 29, 1901.
W. C. PHILLIPS, hospital steward, directed to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters—May 15, 1901.

APPOINTMENT.

W. C. PHILLIPS, of Iowa, appointed junior hospital steward in the U. S. Marine Hospital Service—May 15, 1901.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended July 6, 1901.

SMALLPOX.—United States and Insular.

			Cases	Deaths
CALIFORNIA:	Los Angeles.	June 1-22	.. 7	
ILLINOIS:	Chicago.	June 22-29.	.. 6	
INDIANA:	South Bend.	June 22-29.	.. 1	
IOWA:	Clinton.	June 15-22	.. 1	
KANSAS:	Lawrence.	June 15-23	.. 1	
	Wichita.	June 15-30	.. 3	
KENTUCKY:	Lexington.	June 22-29.	.. 1	
LOUISIANA:	New Orleans.	June 22-29.	.. 2	
	Shreveport.	June 22-29.	.. 3	
MASSACHUSETTS:	Fall River.	June 22-29.	.. 3	
	Waltham.	June 22-29.	.. 1	
	Worcester.	June 14-21.	.. 1	
MINNESOTA:	Minneapolis.	June 15-29.	.. 15	2
	Winona.	June 15-29.	.. 3	
NEBRASKA:	Omaha.	June 22-29.	.. 7	
	South Omaha.	June 24-July 1	.. 5	
NEW JERSEY:	Bayonne.	June 23-30.	.. 1	
NEW YORK:	New York.	June 22-29.	.. 97	15
OHIO:	Cincinnati.	June 22-28.	.. 1	
	Cleveland.	June 23-29.	.. 8	1
PENNSYLVANIA:	Philadelphia.	June 22-29.	.. 3	
	Pittsburg.	June 22-29.	.. 1	

RHODE ISLAND:	Providence.	June 25-29.	.. 2
TENNESSEE:	Memphis.	June 22-29.	.. 5
UTAH:	Salt Lake City.	June 22-29.	.. 7
WASHINGTON:	Tacoma.	June 17-30.	.. 3
WEST VIRGINIA:	Wheeling.	June 22-29.	.. 1
WISCONSIN:	Green Bay.	June 23-30.	.. 5
HAWAII:	Lihue.	May 7.	.. 1 among
	Porto Ikaans.		
	Walmea.	May 5-15.	.. 1 among
	Porto Ricans.		
PHILIPPINES:	Manila.	May 11-25.	.. 14

SMALLPOX—FOREIGN.

ARGENTINE:	Buenos Ayres.	Apr. 1-30.	.. 140
AUSTRIA:	Prague.	June 1-15.	.. 10
BELGIUM:	Antwerp.	June 1-8.	.. 5
BRAZIL:	Rio de Janeiro.	May 1-15.	.. 35
CANADA:	Ontario:		
	Hamilton.	June 1-30.	.. 1
	Quebec.		
	Gaspe Basin.	June 22-29.	.. 10
COLOMBIA:	Panama.	June 18-21.	.. 6
EGYPT:	Cairo.	May 27-June 3.	.. 1
FRANCE:	Paris.	June 8-15.	.. 20
	St. Etienne.	May 15-30.	.. 1
GIBRALTAR:		June 1-16.	.. 2
GREAT BRITAIN:	Cardiff.	June 8-15.	.. 2
	Glasgow.	June 15-21.	.. 13
	Liverpool.	June 8-15.	.. 2
	London.	June 8-15.	.. 1
INDIA:	Bombay.	May 27-June 4.	.. 3
	Calcutta.	May 24-June 1.	.. 11
	Madras.	May 18-24.	.. 9
ITALY:	Messina.	June 8-22.	.. 36
	Naples.	June 8-16.	.. 124
MEXICO:	Mexico.	June 16-23.	.. 2
RUSSIA:	Moscow.	May 25-Je 15.	.. 34
	Odessa.	June 1-8.	.. 1
	St. Petersburg.	June 8-15.	.. 10
	Warsaw.	May 25-June 1.	.. 14
SPAIN:	Madrid.	May 4-June 1.	.. 11
SWITZERLAND:	Geneva.	May 25-June 1.	.. 1
URUGUAY:	Montevideo.	May 11-25.	.. 35

YELLOW FEVER.

COLOMBIA:	Bocas del Toro.	June 28.	.. 1
BRAZIL:	Rio de Janeiro.	May 1-15.	.. 14
MEXICO:	Vera Cruz.	June 22-29.	.. 3

CHOLERA.

INDIA:	Bombay.	May 28-Je 4.	.. 2
	Calcutta.	May 25-June 1.	.. 67
	Madras.	May 18-25.	.. 3

PLAGUE.

CHINA:	Amoy.	Apr. 28-May 10.	.. 325
	Hongkong.	May 11-18.	.. 122
INDIA:	Bombay.	May 28-Je. 4.	.. 141
	Calcutta.	May 21-Je. 1.	.. 50
HAWAII:	Honolulu.	May 31-Je. 10.	.. 4
PHILIPPINES:	Manila.	May 11-25.	.. 55

GREAT BRITAIN.

Dr. F. Dwyer has been recently made Professor of Surgery in Dublin University.

Honored by the Pope.—The Pope has conferred the Cross "Pro Ecclesia et Pontifice" upon Mr. Francis Murphy, L. R. C. P., L. R. C. S., Edin., of Tottenham, England, who, as medical officer, was one of the gentlemen who took an active part in the great Jubilee Pilgrimage to Rome last year.

Harben Medal for Professor Koch.—Professor Koch is to be presented with the Harben Medal on Wednesday, July 24th, on which occasion a dinner has been organized to take place at the Whitehall Rooms, Hotel Metropole, London, which many distinguished member of the medical profession have promised to attend.

Foreign Obituary.—Surgeon-Captain Welford, of the 7th Battalion Imperial Yeomanry, in South Africa, on May 30—Dr. F. W. Warrington, J. P., at Congleton, Cheshire, England, on June 7, aged 62 years—R. Pritchard Roberts, M. R. C. S. Eng., L. S. A. at Bethesda, N. Wales, on June 17, aged 45 years—Dr. John Jones Ross, at Quebec, Canada, aged 68 years—Dr. Arthur A. Corte, at Eldon Place, Preston New Road, England, on June 14, aged 68 years—Dr. E. B. de la Cherois, at Brighton, England—Dr. John Broadbent, J. P., at South Collingham, England, aged 76 years.

The Sale of Poisons by Medical Men.—A meeting of medical practitioners was held in Glasgow on June 19th, to receive a report from the deputation recently sent to the General Medical Council in regard to the sale of poisons in

open surgeries by assistants not qualified under the Pharmacy Act. It will be remembered that the Council declined to receive the deputation on the ground that it proposed to deal with questions still *sub judice*. The deputation therefore had no report to make other than to repeat the decision of the Council as this was expressed in the statement made by Sir William Turner. Dr. W. Watson, who presided over the meeting and who was a member of the deputation, stated that the result of their action was in all respects satisfactory. They had succeeded, he considered, in getting the action of the Council into line with the law of the land and he felt certain that no charge similar to the one which gave rise to their action would ever again be brought against a member of the profession so long as he showed reasonable care in the management of his business. Professor Glaister, however, doubted if this consolatory conclusion was altogether justified. The finding of the Council by no means showed that the question was finally settled, but rather indicated the probability of further developments. After some discussion it was decided to continue the committee with instructions to take action if circumstances rendered this necessary. The question was also referred to at a recent meeting of the Pharmaceutical Society in Edinburgh, when the chairman claimed that the General Medical Council had decided that any medical practitioner who habitually left an open surgery stocked with scheduled poisons in charge of an unqualified assistant was liable to be judged guilty of conduct infamous in a professional respect.—*The Lancet*.

CONTINENTAL EUROPE.

University of Moscow.—At the University of Moscow, Dr. Gulewitsch has been made Professor of Medical Chemistry. Dr. Karusin has been made Professor of Anatomy.

Dr. A. Solowjew has been appointed Professor of Obstetrics and Gynecology at the University of Dorpat.

Dr. H. Sachs has been appointed extraordinary Professor at the University of Breslau.

Dr. van Walsen has been made Professor of Pathological Anatomy at the University of Leyden.

Dr. Chantemesse has just been elected a member of the French Academy of Medicine, and Dr. Heurtreaux, of Nantes, an associate member.

Dr. Monnier has been appointed Professor of Hygiene and Medical Jurisprudence at the University of Nantes, to fill the place of Dr. Olive, resigned.

Dr. Tichomilow, of Moscow, and Dr. Schaer, of Strassburg were elected foreign correspondents at the last meeting of the French Academy of Medicine.

Dr. Landouzy, now Professor of Therapeutics at the University of Paris, will become Professor of Clinical Medicine upon the retirement of Professor Jaccoud in November.

Dr. Megevand has been appointed Professor of Medical Jurisprudence at the University of Genoa.

Dr. Photinos Panas, of Paris, has been obliged to give up his chair of Ophthalmology, on account of the state of his health. Dr. Lapersonne, of Lille, has been appointed to succeed him.

The Microbe of Syphilis.—It is stated that Professor Jullien, one of the surgeons of the St. Lazare Hospital, Paris, has announced to the Academy of Medicine that he and M. Justin Bellisle have discovered the microbe of syphilis.

Gold Medal for Dr. Porro.—On May 21, at the twenty-fifth anniversary of the day, when Eduardo Porro, of Paris, performed for the first time the operation that bears his name, which was recently held, his friends and pupils celebrated the occasion by presenting him with a gold medal.

Accident to Prof. Virchow.—While out walking Prof. Virchow was blown by a strong wind against a tree and sustained an injury to the head. Assistance was quickly obtained and the Professor was taken home in a carriage. Surgical aid was provided and it is stated that there is no reason for any immediate anxiety.

Prevention of Rabies.—No case of rabies has been known in Berlin since 1873 in which year a law was passed compelling the muzzling of all dogs during the entire year.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

June 22, 1901.

1. An Address on Midwifery and Midwives.
EDWARD MALINS.
2. An Address on Military Surgery of the Time of Ambroise Paré and that of the Present Time.
C. H. MILBURN.
3. A Clinical Lecture on a Case of Purpura Rheumatica.
RALPH STOCKMAN.
4. The Croonian Lectures on the Chemical Side of Nervous Activity. W. D. HALLIBURTON. (Lectures III. and IV.)
5. Transplantation of Ureters into Rectum by an Extra-peritoneal Method for Exstrophy of Bladder, etc.
G. A. PETERS.
6. Case of Meningo-Encephalocele Treated by Excision of the Mass. A. FULLERTON.
7. A Note on the Surgical Treatment of Spina Bifida.
LEWIS MARSHALL.

1.—Malins remarks that it is self evident that the art of midwifery took its rise and is coeval with the history of mankind. The concurrent testimony and allusion of all the older authors render it indisputable that women were in commencement the chief if not the sole practitioners in midwifery, and that they likewise exerted the privilege of treating the disease peculiar to their sex as well during the pregnant and puerperal state as at other times. The author gives an interesting résumé of the history of midwives in ancient and modern times. He remarks that it was the introduction of the midwifery forceps which brought about the most marked changes in practice and the direst revolution among the midwives. He urges the adoption of a code of rules for the regulation of the practice of obstetrics by midwives. He claims that England is far behind the other nations in this respect. [W. A. N. D.]

2.—C. H. Milburn in this address compares in an interesting and entertaining way the surgery of the time of Ambroise Paré with that of the present day. He shows that until the middle of the present century the advances in surgery had been comparatively slow. Reference is made to a number of interesting gun-shot injuries received in the South African war. [J. H. G.]

3.—Ralph Stockman reports a case of purpura rheumatica. The patient can assign no cause for the illness for which he has been under treatment in the hospital. For more than two months he has suffered from diarrhea, general weakness, a swelling in some of the joints and an eruption situated chiefly in the lower limbs. Seven years ago he had an illness which was exactly similar to this, only the attack was much lighter. Since admission to the hospital there have been 22 distinct eruptions, some much more abundant than others and chiefly on the lower limbs. The fresh spots are of a bright purplish-crimson hue, and in a day or two they become a dull red, then of a light rust color, slowly fading until they are almost imperceptible. Each outbreak of spots is preceded by pain in his large joints, so that he can foretell their occurrence. The blood examination on admission revealed 4,000,000 red cells. The hemoglobin was 66%, and the leucocytes and blood plates were normal in number. The temperature has been mostly subnormal—97 to 98°, but on five different occasions it has risen in the early evening to 101° or slightly over. The red corpuscles in this case were normal in size and shape, but did not form rouleaux. When a large drop of fresh blood was allowed to fall on a microscope slide, it clotted in the same time as a drop of blood from a healthy person, but granules formed in it which were readily visible to the naked eye, and under the microscope these were seen to be due to the red corpuscles having run together in irregular clumps. The treatment consisted in

confining the patient in bed and the administration of 20 grains of salicin four times a day for 23 days, then one drachm *liquor calcis saccharatus*, thrice daily for six days, then *extractum ergotae liquidum*, 20 minims thrice daily for ten days, then *oleum terebinthinae*, 10 minims four times a day for 27 days, and finally 10 grains of quinine daily for three days. In addition to this, the patient was placed on a freely digestible diet. [T. L. C.]

4.—W. D. Halliburton in his third Croonian lecture on the **Chemical Side of Nervous Activity** states that chemical pathology is a comparatively new branch of science, and he has dealt with the subject under three heads: 1. The Chemical Pathology of Hyperpyrexia. 2. The Chemical Pathology of General Paralysis of the Insane. 3. The Chemistry of Wallerian Degeneration. As to the first head, the experiments may be summed up by saying that they fully confirm the hypothesis that the physico-chemical cause of death from hyperpyrexia is heated coagulation of cell globulin. When this constituent of cell protoplasm is coagulated, the vitality is destroyed. The temperature at which such coagulation is most readily produced is 47° C. Although the nerve cells are those which lend themselves most readily to the histological part of the research, it is by no means improbable that many other cells of the body are affected by high temperatures in a corresponding manner; some varieties are without doubt instances of coagulation necrosis. Researches of Halliburton under the second head, the **Chemical Pathology of General Paralysis of the Insane** have been published previously. The cerebro-spinal fluid removed from cases of general paralysis of the insane, is much increased in quantity and takes the place of atrophied brain material. On injection into the circulation of an anesthetised animal, a fall of arterial pressure with little or no effect upon respiration is observed. This fall of pressure is due to an organic substance which is soluble in alcohol. This substance is precipitable by phospho-tungstic acid, and by chemical methods and was identified as **choline**. The crystals of the platinum double salt which, when crystalized from 15% alcohol, are characteristic octahedral, or the most convenient test for the separation of this base. Normal cerebro-spinal fluid does not contain nucleo-proteid and the amount of choline is so small that it cannot be readily identified. It produces no effect upon arterial pressure. Nucleo-proteid and choline doubtless originate from the disintegration of the brain tissue, and their presence indicates that possibly some of the symptoms of general paralysis may be due to auto-intoxication. The proof that the toxic material is choline has been attested by physiological experiments. The action of the cerebrospinal substance exactly resembles that of choline. **Neurine**, an alkaloid closely related to choline is not present in the fluid. Its toxic action is much more powerful, and its effects differ considerably from those of choline. Our knowledge of the chemistry of nerve degeneration (Wallerian) is limited to what occurs in lecithin, the main constituent of myelin. This substance is broken up in its constituents and each of these is in time removed by absorption. The products of disintegration are four in number: **Choline, Phosphoric acid, fatty acid and Glycerine**. [T. L. C.]

5.—G. A. Peters describes a case in which he first operated for **procedentia recti** and subsequently for **extrophy of the bladder** in the same patient. The first operation was done when the child was 2 years and 7 months old. The prolapse of the rectum extended for 4½ inches and during crying or during the act of defecation the protrusion measured 8 inches. There seemed to be no hernia occupying the peritoneal *cul de sac*. For the relief of this condition the abdomen was opened in a median line and the bowel easily drawn into the pelvic cavity. A fold was then made in the anterior wall of the rectum by placing two rows of Lembert sutures. The rectum was then fixed to the anterior abdominal wall. The extrophy of the bladder was operated upon after a unique method. The rectum

was first thoroughly cleansed and a sterile sponge carried well up into the bowel to prevent any fecal matter from coming down. A small catheter was then placed into each ureter and fixed. The ureteral orifice with a portion of the mucous membrane was then separated from the rest of the bladder. The rectum was then pushed forward and a small incision made on either side of this bowel. Through these openings a forceps was passed which grasped the rubber tube fixed in the ureter and drew the latter organ well into the rectum. The two tubes occupying the ureters were allowed to remain two or three days. The ureters were not sutured to the rectal mucous membrane but quickly became united. The patient made an excellent recovery and 18 months after the operation is in excellent health, there being no evidence of any rectal irritation or of kidney infection. The avoidance of entering the peritoneal cavity is the author's principal claim for this operation. [J. H. G.]

6.—Andrew Fullerton reports a case of meningo-encephalocoele in which he removed the entire tumor successfully. The patient, however, developed bronchitis after being discharged from the hospital and died from this condition four weeks after the operation, the wound having entirely healed without trouble. The tumor was situated in the occipital region and contained a portion of the brain the size of a small hen's egg. The operation was done when the child was three weeks old. [J. H. G.]

7.—Lewis Marshall recommends operation in cases of **spina bifida**, and reports several cases in which he has operated successfully. [J. H. G.]

LANCET.

June 22, 1901.

1. The Croonian Lectures on the Chemical Side of Nervous Activity. W. D. HALLIBURTON.
(See abstract in *Phila. Med. Journal*, July 6, of *British Medical Journal*.)
2. Three Lectures on the Practical Points in the Treatment of Threatened Asphyxia.
ROBERT L. BOWELS.
3. On the Agglutinating Property of Blood Serum in Cases of Plague. D. LOUIS CAIRNS.
4. Sugar-free Milk as a Food for Diabetics.
ROBERT HUTCHISON.
5. The Value of Antitoxin in the Prevention of Diphtheria.
A. E. PORTER.
6. The Roentgen Rays in South Africa.
J. HALL-EDWARDS.
7. Aneurysm of the Subclavian and Axillary Arteries; Ligation of the Second Part of the Subclavian.
G. A. WRIGHT and P. R. WRIGLEY.
8. Meat Preparations; the Possibilities of Myosin Albumin. F. W. FORBES ROSS.
9. A Note on a Case of Fibroma of the Small Omentum.
J. JACKSON CLARKE.

2.—Will be abstracted when the lectures are completed. [F. J. K.]

3.—Cairns discusses the agglutinating property of blood serum in cases of plague. In preparing the emulsion of plague bacilli the author used a 24-hour culture grown upon agar. A sufficient quantity of sterilized salt solution (75%) was poured into the tubes to cover the slanted agar. The growth was rubbed off the surface of the agar slant with a glass rod, and the emulsion was then decanted into a sterilized test-tube. The emulsion of plague bacilli prepared by this method yielded a homogenous and workable mixture which remained unchanged for about 24 hours. Upon microscopical examination the bacilli were found perfectly free in this fluid, and were not grouped together in clumps. The blood was collected in Pasteur pipets about 30 centimeters in length. After collecting the blood the pipet was set aside in a cool place for several hours, until the serum had separated. Test-tubes, about 9 centimeters in length and about .7 of a centimeter in diameter, were found most convenient in the technique of the macroscopical method. These test-tubes were sterilized at a temperature of 160°C. for one hour. The tubes were plugged with cotton wool. In these investigations 5

dilution were employed, namely, 1 in 10, 1 in 25, 1 in 50, 1 in 75, and 1 in 100. Positive reactions were not obtained with dilutions higher than 1 in 75. Control experiments were employed in all instances. The author has appended a number of tables in his article, which give the results of his observations. He concludes that the reaction does not occur during the early days of the disease. It is absent in rapidly fatal cases. Towards the close of the first week of the disease, agglutinative properties show themselves; the intensity of the reaction increases up to the 6th week. After the 6th or the 8th week the serum gradually loses its agglutinative power. As a rule, the rise and the fall in the intensity of the reaction are approximately equal. In severe fatal cases the reaction never reaches a high degree of intensity, while in equally severe cases, which rapidly convalesce, the reaction is more intense. The agglutinative power of the serum in some of the mildest cases is slight and it may be absent. In severe forms of plague, in which there occurs an early and favorable crisis, the reaction is, as a rule, most marked. From a diagnostic standpoint the application of the agglutinative reaction will be found to be of great value. [F. J. K.]

4.—Hutchison highly recommends sugar-free milk as a food for diabetics. The author gives a plan of a strict diet which includes sugar-free milk. In one of his cases the patient followed this scheme. While upon an ordinary diet 300 grams of sugar were excreted daily, and when placed upon the strict diabetic diet, which consisted largely of sugar-free milk, the patient excreted only 25 grams of sugar, and gained in weight. [F. J. K.]

5.—Porter highly recommends the prophylactic administration of antitoxin in the prevention of diphtheria. He employed the prophylactic injections in 24 families during an epidemic of diphtheria with very favorable results. In only one person so injected did diphtheria develop subsequently. The injections were refused in 8 instances, and amongst these 3 afterwards developed the disease. In another series of 21 families in whom the prophylactic injections were not used, diphtheria subsequently developed in a large percentage of the individuals. The author believes that the use of antitoxin is a valuable means of preventing the development of diphtheria in persons exposed to infection. [F. J. K.]

6.—Hall-Edwards describes his experience in South Africa with the X-rays. In all he examined 193 cases of gun shot or shell wounds and in 65 the missile was located by the rays and subsequently removed. The large majority of bullets removed were found between the ankle and the abdomen while the upper extremities with the exception of the hands were comparatively free. The author compares the use of the X-ray for the purpose of locating bullets with the older methods of probe, etc. [J. H. G.]

7.—Wright and Wrigley report a case of aneurysm of the subclavian and axillary arteries occurring in a man 36 years of age. The first symptoms were noticed six months before operation and the patient's occupation, which required the lifting of heavy sacks of flour, was supposed to have been an etiological factor in the case. The subclavian artery was exposed and as its second division was found to be healthy two large silk ligatures were placed about it. The wound healed primarily, the dressing not being removed until the 11th day. At the time of the patient's discharge from the hospital there had been no return of the radial pulse but the extremity was well nourished. A faint pulse was perceptible about two months after the operation when the aneurysm was found greatly contracted and hard, presenting no pulsation. [J. H. G.]

8.—Itote writes upon the values of meat preparations and the possibility of myosin albumin. He contends that extractive compounds are of little value except for their excitatory properties. From a dietetic standpoint the value of gelatin is still an unsettled question. He highly recommends albumins and concludes that the field of usefulness open to myosin albumin is a wide one. The method of procuring a suitable, cheap, and economical process for extracting myosin albumin still remains unsolved. [F. J. K.]

9.—Clarke gives the notes of a case of fibroma of the lesser omentum. The tumor was situated obliquely in front of the stomach. Just behind the growth lay the pylorus. The tumor received its blood supply from the gastroduodenal portion of the hepatic artery. [F. J. K.]

MEDICAL RECORD.

July 6th, 1901.

1. Observations in China and the Tropics on the Army Ration and the Post Exchange or Canteen.

MAJOR LOUIS LIVINGSTON SEAMAN.

2. The Place of Cereals in Infant Feeding.

HENRY DWIGHT CHAPIN.

3. The Value of Local Sanatoria in the Combat of Tuberculosis in Large Centers of Population.

S. A. KNOPF.

4. Observations and Remarks on Removal of the Gas-serian Ganglion in the Cadaver. ROBERT A. AMYX.

5. Primary Carcinoma of the Tip of the Appendix, etc. J. RIDDLE GOFFE.

1.—Major Lewis Livingston Seaman, late Surgeon to the 1st U. S. Volunteer Engineers, presents an interesting paper on: Observations in China and the Tropics, on the Army Ration and the Post Exchange, or Canteen. He gives a most interesting description of the U. S. Military Hospital in Peking, a portion of which, Camp Riley, occupies one of the many compounds of the Temple of Agriculture, one of the most sacred and classic spots in the celestial empire. He draws a favorable comparison of the health of the American troops compared with those of other nations, and especially in the freedom of our troops from enteric fever. This would indicate, as the writer points out, that we have profited by our experiences of the Spanish-American War. He narrates the great improvement in health which took place among our troops in the cold and invigorating climate of Peking in contrast with their run-down condition upon arriving from the Philippines, and attributes this in no small part to the excellent food which the soldiers received. He makes a strong plea for the re-establishment of the canteen. [T. L. C.]

2.—Henry Dwight Chapin of New York, discusses the place of cereals in infant feeding, and states that chemical analyses of milk are not the only scientific basis of comparison; that nature adapts an animal's milk food to its digestive system, and that cow's milk and woman's milk were intended for different digestive systems; that as cows milk forms solid curds, and woman's milk flocculent curds, the curd of cow's milk intended for an infant should be broken up mechanically, that as cereal gruels mechanically break up the curds of cow's milk, and as infants are able to utilize them, their use is rational. Chapin believes that it is often preferable to make a standard diluent of digested gruel, as they not only break up the curds but expose a surface of milk proteins and not starch, and furnish a certain amount of nourishment, that is at once available for carrying on the work of digestion, taking the place of part of the soluble proteins, and also form a satisfactory substitute for milk when it must be withheld for a few feedings. [T. L. C.]

3.—S. A. Knopf, in a lecture upon the value of local sanatoria in the combat with tuberculosis in large centers of population, emphasizes his well known views upon the great importance of this form of treatment. Consumption can be prevented by proper sanitation, training and education. It can be cured in nearly all climates by proper hygienic and dietetic treatment under constant medical supervision, at home or in the sanitarium. [T. L. C.]

4.—Robert F. Amyx contributes an exhaustive paper on "Observations and Remarks on the Removal of the Gas-serian Ganglion in the Cadaver." He emphasizes especially the importance of careful dissection of the ganglion from the dura and other contiguous structures, the dissection being made upon the ganglion and its branches as much as possible. This method of attack will prevent profuse hemorrhage. The ganglion must be dissected from its dural covering, the cavernous sinus, internal carotid artery and middle meningeal artery before any effort is

made to remove it. Observing the caution given above in carrying on the dissection upon the ganglion and its branches will be especially important in preventing the occurrence of hemorrhage. [T. L. C.]

5.—J. Riddle Goffe reports two rare cases of primary carcinoma of the tip of the appendix, primary epithelioma of the sphincter muscle of the bladder. These two cases are unique in demonstrating the presence of primary carcinoma in most unusual locations. It is significant too that they were discovered in two unmarried women, and both at so early an age. The patient with the cancer of the appendix being but 15, and that of epithelioma of the sphincter muscle of the bladder but 28. [T. L. C.]

NEW YORK MEDICAL JOURNAL.

July 6, 1901. (Vol. LXXIV, No. 1.)

1. Chronic Fluorine Poisoning. FRITZ SCHWYZER.

2. The Limitation of Drug Therapy.

ROBERT H. BABCOCK.

3. Remarks on Appendicular Abscesses.

RAMON GUITERAS.

4. An Improved Form of Ambulance would Increase the Value of the Treatment of Ileat Prostrations.

FREDERICK GRIFFITHS.

5. Puerto Rico; its Climate and its Diseases.

C. H. ALDEN.

6. Letter from Toronto.

1.—In chronic fluorine poisoning, F. Schwyzer points out the fact that fluorine is capable of a cumulative action under certain conditions. In small doses it is a relatively harmless preservative agent; but as soon as it is given a chance to accumulate in the body through continued administration, it becomes dangerous, and its employment should be prohibited by law. This applies especially to beverages and food stuffs that are consumed regularly and in large quantities, particularly beer, green vegetables, milk and meat. Great caution should be exercised in prescribing fluorine for internal use. Especially in recent years, numerous fluorine preparations have been recommended for the treatment of consumption always accompanied by the assertion that they are positively non-toxic. There is no doubt in the author's mind that poisoning can also be produced by organic fluorine combinations, if used too long. It is particularly necessary to draw attention to this latter fact, as the symptoms of fluorine poisoning are not very pronounced, and it is rather difficult to detect the fluorine in the body. [T. M. T.]

5.—C. H. Alden, in his article on Puerto Rico, its Climate and its Diseases, gives the following diseases as prevalent on the island: The highest death rate is from anemia, or "tropical chlorosis," with during the last ten years an average of 4513 deaths out of 27,915 deaths yearly. Intestinal diseases are quite common. In the last ten years the death rate was 1183, or 3.83% of the total deaths. Malarial fevers are much less prevalent in Puerto Rico than in Cuba, and during seven months ending April 30, 1900, 1514 deaths, or 6.32%, from these fevers were reported, but it is most likely that the diagnosis was incorrect in many cases. Yellow fever is not endemic. Typhoid fever averages 383 deaths, or 1.43%, annually of the total number of deaths. Malaria fever is thought to be responsible for many cases of fever of the irregular course and is endemic. Tuberculosis, presumably almost entirely pulmonary, gives an average of 1824 deaths yearly, or 6.78% of the total deaths. Tetanus is frequent and fatal, there being an average of 952 deaths, or 3.57% of the total deaths. Venereal diseases, especially syphilis, are very common in the lower classes. There is also a very large proportion of blind in Puerto Rico which is largely due to ophthalmia neonatorum and small pox—the ratio being about one in every 480 persons. Small pox causes about 623 deaths annually, the highest number

being 2362 in 1899, the lowest 11 in 1893. Cerebrospinal meningitis causes quite a number of deaths—from 1899 to 1899, 395, or 1.12% of the total deaths. Leprosy exists, of which the tubercular form is the usual one. Elephantiasis is quite common and has often been mistaken for leprosy. [T. M. T.]

MEDICAL NEWS.

July 6, 1901. (Vol. LXXIX, No. 1.)

1. Practical Notes Relative to Rabies. N. G. KEIRLE.

2. Actinotherapy in Cutaneous Medicine, a Preliminary Communication. WILLIAM S. GOTTHEIL.

3. Ideals in Physical Education. D. A. SARGENT.

4. The Early Operative Treatment of Acute Mastoid Inflammation. EDWARD B. DENCH.

5. Salient Points in an Epidemic of Typhoid Fever Based upon Fifty-five Cases. WILLIAM J. CRITTENDEN.

6. A Case of Lobar Pneumonia with Hyperpyrexia; Recovery. WILLIAM R. WILLIAMS.

1.—N. G. Keirle divides his article into three divisions: (1) At what times and under what circumstances should patients be advised to submit to treatment; (2) With what material and in what manner are they treated; (3) What risk attends treatment? Under the first condition, the author states that the treatment must be commenced immediately, even if we are not sure that the dog is mad. The dog must never be killed, and if, after being observed daily for a few days, he shows no sign of rabies, the treatment may be discontinued. He reports three cases in which the delay was considerable, all of which developed rabies about the same time as the animal that was inoculated. However, a number having no treatment escaped. The material used is not a serum, but a portion of the spinal cord of a rabbit that has died of rabies. This is rubbed up in sterile cool water. The spinal cords are dried over caustic potash, which diminishes the amount of virus, but does not attenuate it. The method is subcutaneous hypodermic injection in the abdominal region. There is no risk greater than the rare and unjustifiable occurrence of abscesses. Lumps caused by proliferation of connective tissue are common, as is also a local or general erythema. Treatment must be continued for at least 23 days. [T. M. T.]

2.—W. S. Gottheil, in his article on actinotherapy in cutaneous medicine, gives the following advantages of the methods: First and foremost, it is eminently conservative. It causes no radiodermatitis, ulceration, or loss of hair, such as too often, though sometimes necessarily, occur under the Roentgen treatment. The author knows of no record of any serious trouble following its employment. Finsen rightly lays stress upon this point; and to dermatologists it is of special importance, since many of the affections that they are called upon to treat occur upon the face. In the second place, it is entirely painless. This is a great desideratum, more especially in dealing with women and children. Third, it is effective. New as the method is, there is already concurrent testimony from a sufficient number of competent observers to demonstrate that we possess a powerful therapeutic agent in concentrated light. [T. M. T.]

4.—E. B. Dench recommends in his article on mastoid inflammation opening the antrum and establishing a free communication with the middle ear. If this is done, the operator can thoroughly remove every focus of infection without running the risk of invading some important region. It must be remembered that even in cases where the examination reveals only slight mastoid involvement, the inflammatory process may have been so extensive as to have already invaded the lateral sinns, which it is important to ascertain. Another reason is that a large opening in the bone enables one to determine whether or not any intracranial inflammation is actually present. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

July 3th, 1901.

1. Medical Prospects. GEORGE E. FRANCIS.
2. A City Isolation Hospital. MAY SALONA HOLMES.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 6th, 1901.

1. Poverty and Degeneracy; Their Cause, Prevention and Cure. N. S. DAVIS.
2. Section on Stomatology. E. R. ANDREWS.
3. The Appointment of State Board of Medical and Dental Examiners. WILLIAM CARR.
4. Revenue for Conducting the Work of State Boards of Dental Examiners. GEO. L. PARMELE.
5. Revenue for Conducting the Work of the Boards of Dental Examiners. V. E. TURNER.
6. The Dental College Standard, Etc.
CHAS. C. CHITTENDEN.
7. Licensing; (1) By Examination; (2) By Diploma.
J. A. LIBBEY.
8. Postoperative Hemorrhage. A. H. CORDIER.
9. The Advantages and Disadvantages of Drainage after Abdominal Operations. HUNTER ROBB.
10. Actinotherapy in Cutaneous Medicine. A Preliminary Communication. WILLIAM S. GOTTHEIL.
11. A New Operation for Removal of Cancer of the Rectum. MATTHEW D. MANN.
12. The Accidents and Complications of Pelvic Surgery and their Treatment. J. B. DEEVER.
13. Cirrhosis of the Liver. Report of a Case.
C. S. MUSCROFT and H. A. INGALS.

1.—Davis delivered the annual address, entitled "Poverty and Degeneracy; their cause, prevention, and cure," before the American Medical Temperance Association, at St. Paul, on June 6, 1901. The author states that there is ample statistical and experimental evidence to show that alcohol leads to slow tissue degeneration, and renders individuals susceptible to acute infectious diseases. He emphasizes that alcoholic liquors are undoubtedly responsible for a large percentage of both physical and mental degeneracy. He points out that alcoholic drinks, tobacco, and other narcotic poisons are responsible for seven-tenths of all the pauperism, crime, and degeneracy of the people of this country and of Europe. In this interesting article the author states that for every dollar received as revenue money for alcoholic liquors and tobacco, the governments and municipalities must expend \$10 for the support of the resulting pauperism, insanity, crime, and degeneracy. He argues that if alcohol and other well-known narcotic drugs are wholesome articles for food and drink, and safe for general use, the public should not be compelled to pay a special revenue tax which is now imposed upon these articles. If these substances are dangerous poisons, destroying both the public health and morals, they should be classed among the list of poisons, such as arsenic, strychnine, etc., and their sale regulated by sanitary authorities, aided by the courts. [F. J. K.]

2.—Andrews, Chairman of the Section on Stomatology, at the 52d meeting of the American Medical Association, delivered the annual address before that section. In this discourse he reviewed the more important events which presented themselves during the year, especially those pertaining to dental education. [F. J. K.]

3.—Card discusses the appointment of a State Board of Medical and Dental Examiners. He emphasizes that as appointments are often made for political and personal reasons, unfit and unsuitable boards result. He believes that the system of controlling education in the State of New York by the Board of Regents, is by far the best that now exists, and hopes that the education of every other State in the Union will be regulated by a similar body. [F. J. K.]

4.—Parmele believes that the revenue for the maintenance of the State Board of Dental Examiners should be collected from the candidates presenting themselves for examination. [F. J. K.]

5.—Turner discusses the methods for collecting revenue for conducting the work of the Board of Dental Examiners. (1) by taxation of the people; (2) fees collected from the candidates for examination; (3) by taxation of the profession. The author contends that the most satis-

factory plan, considering all things, is to collect fees from the candidates for examination. [F. J. K.]

6.—Chittenden, in a paper read in the Section of Stomatology, discussed the Dental College standard. [F. J. K.]

7.—Libbey sets forth sufficient evidence to show that reform is needed in the system of dental education, and believes that when the people and the profession realize the state that now exists, laws will be enacted to insure against quackery. He maintains that every stomatologist should receive the degree of Doctor of Medicine. [F. J. K.]

8.—A. H. Cordier speaks of the seriousness of post-operative hemorrhage, its causes and prevention. The author has lost one case from post-operative hemorrhage, the result of the slipping of a catgut ligature, and has operated a number of times for such a condition following this cause. Oftentimes the Trendelenburg position will prevent the patient bleeding upon the table, and yet, when restored to the horizontal position in bed, bleeding may occur, particularly capillary oozing. It is recommended that a drainage tube in suspected cases be used for a few hours. In the cases seen by the author the hemorrhages occurred after simple operations. Attention is called to the difficulty which is not infrequently met with in differentiating between shock and hemorrhage, and it is in these cases that the drainage tube is of value. When once hemorrhage is suspected the abdomen should be promptly opened sufficiently to permit the introduction of a drainage tube. Salt solution introduced into the circulation has saved the lives of many cases of post-operative hemorrhage. [J. H. G.]

9.—Hunter Robb discusses the advantages and disadvantages of drainage after abdominal operations. Formerly it was his custom to employ drainage after certain abdominal operations. Gradually, however, he has abandoned the use of the drainage tube. In 222 consecutive cases only 1 was drained, a pus case where it was impossible to remove the entire abscess wall. In these 222 cases 28% were pus cases. Robb states that not only have his immediate results been better, but also his remote results since the abandonment of drainage. [J. H. G.]

10.—Gottheil defines radiotherapy as meaning the therapeutic use of the Roentgen Rays. Actinotherapy, he defines, as the employment of the ordinary sun or arc light, or portions of their rays, as therapeutic measures. The author does not agree with Flinsen who asserts that actinotherapeutic treatment requires hourly sessions every day. The author has reduced the time of treatment very materially, giving his patients only half hourly sittings every other day. He emphasizes that the length of the treatment depends largely upon the intensity and concentration of all the available actinic light. He employs an instrument manufactured by a firm in New York City, called the "Actinolyte." This instrument consists of an arc light, which can be regulated automatically, and a double convex condenser, the position of which can be regulated so that a circle of light of any size can be obtained. The heat rays are cut off by a cell which contains fluid. The author mentions that actinotherapy has proved useful in lupus vulgaris, lupus erythematosus, mycotic eczema, trichophytosis, favus, impetigo, furunculosis, tuberculosis cutis, epithelioma, mycosis fungoides, blastomycosis, actinomycosis, and other similar affections. [F. J. K.]

11.—Matthew D. Mann describes a new operation for removal of cancer of the rectum. The operation is suggested for cases where the growth is considered too high up to be easily reached through the vagina. The diseased portion of the bowel is excised and an anastomosis is made by means of the Murphy button. The author has been surprised to find with what ease this resection of the rectum can be done when the patient is placed in the Trendelenburg position. [J. H. G.]

12.—Deever emphasizes the necessity for a thorough knowledge of the pelvic viscera, their topographical relations and the pathology of their diseases in order to successfully cope with the accidents and complications of pelvic surgery. The most common of these complications is the formation of adhesions, the result of inflammatory processes involving the pelvic organs. These adhesions vary in character, some are easily separated while others are old and organized. The simple removal of the lesions is not sufficient in pelvic operations. In addition there should be thorough liberation of adhesions and the covering in of abraded or torn surfaces by peritoneum. This

may require considerable force or even division by means of the scalpel. Injury to the peritoneal coat of the bowel does not present any formidable condition, but when the muscular coat has been torn an effort should be made to suture the parts together, providing that the caliber of the bowel will not be impinged upon too much. In the same manner traumatism of the bladder must be attended to promptly. The displacement upwards to which the bladder is liable in the presence of a large growth or cyst makes it possible to injure that viscus in making the abdominal incision. Peritonitis in association with fibroids is rare in comparison to that of ovarian tumors and the inflammatory affections of the uterine appendages. In such cases, if pus be present, it is only after the most careful walling off of the peritoneal cavity that any attempt should be made to remove the uterus with its tumor. The most common complications of a rupture of an extrauterine gestation are hemorrhage, adhesion, and appendicitis. When appendicitis and extrauterine pregnancy are found together the latter usually involves the tubes of the right side. It is only in the presence of a sepsis that much danger can accrue from the combined lesion. The points where hemorrhage is most likely to take its origin are, the omentum and the ovarian, uterine, appendical, and mesenteric vessels. Postoperative peritonitis ranks highest in the fatality of pelvic operations. The treatment of a lacerated cervix calls for a great display of good judgement and skill as does any of the major operations on the pelvic viscera. [W. A. N. D.]

13.—Muscroft and Ingals give a report of a case of cirrhosis of the liver which occurred in a man, aged 45. The Talma-Morison operation was performed to give the patient relief, but death occurred 30 hours after the operation. Chloroform was used as the anesthetic; only a small amount was necessary. [F. J. K.]

AMERICAN MEDICINE.

July 6th, 1901.

1. Experimental Yellow Fever. WALTER REED, JAMES CARROLL and A. AGRAMONTE.
2. Medico-Legal Aspect of Tuberculous Joint Disease. H. AUGUSTUS WILSON.
3. Three Distinct Consequences of Myocardial Degeneration Following Coronary Arteriosclerosis, etc. A. P. OHLMACHER.
4. Occlusion of the Vena Cava from Compression; Diffuse Cancer, Chiefly Abdominal. R. T. EDES.
5. A Brief Note on Aspergillus Keratitis. JAMES MOORES BALL.
6. The Therapeutic Value of Adrenalin Chlorid. DUDLEY S. REYNOLDS.
7. Pilocarpin Hydrochlorate and its Use in Croup. S. E. WERTMAN.

1.—Walter Reed, James Carroll and A. Agramonte present an interesting study of yellow fever produced experimentally. In the first class of cases, the injection of the blood of a yellow fever patient induced the disease in four cases. The production of yellow fever by the injection of blood taken from the general circulation is of much interest, showing, first, that the parasite is present in the blood at least during the early stages of the disease, and secondly that the passage through an intermediate host, although this would seem to be nature's methods, is not essential in the life cycle of this parasite. In four cases the disease was produced by the bite of the infected mosquito, the *Culex fasciatus*. These latter cases were of interest, as showing the length of time during which the mosquito may remain capable of conveying the infection. Three mosquitos applied on the third day acquired the parasite and were able to infect three individuals with yellow fever. A single mosquito applied to the same case of yellow fever on the fourth day of the disease failed to obtain the parasite, as shown by the negative results 40 days after contamination. The authors submit one case in which a patient was repeatedly bitten by mosquitos who had fed upon yellow fever cases, but who were not infected. This indicates since the patient was nonimmune, that all mosquitos do not become infected. The authors' studies

upon the incubation period of yellow fever confirm a statement of later writers that it does not usually exceed four or five days, but that it may be prolonged more frequently perhaps than has been supposed. In the 12 cases produced by mosquito inoculation in the series of experiments, the onset was sudden in two and gradual in 10. In both of the former, the attack occurred during the night. The patient also in both instances being awakened by the onset of a decided chill. Of the 13 cases in which the onset was gradual, by mosquito inoculation 10; by blood injection, 3, frontal headache was the most frequent premonitory symptom. The fever charts of the cases will show that the primary rise of temperature is tolerably abrupt and reaches its height in a very short time. It does not reach its maximum as quickly as the writers would seem to indicate. The tri-hourly record in 10 of our mosquito inoculations shows that this period of primary rise varies from 12 to 24 hours. The average period was a fraction over 16 hours. In striking contrast to these was the short period of the primary rise of temperature in the four cases produced by blood injection. In these it varied from 2½ to 9 hours, the remaining two cases giving 6 to 7 hours respectively. In the 12 cases due to mosquito inoculation, the primary rise of temperature was followed by a distinct remission or intermission which was generally reached in 48 hours. The same remission was present in three of the four cases produced by blood injection. The authors believe that the facts presented, indicate that the period of inoculation of yellow fever occasionally exceeds the quarantine period of five days, and that although exceptional, this must not be left out of consideration. Secondly, their observations emphasize anew the importance of recognition by the profession of very mild cases of yellow fever so forcibly pointed out years ago by John Guiteras. [T. L. C.]

2.—Augustus Wilson presents a paper on a Medico-Legal Aspect of Tuberculous Joint Disease. He makes the observation that the law only requires a physician to do the best that he is able, and not the best that any physician might do in the treatment of a case. He mentions visiting a hospital ward devoted to children, in which 10 cases of hip-disease, all having properly applied extension apparatus, were permitted to sit up in bed. It was believed that all of the cases would have abscesses sooner or later, and all would have stiff hips and short legs. The mistake of permitting these patients to sit up would readily account for such an outcome. Unlike acute inflammatory processes, tubercular osteitis demands for its recovery perfect fixation for a long time and any attempts by movements to prevent stiffness will provide the very traumatism that is needed to maintain and increase the destructive process. The loss of joint usefulness should never be considered as a necessary or unavoidable result of tubercular joint disease, but rather as a distinct evidence of failure in not having the attention of a physician sufficiently early. Failure to reach a correct diagnosis or inappropriate forms of treatment are also responsible for untoward results. [T. L. C.]

3.—A. P. Ohlmacher reports three cases of myocardial degeneration following coronary arteriosclerosis. These conditions are illustrated by typical cases. Even at autopsy the underlying mechanism in such cases of death from "heart failure" is not always appreciated. There are examples of heart-muscle lesions, of myocardial disease, resulting from arteriosclerosis of the coronary arteries, the latter affection usually being a part of a general arteriosclerosis, and thus they represent one of the several modes by which arteriosclerosis, that peculiar disease of advanced life, brings man to an unexpected end. The first case was one of sclerosis and thrombosis of the right coronary artery with a softening of myocardium and unexpected death. The second case presented sclerosis and thrombosis of the left coronary artery with anemic softening, rupture of the heart, and sudden death. The area of

softening thus corresponds to the usual type of *myomulacia cordis* as it is the counterpart of hemorrhagic infarction in any other organ in which terminal arteries are occluded by thrombosis or embolism. The third case was one of sclerosis and obliteration of the left coronary artery with fibrous myocarditis, aneurysm of the heart, and death during pneumonia. [T. L. C.]

4.—R. T. Edes reports a case of occlusion of the vena cava from compression associated with diffuse cancer, chiefly abdominal. The report of the autopsy is included. Obstructions complete or partial of the vena cava are far from being rare. In this case it could be followed downward from the diaphragm from just below the renal veins at which point its cavity came to an abrupt ending containing a rounded mass and firmly occluding it. A résumé of some interesting cases from the literature accompanies the report. [T. L. C.]

5.—James M. Ball reports a case of *aspergillus keratitis*, a rare variety of corneal inflammation of which less than a dozen cases are described in the literature. The author believes that the condition is much more common than has been thought. He reports a case of the condition and emphasizes these points: *Aspergillus keratitis* is a more common disease than has been supposed. Intense pain in the eye, followed by the development of a brownish or black mass within the substance of the cornea are pathognomonic signs of *aspergillus keratitis*. Removal of the mass early in the case is followed by uninterrupted cure. Failure to recognize the condition and to apply proper treatment is followed by sloughing of the cornea and in some cases by the loss of the eye. In the few cases of *keratomycosis aspergillina* in which cultures have been made, only *aspergillus fumigatus* has been found. [T. L. C.]

7.—S. E. Wertman has treated a number of cases of croup, unusually severe and malignant in type, with pilocarpin hydrochlorate. Brief reports of five cases are given. He used antitoxin in three cases all of which were fatal. These cases had received in addition internal and local treatment with which up to this time he had been having good results. Five cases treated after the latter method (excluding antitoxin) recovered. In another case in which the disease had assumed such a grave form that dissolution seemed but a few hours distant, instead of giving large doses of pilocarpin hydrochlorate, the drug was administered in small doses hypodermically. As to dosage a child of four years received hypodermically, 1-32 of a grain dissolved by heat. The injections should be given some eight hours apart. [T. L. C.]

AMERICAN JOURNAL OF MEDICAL SCIENCES.

May, 1901.

1. The Protozoan of Cancer. H. GAYLORD.
2. (1) Thoracic Aneurysm. (2) Carcinoma of the Superior Maxilla. (3) Cholelithiasis and Suppurative Cholecystitis. (4) Inguinal Hernia of (a) Bladder; (b) Cecum. B. GALLAUDET.
3. The Carbohydrates of the Urine in Diabetes Insipidus. D. L. EDSALL.
4. Conclusions Based Upon Three Hundred and Thirty Outbreaks of Infectious Diseases Spread Through the Milk Supply. G. KOBER.
5. Laryngeal Hemorrhage from an Apparently Normal Larynx. G. WOOD.
6. Blastomycetic Dermatitis of the Gluteal Region. F. HARRIS.
7. Subinvolution of the Uterus; Three Suggestive Cases. L. ATLEE.

1.—The first article in this number is of such extraordinary importance that the following abstract has been made very complete.

The first positive experiment was made from the peritoneal fluid of a man 51 years of age upon whom an exploratory operation was performed August 12th, 1898. The patient presented all the signs of a large intraperitoneal tumor, and at the operation the abdominal fluid was drawn off with careful aseptic precautions into 3

test tubes and several flasks. Inoculation from this fluid upon various media was negative. Microscopical examinations showed, however, the presence of pale spherical bodies from 2 to 10 microns in diameter that resembled fat, but had too low a refractive index, did not stain black by osmic acid, and could not be extracted by ether under any circumstances. They could be stained by the usual aniline dyes, but fixation caused considerable distortion. A few of these contained granules with Brownian movements. These tubes were examined every day, and it was possible to demonstrate that the spherical bodies gradually increased in size, became more indefinite in outline and lost their yellowish green color. During this period they commonly sent out pseudopods and long projections. In some cases a delicate nucleus could be made out. Ultimately a few of them became transformed into what appeared to be large sacks containing highly refractive granular and small spherical bodies; these of course resembled a sporulation stage. This fluid was centrifugated, and from the supernatant liquid injections were made into the peritoneal cavity of a female dog and of a guinea-pig and into the jugular vein of a guinea-pig. In the meantime the patient died. An examination of the tissues showed the characteristic picture of colloid carcinoma of the peritoneum, probably originating in the appendix. The microscopical structure resembled that of adenoid carcinoma. Cultures from the tumor were entirely negative. Twelve days after inoculation the guinea-pig that was inoculated into the jugular vein, was distinctly listless. Fifty days after inoculation it was killed and examined. There was no reaction at the site of inoculation. The pleura was slightly infected and the lung contained numerous minute nodules. The other organs appeared to be normal. These nodules histologically presented the typical picture of adenocarcinoma. Sections stained by Plimmer's method showed the presence of vast numbers of the peculiar organisms described by him. Small hyaline bodies were found in the heart blood that resembled those found originally in the peritoneal fluid. In the animals that had received injections into the peritoneal cavity, when killed, a small amount of fluid was found that contained the peculiar hyaline bodies found in the original peritoneal fluid. These when placed in the thermostat went through the same cycle of changes. Cultures were attempted but were unsuccessful on account of the use of unsuitable media. In both these animals there was some indication of implication of the mesenteric lymph nodes. Gaylord then undertook the examination of a large number of tumors in order to determine whether these peculiar hyaline bodies could be found in them. These are apparently tabulated in another portion of the paper under the title of "Typical Plimmer's Bodies, Intracellular Protozoan Forms and Russell's Bodies," and he is able to state that he has found them in "all organs including the blood, taken from all regions, of all cases dying of cancer, including sarcoma and epithelioma." Moreover in "all cases of carcinoma and sarcoma thus far examined, in which cachexia was well marked, that the organism, especially the younger forms, can be detected in the peripheral blood." Gaylord now gives a résumé of the literature of the blastomycetes in relation to cancer, particularly those of Sanfelice and Plimmer. He is enthusiastic about the Plimmer's staining method, adding to it however, as a 6th stage, immersion of the section in peroxide of hydrogen until the black color is removed. In all cancers that he has examined, Plimmer's bodies have been present. In one case of apparently benign but recurrent adenoma of the breast, only a few were found. It was observed that Plimmer's bodies are rare, and not so well defined in sarcoma as in carcinoma. Their demonstration is difficult. In the fresh state they take Sudan III, or they may be fixed by dropping wet smears into Hermann's fluid or by dropping peritoneal coagulum into Hermann's fluid. They are usually intracellular and often several may be detected in a single cell. They are never found in conditions other than tumors in which cellular degeneration is taking place. An effort was now made to identify this microorganism. As it did not appear to be a yeast and could not be cultivated upon media, (64 different varieties having been tried) their attention was attracted by its similarity to the vaccine bodies described by Funk, and he therefore concludes that they are protozoa. They are apparently capable of producing suppurative lesions in human beings, for in one case of carcinoma of the breast a small abscess was found in the skin, the pus cells of

which contained numerous Russell's bodies, and Gaylord believes that they were the direct cause of the suppuration. In conclusion he gives a summary of the animals inoculated with material and cultures from human carcinoma and sarcoma. There were 41 guinea-pigs, 6 rabbits and 2 dogs inoculated in various ways, most of which lived more than 40 days, and 7 guinea-pigs inoculated with parasites from infected animals which lived about 29 days, proving the rapid increase in the virulence of the organism. In cultures made in collodium sacks which were then implanted in the peritoneal cavities of rabbits the virulence was so exalted that they killed by hematogenous infection in 14 days. It does not appear, however that distinct tumors are found in many of these animals, but large numbers of the parasites could readily be detected in all the fluids and tissues. Two guinea-pigs and 2 rabbits inoculated into the jugular vein showed the peculiar nodules in the lung described in the first pig. Two other animals presented rather doubtful lesions. Gaylord promises a second instalment of his paper in which he intends to describe more fully the inoculation experiments and the methods of cultivation. [J. S.]

2.—Gallaudet reports some interesting cases. The first a man of 39, had developed an aneurysm of the carotid artery as a result of an old injury, which it was considered demanded operation because it was increasing rapidly. Two operations were accordingly done. The first was incomplete on account of the obvious tendency to collapse on the part of the patient. In the second the artery was ligated above the sack and an attempt was made to remove it, but the patient died upon the table. The operation was rendered exceedingly difficult on account of dense adhesions, and profuse hemorrhage. In another case, a man with a carcinomatous growth occupying the roof of the mouth, was operated upon after previous ligation of both external carotids by tracheotomy. All the diseased bone was removed with the Rongeur forceps, and the patient made an excellent recovery. The third case was one of cholelithiasis and suppurative cholecystitis. The patient had had no symptoms except jaundice and moderate evening rise of temperature with clay-colored stools. There was neither local pain, tenderness in the epigastrium nor any leucocytosis. At the operation the gall bladder was distended by pus and contained 2 stones, and a 3rd stone was found impacted in the cystic duct at its junction with the hepatic duct. The recovery was uneventful. Two interesting cases of hernia are also mentioned. One in which the bladder ascended through the right inguinal canal, and another in which the cecum was found in a left inguinal hernia. In operating for hernia he sutures the aponeurosis of the external oblique under the cord.

3.—Edsall has carefully estimated the carbohydrates and nitrogen in a case of diabetes insipidus. The method employed was to precipitate with benzoyl chloride. In the presence of sodium hydrate the carbohydrates dropped down as benzoesters. He found that they were not abnormally increased; that they vary slightly with the quantity of urine, and approximately with the total nitrogen, but that they have no distinct relation to the latter. Restriction of the fluids of the diet reduces their quantity. The object of the paper was to discover whether the quantity of carbohydrates could be taken as an evidence of the extent of the diabetes in the absence of a reducing sugar. [J. S.]

4.—Kober believes that milk may be rendered unfit to use by the development of bacteria; by improper feeding of the animals; by being the product of diseased animals; by containing tubercle bacilli; and by acquiring the infectious organisms after leaving the animal. He has tabulated 330 outbreaks of infectious diseases spread by the milk supply, consisting of 195 epidemics of typhoid fever; 9 of scarlet fever, and 36 of diphtheria. Of the epidemics of typhoid fever 148 were due to disease invading the farm or dairy; 16 were due to intentional dilution with infected water. In 7 cases the cows probably waded in sewage-polluted water. In one case the milk pans were washed with cloths used about the patients. Of the 99 epidemics of scarlet fever, the disease existed at the dairy or farm 168. In 6 cases the helpers had lodged in or had visited infected houses; in 2 cases the infection was conveyed by bottles infected at customers' houses. In 17 cases the dairy helpers were suffering from the disease while handling the milk, and in 10 cases they had acted as nurses. The epidemics were also spread by wiping the

milk cans with infected cloths, by storing the milk in the sick room and apparently by disease of the cattle. Diphtheria existed at the dairy or farm 13 times, and in 3 cases the employes were ill while still handling the milk. In 12 cases the cows were diseased. Of these epidemics 243 were reported from England; 14 from Germany; 5 from France; 5 from Austria and 52 by American and 11 by Scandinavian authors.

Kober believes that the laws now on the statute books regarding milk practically deal only with adulteration, and do not control the methods of handling or preparation. [J. S.]

5.—Wood reports a case of hemorrhage from the larynx for which no cause could be ascertained. He collects 6 similar cases from the literature. In his own case the bleeding was temporarily controlled by an application of suprarenal extract. [J. S.]

6.—Harris reports a case of blastomycetic dermatitis involving the gluteal region, that commenced as a small pimple and then spread, forming a roughened area that itched intensely. This was excised and found to consist of hyperplastic epithelial tissue of the skin enclosing military abscesses and containing giant cells. Scattered through the tissue were numerous circular or oval bodies, evidently blastomycetes. Cultures were not made. [J. S.]

7.—Atlee reports 3 cases of subinvolution of the uterus. The first, a woman of 23, after the birth of her first child still had an enlarged, tender uterus with patulous os and profuse leucorrhoea. The 2nd, a woman of 32 had been subjected to a criminal abortion. She had severe leucorrhoea and the uterus was greatly enlarged. The 3rd, a woman of 38, after the birth of a still-born child had leucorrhoea, the uterus was also enlarged and patulous. All these cases were treated by 1 gr. of ergotin three times a day, and magnesla sulphate. They all recovered. [J. S.]

VRATCH.

March 31, 1901. (Vol. XXII, No. 13).

The entire number is devoted to biographical sketches of the late V. A. Manassein.

April 7, 1901. (Vol. XXII, No. 14).

1. Chavkin's Lymph and Other Substances Elaborated in the Human Organism Producing an Immunity Against the Plague. A. F. VIGOURA.
2. Balantidium Coli as the Cause of Chronic Diarrheas. N. S. SOLOVIEFF.
3. Gastrotomy for the Removal of a Glass Tube which was Swallowed and Imbedded in the Stomach. V. V. ROSANOFF.
4. Koumiss-Cure and Some of the Koumiss Settlements of the Government of Oufim. P. V. TSESAREVSKI.

1.—Will be abstracted when concluded.

2.—Solovieff made an exhaustive study of a case of ulcerative colitis caused by balantidium coli, which terminated fatally. An examination of histological preparations showed that, contrary to the general opinion, the balantidium coli are not confined to the mucous membrane of the large intestine. Owing to their independent motility, they penetrate between the intestinal glands, then into the submucosa where they multiply and migrate further through the muscular layer into the subserous. All along their course they produce coagulation necrosis of the tissues. This fact explains the chronic course of the affection as well as the relapses, after the parasites have disappeared from the feces. Several excellent microphotographs illustrate the author's findings. [A. R.]

3.—Rosanoff reports the following case: A peasant, while in a state of intoxication, put into his mouth a few coins which he intended to spend on more liquor. At that time he happened to say something to his wife and at once began to choke. He spit out the coins except one which he believed had entered his throat. He seized a glass tube from the table and tried to push the coin down. In the effort the tube slipped into the stomach. For nearly six months the man went about his usual work without the least discomfort. Finally the tube changed its position in the stomach, and gastric disturbances ensued, followed by emaciation. Gastrotomy was performed and a glass tube 22 cm. long and 3 cm. in diameter removed. The patient made an uneventful recovery. The coin was found under the table. [A. R.]

4.—Will be abstracted when concluded.

EDINBURG MEDICAL JOURNAL.

April, 1901. (Vol. IX. No. 4.)

1. Light and Color Perception. F. W. ELDRIDGE-GREEN.
2. On the Formation of Crystals, Dendrites and Spiral Structures in Relation to Growth and Movement, Especially Rhythmic Movements. J. BELL PETTIGREW.
3. Remarks on Two Cases of Enteric Fever, Complicated with Rigors and Exacerbations of High Temperature. VINCENT DICKINSON.
4. Pernicious Anemia with an Analysis of Eighty-Seven Published Cases and an Inquiry into the After History of Twenty-two Reported Cures. HORACE C. COLMAN.
5. On the Diagnosis of Thoracic and Cardiac Aneurysm by the Röntgen Rays. HUGH WALSHAM.
6. Osteomalacia. W. E. FOTHERGILL.

3.—Dickinson reports 2 cases in which typhoid fever was complicated with rigors and exacerbation of high temperature. One of the patients was a man, aged forty-five years; and the other was a man, aged sixty years. [J. M. S.]

4.—Coleman's paper is based on the study of 87 cases of pernicious anemia and contains a detailed report of 4 cases which he observed himself. [J. M. S.]

5.—Walsham believes that of all the diseases of the chest for which the Roentgen rays may be used for the purpose of diagnosis there is none in which they are of greater value than in the diagnosis of thoracic aneurysm. He feels justified in asserting that it is the duty of the physician to make use of this method of examination in all doubtful cases of chest disease especially if aneurysm be suspected. He gives the notes of 5 illustrative cases together with 9 reproductions of skiagrams. He believes that a transverse position of the heart is an important sign of intrathoracic aneurysm. [J. M. S.]

6.—Fothergill reports the case of a Polish woman, aged 48 years, who had had 9 pregnancies, 8 of which ended in the birth of living children. Toward the end of the sixth pregnancy she began to suffer pain in the hips and legs and discovered that she could not walk easily. The seventh labor was instrumental and was followed by slow improvement, during which she became free from pain, but muscular weakness and difficulty in walking remained. During the eighth pregnancy, which occurred 2½ years later, the pains in the hips and legs returned and were accompanied by pain in the sacral and lumbar portions of the vertebral column and in the arms. After labor, during which she was delivered of a dead child, considerable improvement followed and she was again able to walk without sticks. She became pregnant the ninth time and the usual symptoms returned. It was necessary to deliver this child by Cesarean section, after which improvement again took place until the patient was again free from pain and could walk with out support. With the exception of a large ventral hernia the patient remained fairly well for about 6 years; but during this time noticed an alteration in the shape of her body. Three years ago the pain returned in the back and legs. It became very severe and spread to the arms and chest, she began to suffer from bronchitis and finally became bed-ridden. Under appropriate treatment, which included large quantities of cod-liver oil, improvement again took place so that she was able to walk with slight support. The author believes that osteomalacia is due to a primary affection of the central nervous system, probably beginning in the nerve cells of the anterior horn of the spinal cord. The author believes that in men and in non-pregnant women internal medication should always be patiently tried together with hygienic and dietetic measures. In females, if the disease continues to progress, double oophorectomy may be performed and should be followed by continued medication. In early pregnancy, abortion should be induced and suitable medication be established. In late pregnancy, if a living child cannot be born at term, it is necessary to choose between the induction of premature labor and Cesarean section. During labor if the abdomen is opened, the ovaries should be removed whether the uterus is or not. [J. M. S.]

May, 1901. (Vol. IX. No. 5.)

1. The Rational and Comprehensive Study of the Hepatic System. FREDERICK T. ROBERTS.
2. Malignant Degeneration of the Villi of the Chorion.—Syncytioma Malignum. ROBERT WILLIAM MACKENNA.

3. Medicine and Surgery in the Arctic Circle. JAMES LAING.
4. A New Treatment for Inoperable Cancer of the Breast. CECIL LEAF.
5. Note on the Cremasteric Reflex in Sciatia. G. A. GIBSON.
6. Stenosis of the Small Intestine after Strangulated Hernia. ALEXIS THOMSON.

1.—Will be abstracted when finished.

2.—MacKenna, after a study of 78 cases of syncytioma malignum, finds that the majority of the cases occur between the ages of 25 and 35 years. Hydatid mole preceded the disease in 38 cases; parturition at term in 24 cases; and abortion in 15 cases. There does not seem to be any very precise relationship between multiparity and the development of the tumor. Hemorrhage is usually the earliest and the chief symptom of the disease. Part of it comes from the capillaries of the uterine mucosa but the greater part probably comes from the vessels deeper in the uterine wall whose coats are broken through by the advancing tumor cells. In all probability each profuse hemorrhage is due to the successful penetration of the walls of one of these deeper vessels by the tumor cells. The following points are of value in making a diagnosis: (1) the fact that the patient is usually in the prime of her reproductive epoch; (2) the fact that at some recent date she has been confined, has aborted or has expelled a hydatid mole; (3) the hemorrhagic character of the disease; (4) the rapidity with which metastases develop, particularly along the blood channels. Macroscopically, the mass brought away by the curette resembles the tissue removed in an ordinary case of retained placenta. Microscopically, the tumor contains syncytial cells and cells from the layer of Langerhans. The author believes that the tumor is a malignant degeneration of the cells investing the villi of the chorion and that the involvement of the decidua serotina is secondary. There is great danger attending upon retention of placental remains of fragments of hydatid mole and in all cases it is of great importance to make sure that no remnants of fetal tissue are left in the uterus. In the event of any repeated bleeding following the termination of gestation the uterus should be explored and curetted and the tissue removed and examined microscopically. The uterus and its appendages should be removed as soon as signs of the disease are discovered, unless there is some strong contraindication. The cause of the malignant changes, in the author's opinion, is the presence of some unknown toxin in the blood. [J. M. S.]

4.—Leaf describes an apparatus which he uses in order to produce suction of the tissue involved and the tissue neighboring to malignant tumors to the mammary gland. The apparatus is applied to the breast and worn as long as it gives the patient no inconvenience, a time varying between 6 and 15 hours out of the 24. If ulceration is not already present in the tumor the author does all that he can to encourage it by the constant use of the boracic fomentations which have the additional advantage of softening the fibrous tissue which is present and clearing the channels in which the cells and cancer juice travel. The treatment is recommended in cases of ulcerating scirrhus adherent to the pectoral muscles, in which the axillary glands are much enlarged, matted together and attached to the thoracic wall. It is also recommended in cases in which after one or more operations the growth has recurred in the pectoral muscle, in the lymphatic glands or in both. The author believes that the suction produced by his apparatus draws the cancer juice and the cancer cells and the microorganisms, if there are any, to the surface and prevents them from becoming carried to distant parts in the lymphatic circulation. He reports the case of a woman, 76 years, in whom the shield was worn for nearly 4 months. During this time although the ulcerated surface became slightly more extensive, there was no evidence to show that the glands were becoming affected or that the disease was spreading along the lymphatics. The treatment was finally stopped in order to allow the patient to have her

breast amputated. In another patient, aged 67 years, the shield was worn from 7 to 9 hours out of the 24, and there was a weekly discharge of from 10 to 15 ounces. As a result of the treatment the area of involvement in the breast has undoubtedly increased, but the degree of hardness is decidedly less marked and is sometimes almost soft. The discharge has become more offensive and there has been more sloughing. On the other hand the axillary thickening is undoubtedly less. In a third patient, aged 34 years, the shield was worn from 4 to 8 hours out of the 24. Since the commencement of the treatment the nodules of which there were 3, have become more prominent, but distinctly less adherent to the pectoral muscle. The axillary thickening, however, has not advanced at all. [J. M. S.]

5.—Gibson has noticed an exaggeration of the cremasteric reflex in cases of sciatica. The phenomenon was observed not only in the more serious types of disease, but also in the less grave varieties not accompanied by muscular wasting and changes in electric responses. The reflex may be obtained in the ordinary way, but is more easily produced by firm pressure over the lower and inner portion of Scarpa's triangle. The sensory nerve supply is derived from the internal cutaneous branch of the anterior crural nerve, which is the afferent segment of the reflex arc. The efferent segment is the genito-crural nerve, which has its origin in the first and second lumbar segments. The great sciatic nerve has its origin in the fourth and fifth lumbar and the first, second and third sacral segments. Therefore, there is no direct connection between the great sciatic nerve, on the one hand, and the genito-crural nerve on the other, and this seems to indicate that in sciatica the segments of the cord above those from which the great sciatic nerve takes its origin are in a state of excessive irritability. [J. M. S.]

6.—In operating for strangulated hernia it is very common to meet with circulating grooving of the bowel at one or both ends of the loop engaged in the hernia. When the intestine is liberated and handled the grooves almost invariably recover. They may, however, persist and in this case the symptoms of obstruction continue, instead of being relieved by the operation or they may become the seat of a fibrous stricture. The stenosis that results from persistence of the constriction grooves is an urgent condition. If the belly is opened the damaged loop of bowel will be found in the same condition that it was in at the time of operation. The treatment consists either in immediate resection of the damaged portion of the bowel or in relieving the obstruction by enterotomy. The stenosis that depends upon the formation of a fibrous stricture is of gradual development and the associated symptoms do not make their appearance until an interval of weeks has elapsed since the original strangulation. In such a case when the abdomen is opened the damaged loop of intestine is usually found in the vicinity of the previous wound and is frequently discovered to be fixed in this region by adhesions. After the adhesions are separated the affected loop is found to present a fibrous stricture at one or both ends in the position of the constriction rings observed at the first operation. Above the stricture the intestine is greatly distended and its walls hyperthrophied; while below, its walls are collapsed and the gut is empty. Under these conditions the treatment is directed toward relieving the obstruction and getting rid of the stricture. This may be accomplished by resecting the stricture loop immediately or doing an enterotomy above the proximal stricture and resecting the bowel at a later period after the distention has been gotten rid of. The latter method is Thomson's preference. [J. M. S.]

ARCHIVES OF PEDIATRICS.

May, 1901. Vol. 18. (No. 5.)

1. The Blood in Infancy and Childhood. ALFRED STENGEL and C. Y. WHITE.
2. The Value of the Widal Reaction in Infancy and Childhood. JOHN LOVETT MORSE.
3. Experiences in an Epidemic of Typhoid Fever; Fetal

and Infantile Typhoid, Scarlatina Complicating Typhoid and Vice Versa. J. FINLEY BELL.

4. A Case of Streptococcal Infection Successfully Treated by Antistreptococcus Serum. J. S. FOWLER.

1.—The article by Stengel and White on the blood in infancy and childhood which began in the April number, is finished in the current number. The first changes observed in most cases of disease affecting the blood is a reduction in the hemoglobin and in the number of the erythrocytes, but as a rule the reduction in coloring matter is greater than that of the number of cells, especially in young infants and young children. When erythroblasts are found in the circulating blood after the second or third day of life their presence may usually be assumed to indicate a pathological change. The significance of erythroblasts is, however, much less in infancy and childhood than in the adult since marked anemia occurs so much more readily in early life. Leukocytosis is more frequent in the blood of anemic children than in adults, and the increase may reach enormous proportions in apparently slight pathological conditions. The causes of leukocytosis in children are, in general, the same as those which produce the condition in adults. We may distinguish toxic, inflammatory, posthemorrhagic and cachectic forms. Enlargement of the spleen may or may not accompany the leukocytosis. During an attack of an infectious disease there is often but little change in the number of red corpuscles and the percentage of hemoglobin, while during convalescence a moderate or severe grade of anemia presents itself. The number of leukocytes is increased in some diseases and is unaffected or decreased in others. Among those diseases in which there is no leukocytosis are German measles, early stages of smallpox, mumps, influenza, malaria, typhoid fever, tuberculosis and chickenpox. In an infectious leukocytosis the polymorphonuclear elements are the ones usually involved. In typhoid fever the number of leukocytes is decreased in children as in adults, and there may be at the same time a decrease of the hemoglobin and of the red corpuscles. In pneumonia there is nearly always some degree of leukocytosis which is often excessive. When leukocytosis is absent the prognosis is unfavorable in children as it is in adults. Rotch found that leukocytosis develops from 6 to 12 hours before physical signs are discoverable, and that a leukocytic crisis may antedate the crisis of temperature by 24 hours. A blood lysis is, however, more common. Hereditary syphilis is often accompanied by an anemia which under certain conditions may become very great. This anemia is characterized by decrease of the erythrocytes accompanied by poikilocytes, microcytes, macrocytes, by the presence of polychromatophilia and nucleated erythrocytes. Leukocytosis is present and at times may reach a very high grade with predominance of the lymphocytes. The presence of myelocytes is noted and the hemoglobin is greatly decreased. Slight acute inflammatory processes of the respiratory tract may cause oligochromemia and oligocythemia; chronic processes scarcely ever do. The authors have examined the blood from cases of pneumonia, typhoid fever, whooping cough, chickenpox, tuberculous caries with cold abscess, acute rheumatism, noma, bronchitis, pleural effusion, enteritis, mitral heart disease, rickets, eczema, local epilepsy, convulsions, spastic cerebral palsy and chronic meningitis. [J. M. S.]

2.—After a study of the value of the Widal reaction in infancy and childhood Morse believes that it is safe to conclude that this reaction occurs under the same conditions and with the same limitations in children as in adults. There is some evidence to show that in them reaction appears earlier, is feebler and persists a shorter time than in adults. The serum test, therefore, is of especial value in 2 ways in the diagnosis of typhoid in children; first in ruling out many cases of gastrointestinal disorders which might otherwise be mistaken for typhoid, and second, in making a positive diagnosis possible in many mild cases which might otherwise pass unrecognized. In early infancy

a positive Widal reaction is of somewhat less diagnostic value than in older children and adults. If the mother has had typhoid, and especially if she is nursing the infant, it should be looked on with some suspicion, unless associated with other characteristic signs of typhoid. Examination of the mother's blood and milk and the cessation of breast feeding will then assist the estimation of the true value of the reaction in the infant. The Widal test also promises to be of great value in the determination of the frequency, symptomatology and pathology of infantile typhoid. The employment of this test in large series of cases, not only of supposed typhoid, but also of other gastrointestinal disorders cannot fail to add much to our knowledge of these vexed questions even if it does not positively settle them. [J. M. S.]

3.—Hall records his experiences in a local epidemic of typhoid fever. One of the cases occurred in a pregnant woman and resulted in a premature labor at 8 months. The baby also presented typhoid fever. One of the patients also presented scarlet fever as a complication of typhoid fever, and another patient was taken ill with scarlet fever and subsequently developed typhoid. [J. M. S.]

4.—Fowler reports the case of a boy, aged 19 months, who was suffering from vomiting and diarrhea. The patient also presented a mucopurulent nasal discharge, dacryocystitis, stomatitis and a patch of bronchopneumonia. There were 2 distinct attacks of bronchopneumonia. Under the use of antistreptococcus serum the patient recovered. During convalescence he developed measles from which he also recovered. The stomatitis was due to the presence of streptococci and the general streptococcus infection started from that lesion. [J. M. S.]

NEUROLOGISCHES CENTRALBLATT.

April 1st, 1901. (No. 7.)

1. The Pathogenesis and Clinical Manifestations of Cramps in the Calf Muscles. P. NÄCKE.
2. A Case of Superficial Softening in the Area of Distribution of the Sylvian Artery. G. BIKELES.
3. Contribution to the Histology of the Changes Produced in the Spinal Cord as the Result of Compression by Vertebral Tumors. M. BIELSCHOWSKY.

1.—Näcke deplors the ignorance that exists concerning such a common and important symptom as **cramp in the calf muscles**. Various theories have, however, been suggested, among these are hypotonia of the antagonistic muscles, and fatigue of the calf muscles themselves, but as the symptom often occurs in the very beginning of exercise, and is no more likely to take place during the night after severe exercise, then after a day of rest, Näcke believes that it is probably the result of violent shortening of the muscles, or some defect in movement. The normal man usually sleeps upon the side with the joint slightly flexed, that is, the muscles are probably in a state of equilibrium. In this position, however, it is possible that excessive contraction may from time to time take place. Pressure upon the arteries does not seem to be of any significance, because women who habitually wear garters are not more subject to this manifestation than are men. Among certain predisposing causes are infectious diseases, certain forms of poisoning, and other states that bring about an abnormal condition of the blood. Why, however, the calf muscles should be particularly involved is not clear. Nervous influences are doubtful. Some authors, as for example Féré, believe that they are of considerable importance, but Näcke has failed to observe the symptoms more frequently in neurasthenics and epileptics than in others. Regarding the symptomatology of this disease Näcke speaks of localized cramps in the calf muscles occupying only one side, or cramps first in both legs or in one immediately after the other, or repeated attacks. In some cases the cramp is almost clonic in character, and the pain may persist some time after the attack. In one instance Näcke was able to observe it in himself three days later. He calls attention to a peculiar condition that he names "abortive cramp," that is to say, a slight contraction of the muscles that can be overcome by effort. This is

particularly interesting in connection with the theory of musculo-cutaneous origin. The major cramps of course awaken the subject at once, but it is possible that these abortive cramps might produce characteristic dreams. However, their duration is probably too brief. In conclusion he speaks of the fact that these cramps are invariably peripheral in character, and states that Dexler has informed him that they do not occur in the lower animals. [J. S.]

2.—The patient, a man of 29, had always been in bad health, with weak cardiac action. He developed edema of the left lower extremity, and 2 days later had paralysis of the left upper extremity and left side of the face, and paresis of the left lower extremity. The superior branch of the facial nerve, and the motor portion of the trigeminus were not involved. The tendon reflexes were exaggerated on the left side, and the cutaneous reflexes on the right side. Touch and pain sense were diminished on the entire left side, and temperature sense on the left side with the exception of the face. An examination of the heart led to the diagnosis of defect of the septum of the heart, stenosis of the pulmonary artery, tuberculosis of the lungs, thrombosis of the veins of the left leg, and embolism of the Sylvian artery. The patient died in the course of 18 days. At the autopsy there was found an area of softening composed of numerous closely aggregated focal lesions occupying the entire area of distribution of the Sylvian artery. There was also some hemorrhage into the pia arachnoid. Sections were made and stained by the Marchi method, and showed degeneration involving exclusively the pyramidal tract in the medulla and of the few fibres in the right fillet in the pons, probably corresponding to the motor fibres described by Hoche in this region, an area of degeneration in the posterior limb of the internal capsule corresponding to that described for hemiplegia, but slightly more extensive. In the right crus degeneration was found in the medial portion, but none in the external third. The case is interesting because of the extensive degeneration, the left upper branch of the facial nerve remaining intact. It is possible that the sensory disturbances which involved the left side nearly uniformly, were due to functional, and not organic lesions. [J. S.]

3. In concluding his paper Bikeles calls attention to the fact that of the 3 cases reported by him in which the spinal cord was subjected to external pressure, 2 showed no trace of inflammation. Both of these, however, were characterized by the wide-meshed proliferation of the glia which is produced by the swelling of the myelin sheaths. He is unable to convince himself that the compound granular cells are derived from the leukocytes, but he is inclined to regard them as neuroglia cells, or connective tissue cells of the vessel walls. In the third case that had probably been subjected to pressure longer than the others there was distinct proliferation of the neuroglia tissue. The paper is still unfinished. [J. S.]

April 16, 1901.

1. The Disturbance of Deep Sensation. A. PICK.
2. A Stain for the Axis Cylinder. Preliminary Communication. L. KAPLAN.
3. The Histology of the Changes Produced by Compression of the Spinal Cord in Diseases of the Spinal Column. M. BIELSCHOWSKY.

1.—Pick has observed a case of a man, 43 years of age, suffering from general paresis. Whilst under observation the patient had an apoplectic attack in which the head was turned to the right, and there was paresis of the left facial nerve. There was complete loss of pain sense in the left arm, and almost complete loss in the left leg. There was also flaccid paralysis of the limbs on the left side. The next day the patient had improved very much and upon examination it was found that he had a left-sided hemianopsia, and there was extreme ataxia when the patient attempted to grasp any object. This ataxia gradually disappeared, and the patient returned to his former condition. At his death, some time later, the typical changes of general paresis were discovered. As it might be supposed that the disturbance of deep sensation was the result of the hemianopsia, Pick reports 2 additional cases in which the same symptoms did not exist. He also calls attention to the interesting experiments upon animals made by various authors in which, after destruction of the parietal lobe, loss of the position of the limbs could be determined. [J.S.]

2.—Tissues are hardened in Müller's fluid for 3 months

or more, then in alcohol for a day, and imbedded in celloidin or paraffine, and sectioned. They are then stained in a freshly prepared 10% aqueous solution of anthracene elcengalic ink for 3 days at 55°. Then washed in water, differentiated in potassium permanganate and nascent sulphuric acid (as in Pal's method); then washed in water, dehydrated, and mounted in xylol colophonium. A peculiar substance of the axis cylinder that commences a short distance from the cell and terminates a short distance before the end arborization is stained. [J. S.]

3.—Bielschowsky concludes his article. In the 2nd case the cross section at point of compression presents the typical picture of moderate softening. The pia was not involved, and there the question necessarily presented itself as to whether there was not some inflammatory action, or at least a toxemia, the result of the tumor. As in this case, however, the tumor was merely an exostosis, the latter supposition is excluded. He believes that the appearance is due merely to the disintegration of the spinal cord brought about by pressure. He also calls attention to several interesting features, first, a bundle of fibres that were found in the anterior commissure and in the adventitia of the central bloodvessels at the point of compression. These, he believes, are fibres pursuing an atypical course, although he discusses Flekier's supposition that regenerating fibres may be found in the spinal cord. In the 3rd case he calls attention to the cavity formation above the point of the compression and suggests that it is due to the obliteration of the central canal. Mendel has suggested that this is due to the interference with the flow of cerebrospinal fluid as a result of the proliferation of the neuroglia tissue, that is, a sort of gliomatosis. This, Bielschowsky regards as perhaps too sweeping, and he believes that in his own case there existed, as a result of the carcinoma of the vertebrae, a hydromyelia of the cord, following which the compression occurred. He believes that the clefts found in the anterior cornua are to be regarded as secondary to the rarefaction of the tissue. [J. S.]

ZEITSCHRIFT FUER KLINISCHE MEDIZIN. (Bd. XLII, Hefte 3 and 4.)

1. Changes in the Bone Marrow in Leukocytosis. H. RUBINSTEIN.
2. Physical Investigations of the Heart Sounds. A. v. HOLOWINSKI.
3. A Case of Acromegaly. M. A. TRACHTENBERG.
4. Aneurysm of the Aorta and Mediastinal Tumors. P. HAMPELN.
5. A Contribution to the Symptomatology and Diagnosis of Aneurysm of the Ascending Aorta Perforating into the Pulmonary Artery. C. HILDMOESER.
6. Concerning the Effects of Food on the Osmotic Pressure in Man and Animals. FRANZ NAGELSCHMIDT.
7. Concerning the Nature and Importance of the Ganglion Cells of the Cerebral Cortex of Man. ALBERT ADAMKIEWICZ.
8. Febrile Changes in the Chemistry of the Blood. CARL v. STEJSKAL.
9. Intercostal Phonation Phenomena. EDWARD WEISZ.
10. A Further Reply Concerning the Influence of Artificial Sweating upon the Secretion of Gastric Juice (in reply to Dr. Paul Edel). ALEXANDER SIMON.

1.—The method adopted by Rubinstein consisted in excising a portion of the ribs of rabbits, and carefully counting all the different varieties of cells in sections of the marrow, and at the same time counting carefully the white cells in dried preparations of the blood. Immediately thereafter the rabbit was injected with a leukocytotic; he used chiefly streptococcus cultures, turpentine, deutoalbumose and extract of spleen. The results from these substances were about equally good. The conclusions which he reaches are that leukocytosis (purely in the sense of an increase of other cells than the lymphocytes) is a function of the bone marrow only. After injection of the leukocytotic there is an increase of polymorphonuclear cells in the blood current, and in the bone marrow one finds an increased production of large homogeneous mononuclear cells which subsequently show granulations and are therefore the direct predecessors of myelocytes; these subsequently by nuclear changes become polymorphonuclear leukocytes. If the leukocytosis is prolonged, there is such an increase of myelocytes that these cells amount to much more than half the total number of cells in the bone marrow. The granules found in the large homogeneous mononuclear

cells may be observed in the process of formation, and in the early cells and in the early stages are basophilic. There was no evidence of any formation of granulated cells in the blood current or in the spleen or lymph. The large homogeneous mononuclear cells mentioned are developed from small lymphoid elements which are found in every bone marrow, but which are formed there, and have no relation to the lymphocytes of the lymph system. These facts are sufficient to demonstrate the incorrectness of the Uskoff teaching that the white blood cells are all derived from true lymphocytes. The eosinophilic leukocytes are derived, as are the pseudoeosinophiles and the neutrophiles, from lymphoid cells of the bone marrow. Intermediate stages between neutrophiles and eosinophiles cannot be observed in the blood or in the bone marrow. The process of development of the leukocytes in the bone marrow is through the following stages: There is first a small lymphoid cell with a nucleus showing distinct structure and with a small, distinctly basophilic, ungranulated protoplasm; second, a larger lymphoid cell with a large nucleus with distinct structure and a broad ungranulated protoplasm; third, a large lymphoid cell with a nucleus that does not show distinct structure but has a broad ungranulated protoplasm; fourth, a mononuclear ungranulated, large lymphoid cell, with a round nucleus, that takes stains weakly, with clear ungranulated protoplasm; fifth, the myelocyte; sixth, the polymorphonuclear leukocyte, the granules in the rabbit being pseudoeosinophilic; seventh, eosinophilic cells going through the same process with the single difference that the granules are from the beginning larger, and soon show the eosinophile stain instead of the neutrophile. [D. L. E.]

2.—The article is an extended description of the apparatus devised by the author, of the methods of its use, and of the results derived from its use. It has no special practical value, and is not subject to abstracting. [D. L. E.]

3.—The case described was observed in a woman of 31 who presented the usual characteristic appearances of acromegaly. There is a very careful series of measurements of all the regions of the patient's body and extremities, and these are compared with those of the normal person at the same age. A radiograph shows the changes in the hand and arm, and the contraction of the field of vision for white and colors is exhibited in illustrations. It is believed that this case could be clinically considered to be due to enlargement of the pituitary gland, since there was imperfect vision in both eyes, contraction of the field of vision, and more particularly, temporal hemianopsia. The disturbance of vision had been present for years and was constant, hence its cause was also constant and therefore probably organic. This cause was probably some disturbance of the chiasm in the posterior part, and this would give reasonable suspicion of enlargement of the hypophysis. It is commonly stated that in acromegaly the cardiac dulness, particularly over the left ventricle, is enlarged, this being attributed to the thickening of the arteries. In this case the heart was not hypertrophied, and there was no accentuation of either second sound. The patient had, however, attacks of heart weakness. It was interesting to note that both the heart weakness and the disturbance of vision had begun practically coincidentally, about six years before the patient came under observation, and the heart weakness was apparently functional; it is suggested that the functional disturbance of the heart was produced by altered function of the pituitary body. There has been no previous discussion of the functional changes of the heart in acromegaly, and Trachtenberg considers that this question should be more carefully studied. As to the relation between the pituitary body and acromegaly, he states that our knowledge is not yet definite, but he believes that we must recognize that there is a distinct relation between changes in the hypophysis and this disease; it is certainly true that the two have been observed frequently to exist together. But what the disturbance is one cannot say off hand, as in some cases there has been atrophy of the hypophysis and in other cases hypertrophy. There is some obscure relation between the hypophysis and the thyroid, and there is a rather striking analogy between the results of different forms of alterations of the thyroid and those of different varieties of changes in the hypophysis. [D. L. E.]

4.—Hampeln contributes a very interesting discussion of aneurysm and mediastinal tumors and the differential diagnosis between these two conditions, based upon a series of about 150 cases of aneurysm, about 200 cases of stenosis of the esophagus, and a large number of other

cases of mediastinal tumor. The conclusions which he has reached from his clinical work and the observation of a large series of autopsies, are that the most important signs which give evidence of mediastinal disease are stenoses and pressure paralyses, the latter chiefly involving the recurrent nerve. Tracheal stenosis is the most important of the various forms of stenosis, and if it is present the probability of the presence of aneurysm is very great. In 20 cases of tracheal stenosis aneurysm was present 18 times, tumor but twice. The stenoses of the bronchi are of much less importance because they are present in about the same percentage of cases of neoplasm as of aneurysm. Esophageal stenosis speaks very strongly for the presence of neoplasm. This more especially refers to permanent disturbance of deglutition; a subjective feeling of difficulty in swallowing may be met with in aneurysm, but also in general dilatation of the aorta. The latter feeling was noted in 14 of 95 cases; but these feelings are only temporary, and are very different from the characteristic symptoms of actual stenosis of the esophagus. Distinct permanent stenosis of the esophagus is in his experience a great rarity in aneurysm; he saw it but once in 140 cases. In 4 cases the postmortem showed compression, and in 3 instances perforation, but only slight difficulty in swallowing or none at all was ever complained of. The reason for this is that the aorta can exert only a one-sided pressure upon the esophagus. The course of the esophagus becomes somewhat distorted because of this, but as a rule nothing else results. He has reached the conclusion, therefore, that permanent signs of stenosis of the esophagus constitutes almost secure evidence of mediastinal disease, and excludes aortic aneurysm. Only rare exceptions to this rule will be found. Paralysis of the recurrent on the left side was noted in 30 instances, 25 of these were aneurysm, 5 neoplasm. It is, however, to be observed that the percentage of paralysis of the recurrent in aneurysm is about the same as that in neoplasm. If the paralysis occurs in a person of middle age, particularly if there is a syphilitic history, it speaks decidedly in favor of aneurysm, but if it occurs in an older person, and especially when there is cachexia, it indicates carcinoma. Hemorrhage from the lungs is an extremely important sign in carcinoma, as it indicates severe pressure, and is usually premonitory of rupture. A similar sign is, however, frequently observed in carcinoma of the lungs and bronchi. [D. L. E.]

5.—The case reported by Holdmöser occurred in a man of 48 who was observed through two periods, one of them in the early part of the summer of 1900, the other in the fall of 1900, death occurring at the end of the latter period. His chief subjective symptoms were cough, and dyspnea, which at first improved but afterward grew worse, and death occurred from cardiac insufficiency. Physical examination of the man showed as the most pronounced signs about the heart a strong pulsation on the left of the sternum most marked in the second intercostal space, a marked thrill at this region, and a loud systolic murmur heard most markedly at this area, but also on the right. In the beginning of the disease there was also a diastolic murmur at this point, and there was also a systolic murmur of a different character heard over the left ventricle. The left ventricle was decidedly hypertrophied, the right less so. The second pulmonary sound was marked by accentuated, and the pulse was decidedly quick. There was dulness over the sternum and over the area of pulsation. The affection was evidently an aneurysm, the main question being whether it was an aneurysm of the root of the ascending aorta or of the pulmonary artery. Holdmöser discusses these various possibilities, stating that the conclusion reached was that there was an aneurysm of the lower part of the ascending aorta extending toward the left side, and there was also thought to be a mitral insufficiency. He discusses the possibility of a diagnosis of aneurysm of the pulmonary artery, the admissible conclusion being that this diagnosis is often impossible and at least extremely uncertain. The autopsy showed aneurysm of the ascending aorta extending toward the left, compressing the pulmonary artery and showing a perforation about the diameter of a pea with thickened edges; it had evidently been present for a long time before death. The left ventricle was much hypertrophied and dilated; the right ventricle was dilated and but slightly hypertrophied. The right pulmonary valve was completely adherent to the wall of the pulmonary artery. There follows a theoretical discussion of the origin of the murmurs, in which no definite conclusion is reached excepting that

the diastolic murmur heard over the pulmonary region was probably not due to insufficiency of the pulmonary valves, but was produced in the aneurysm itself. This diagnosis was made during life, and although the autopsy appearances did not seem to confirm it, Holdmöser thinks that the adhesion of the pulmonary valve probably did not allow of regurgitation, but that the aneurysm pressed this valve over far enough to prevent regurgitation. The study of other cases of rupture of an aneurysm into the pulmonary artery shows that the cases are to some extent suggestive as to diagnosis. A loud systolic murmur was heard in all cases on the left in the second intercostal space; dulness and thrill were found in the same region. The murmur was transmitted to the back, chiefly on the left. A diastolic murmur was heard in a number of cases, and was in most of these cases shown to be due to coincident insufficiency of the pulmonary valves. There was a decidedly varying condition as regards overfilling of the veins. It was notable that in several cases in spite of dyspnea the patient preferred to lie down. Holdmöser has found six other cases in which there was evidently a healed perforation like this. The clinical signs of the perforation itself are not at all distinctive; they may be quite as well due to compression. The perforation is probably of marked importance in itself only when it is very large, or when the right heart has already become insufficient. The radiogram showed an abnormal shadow toward the right, and an unduly broad shadow toward the left. Such a shadow might be due to pulmonary aneurysm or to aneurysm of the aorta extending toward the left, but when such a shadow is observed it is wise to think of the possibility of either aneurysm of the pulmonary artery or compression by an aortic aneurysm. [D. L. E.]

7.—Adamkiewicz gives a somewhat obscure physiological-psychological discussion of the function of the ganglion cells of the cortex. [D. L. E.]

8.—The changes found in the blood by Stejskal are summarized by him as follows. In the whole blood the albumin was decreased, the dry residue was lessened, the water and salts were increased, the fat and cholesterol were lessened, the lecithin unchanged, the calcium and potassium salts were increased, the chlorides and iron decreased, the sodium practically unchanged. The serum showed chiefly a decrease of the albumin and a coincident decrease of the dry residue, and increase of the ash and water. All the components of the ether extract had decreased. The potassium were increased, the chlorides decreased. The erythrocytes were poorer in albumin, lecithin and cholesterol, and richer in water and salts. This was evidently due to imbibition of fluid rich in salts, particularly in chlorides, that is, imbibition of plasma. The weight of the erythrocytes was increased, the amount of plasma decreased, but the plasma was poorer in albumin and richer in water and salts. The question as to the origin of these changes could not be definitely settled; it might be due to lack of nutrition, to the disease itself, or to the fever. The fact that the salts had increased spoke against the possibility of inanition as the cause, and further plenty of nourishment had been taken; the disease itself may have been the cause, but there is not sufficient knowledge of the effects of disease to state this. The effects of fever *per se* have been studied to some extent, however, and from a comparison of results found in this case Stejskal decides that very probably the conditions were due to the fever itself. [D. L. E.]

9.—Abstracted in the Philadelphia Medical Journal from *Deutsche Medizinische Wochenschrift*, March 1, 1900.

DEUTSCHE ZEITSCHRIFT FÜR CHIRURGIE.

March, 1901. (Volume 59, Nos. 1 and 2.)

1. The Surgical Relation of Influenza. G. PEREZ.
2. The Intracranial Complications of Middle Ear Disease. W. MERKIENS.
3. The History of Anuria. FRANZ KOENIG.
4. The Treatment of Appendicitis. EDMUND ROSE.
5. Cysts of the Pancreas. G. SEEFISCH.
6. Tuberculous Stenosis of the Small Intestine. J. SOERENSEN.
7. A New Osteoplastic Method of Laying Open the Orbit. FELIX FRANKE.
8. Hemorrhagic Cysts of the Pancreas. V. Subbotic.
9. Experiments with Wax-covered Silk Thread. N. SALTZYKOFF.

1.—Perez has collected the various clinical observations upon the different localizations of the influenza bacillus.

especially those needing surgical treatment, and the varied complications and sequelae of influenza; seeking to explain them by experiments. The difficulty of isolating the influenza bacillus, the occurrence of other micro-organisms with it, and the similarity between it and the pseudo-influenza bacillus, made his work extremely difficult. As long as these micro-organisms are found with the influenza bacillus, it can not be proved that the processes occurring, which necessitate surgical interference, are the result of the influenza bacillus alone. No doubt longer exists that influenza is due to the Pfeiffer bacillus. Perez describes the influenza bacillus in detail, with a review of the literature of its morphology and pathogenicity; its staining properties, and the effects caused by it when inoculated into animals, from his own experiments. Among the changes produced in the skin by influenza are alopecia, erythema, eczema, purpura, and other eruptions with desquamation. It causes inflammation in the muscles, fasciae, and connective tissue, with infiltration of the leucocytes and abscess formation. It causes bronchopneumonia, abscess of the lung, and pleurisy which is generally purulent. In all of the inflammations due to the influenza bacillus, the tendency of both red and white blood corpuscles to escape through the blood-vessel walls seems markedly increased. Perez expects to continue his experiments, and will publish the results of influenza upon the rest of the body later. [M. O.]

2.—Merkens reports some of his own cases and some from the literature, to show the occurrence of intracranial complications, meningitis, sinus phlebitis, brain abscess, and encephalitis, with purulent otitis media. A woman with left otitis media had the base of the skull fractured, but recovered. Three months later severe pachymeningitis occurred, with death on the third day. Autopsy showed more lesions on the left of the brain than on the right. Merkens believes the meningitis to have been due to purulent otitis media. The injury undoubtedly had an unfavorable effect upon the middle ear disease. Two other cases of suppurative otitis media following fracture of the base of the skull are mentioned. The differential diagnosis between meningitis and brain abscess is difficult; high fever, rapid pulse, convulsions, with rapid change of symptoms are found with meningitis; normal temperature, slow pulse, increasing paralysis, and slow course, with abscess. When the abscess is on the left side, typical speech disturbance occurs. Sensory troubles are due to encephalitis around the abscess, and to increased intracranial pressure. Merkens reports two other cases which died after operation, one of meningitis following purulent otitis media, the other of brain abscess. Both had been correctly diagnosed. He also reports a case of sinus phlebitis following otitis media, and a case of extradural suppuration, both of which recovered after operation. He quotes a number of cases of toxic encephalitis. As serous meningitis and encephalitis are caused by the same toxins, they may exist together, and can easily recover without operation. If bacteria are present, suppuration will occur, and recovery will be doubtful. When the diagnosis of an abscess of any part of the brain, or of sinus phlebitis is made, operation should be immediate, to save the patient's life. Care must be taken, however, especially in children, not to operate unless positive that suppuration has occurred, for the symptoms with otitis media will often puzzle an expert clinician. [M. O.]

3.—Anuria is rarely seen. Koenig reports the case of a man of 51, given to inordinate beer drinking, who passed no urine for 4 days. His bladder was found empty. He felt perfectly well, and continued drinking. While driving to Göttingen for operation, he stopped and ate a good meal. Only on the ninth day did vomiting appear, and coma came on, with death following, in spite of operation. Koenig says that no symptoms are noticed for 3 days at least. He reports the interesting case of a phthisical girl of 14, whose right kidney was severely affected. Suddenly anuria occurred. Operation was performed, the right kidney opened along its convexity, and a fistula established. Urine flowed through the fistula for a week, then it appeared in the bladder. The fistula healed in a few weeks. Two other cases are reported, of anuria due to stone in the left ureter, one cured by operation, the other spontaneously, by the passage of the stone. [M. O.]

4.—Prophylactically Rose removes the appendix whenever it shows signs of inflammation or thickening, while performing adjacent abdominal operations. Medical treatment of appendicitis he considers useless. The main symp-

tom is constipation, which may even be the cause of appendicitis. **Opium should never be given.** Before operation, the intestines should be disinfected as far as possible. Operation should be performed in the first half of the first week generally, rarely in the first part of the second week. The pulse will show the immediate necessity for operation. 5 operations can be done, simple incision of the appendix, which is rare; amputation of the appendix; extirpation of the appendix; amputation of the cecum; and exairesis of the appendix. After reporting cases to illustrate these operations, making a total of 68 cases reported, Rose concludes, saying that the more he operates for appendicitis, the more he leaves in drainage, and omits stitches in the abdominal wall. **The longer the abdomen is kept open, the more successful is the result.** [M. O.]

5.—Cysts of the pancreas are very rare, and are hardly ever diagnosed. Von Mikulicz, out of his immense operative material, has found cysts of the pancreas only 5 times. Professor Hahn, in 10 years, has seen 4 cases which Seefisch reports in detail. Koerte has divided cysts of the pancreas into three kinds, the traumatic, the inflammatory, and the tumor-like, which increase in size gradually and only show symptoms late. The inflammatory are the most common. One of Seefisch's cases is traumatic, as it occurred a month after the patient had been run over. One case is inflammatory, following parturition, and the two others belong to the tumor-like variety, growing gradually larger without known cause. From these cases Seefisch has collected the following common symptoms as of value in making the diagnosis of cysts of the pancreas: (1) gastric symptoms, pain, tenderness, vomiting, signs of dilatation, etc.; (2) emaciation; (3) their development in the epigastrium, generally somewhat to the left side; (4) their situation near the posterior abdominal wall, upon the aorta, so that its pulsation is seen and felt; (5) their immobility; (6) the stomach (dilated) and the transverse colon are found lying upon the cysts. **Pancreatic symptoms were absent in all four cases, one of which died.** The general method of treatment is that devised by Gussenbauer, marsupialization of the cyst, with drainage through the abdominal wall, to which the opened cyst is sutured. In a few cases the cysts have been extirpated. This would be the ideal treatment, yet it is too dangerous in most cases. [M. O.]

6.—Soerensen reports three cases operated for cicatricial stenosis of the ileum, due to tuberculous ulcers, which he has seen during the past year. Tuberculous ulcers of the intestines are very common, about 85% appearing in the ileocecal region. But cicatricial strictures have rarely come to operation. The first patient had had phthisis for four years before operation. A stricture was found in the ileum, with an opening about 1 cm. wide. Entero-anastomosis was quickly done, as the patient was very weak. In the second case, tuberculous for three years already, several strictures were found in the ileum, the smallest only ½ cm. wide. The ileum was sutured into the transverse colon. The third case was a soldier who had been ill a year, in whose ileum several strictures, none under 1½ cm. were found. Here the ileum was sutured into the ascending colon. No symptoms of acute tuberculous enteritis are found in these cases, the patient showing no intestinal symptoms until stenosis occurs. But there are great emaciation, loss of weight, fever, etc. Then suddenly come the signs of intestinal obstruction. Above the stricture, hypertrophy of the muscular wall of the intestine occurs. In the great majority of cases phthisis already exists. Yet a tuberculous stricture may appear in an individual otherwise perfectly well. Before the symptoms of intestinal obstruction occur, diet will be needed; purgatives are dangerous. When strangulation occurs, operation should be performed at once. Entero-anastomosis and resection of the bowel are the operations to be performed. [M. O.]

7.—Franke reports a case of retrobulbar tumor in a man of 63. By Kroenlein's operation it was impossible to reach the tumor, but after enlarging his incision by scraping away the periosteum of the roof of the orbit, he came suddenly upon the tumor, which could even then only be removed in bits. The bony flaps were replaced, and the wound closed. It healed by first intention, but the result did not benefit the patient much. The tumor was a sarcoma. This led him to attempt an operation upon the cadaver, going through the bone at the level of the eyebrow, thus opening the orbit. This was easily accomplished. Franke advises this new modification of Kroen-

lin's method, as it injures neither muscles or nerves, and permits opening the retrobulbar space widely. [M. O.]

8.—Subbotin reports his second operated case of hemorrhagic cyst of the pancreas. Both of his cases were diagnosed before operation. This one occurred in a girl of 27, in whose left hypochondrium a tumor had grown for two years, following an injury. Laparotomy was performed, the cyst opened and drained through the abdominal wall, to which its edges were sutured. She died of septic peritonitis. Examination showed the tumor to be a chronic, sclerotic, hemorrhagic cyst of the pancreas. The pancreatic duct was not permeable, and other cysts existed near the head of the pancreas. The large cyst had probably been produced by dilated pancreatic ducts, being further enlarged by frequent hemorrhage. [M. O.]

9.—After a series of experiments with wax-covered silk thread, both with bacteria and disinfectants, Saltykoff concludes that it cannot be employed for sutures, for bacteria will penetrate it while disinfectants will not. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

1901. Volume IV No. 2.

- 1.—The Lengthening of the Fallopian Tubes with Ovarian and Parovarian Cysts. HARRY LEPMAN.
2. Malignant Myoma of the Uterus. ANTON MASTNY.
3. The Relation between Toxin and Antitoxin. RICHARD KRETZ.

4. The Anatomical Conditions Found in Death from Strangulation and Hanging.—FRITZ REUTER.

1.—From a full review of the literature, Lepman shows that the Fallopian tubes are generally lengthened by the growth of ovarian and parovarian cysts. The tubes rarely become thinner, generally growing thicker, broader, and longer. A table of 14 cases is given, in each of which measurements were made post mortem. From these it appears that the Fallopian tubes in women, except during pregnancy or the puerperium, measure from 9 to 9½ cm. in length, not including the uterine part of the tube, which is from 0.7 to 1.0 cm. long. The isthmian end has a diameter of from 2¼ to 4½ mm.; the ampulla, from 3¾ to 5½ mm. The lumen increases proportionately with the distance from the uterus. Having borne children makes no difference in these measurements. The only differences found in multiparae are that the blood vessel walls are somewhat thicker and the connective tissues more abundant than in virgins. During pregnancy the tubes are pushed out of the way, showing the effect of compression only. Then follows a detailed list of pathological cases in which the Fallopian tubes were lengthened. The tubes have been found five or six times their original length, the ampulla being tortuous. In 7 out of 11 cases examined microscopically, the cause was a parovarian cyst. The increased thickness of the tube is due to hypertrophy of its muscular wall, with some hyperplasia of the connective tissue. The cause of these changes is not only mechanical, from the tumor, but is most probably due to the increased blood supply in the neighborhood of the growing cyst. Thus Lepman believes that the Fallopian tubes take part in the common growth about the tumor, that continued mild, mechanical irritation will cause considerable hypertrophy of the muscle; but that, should truly strong reaction occur, atrophy will follow. Thus atrophy of the tubes is found with very rapidly growing cysts. [M. O.]

2.—While myomata are generally benign tumors, cases have occurred with recurrence and metastases. It is possible for a co-existing carcinoma or sarcoma to have grown into a myoma; or a metastatic growth from either carcinoma or sarcoma to have grown into a myoma; or a metastatic growth from either carcinoma or sarcoma may appear in a myoma; or a mixed tumor may be formed by the simultaneous development of a myoma and a sarcoma or carcinoma. But beside these pseudo-malignant myomata of the uterus, a true malignant myoma may be found. This Williams has called myoma sarcomatodes. Only four such cases have been published. Mastny reports the fifth case of malignant myoma, in a woman aged 45. A diagnosis of myoma of the uterus with malignant degeneration had been made before death. The autopsy revealed an elliptical tumor of the uterus which filled the entire hypogastric region. Small nodular masses were seen upon the flat surface of the tumor. Metastases existed in the broad ligament, lungs, pancreas, bronchial and retro-

peritoneal glands. Microscopic examination showed a muscular tumor of the uterus. Even the sarcomatoid cells show distinctly their derivation from muscle cells. The major part of the tumor was composed of these atypical muscle cells. Mastny showed, by staining them, that the gradual growth and the changes occurring in the muscle cells, with the disappearance of the connective tissue, might be seen. [M. O.]

3.—Kretz, after describing Ehrlich's "side-chain" theory to explain the immunity produced by anti-toxin, shows that this idea cannot be correct, for the antitoxin formation is irrespective of the effect of antitoxin in the animal body. This is also shown by the paradox reaction. Nor does Kretz believe that Wassermann's conclusion that one part of brain substance is identical with one of antitoxin is correct, though it does show the chemical affinity between the toxin and the organ affected. But one function of the toxin has remained hidden, which may be defined as the antitoxin-producing component of the toxin-effect. While Kretz considers pure neutralization of the toxin by the antitoxin, with Ehrlich's theory, incorrect, nevertheless he believes that the "side-chain" idea has helped to explain much. After visiting Ehrlich, Kretz adds that, in spite of recent experiments, Ehrlich's hypothesis does not explain the paradox reaction. Nor will the relation between toxin and antitoxin be understood until further investigations have gone deeper into the subject. [M. O.]

4.—Reuter has examined the bodies of 22 cases of strangulation, 7 of them suicides. Six others were adults, 9 infants. He describes the anatomic conditions found, believing that cyanosis of the face, with or without ecchymoses, and hemorrhage of the conjunctiva and eye-lids are noted in every case externally; internally are seen congestion of the brain and meninges, hemorrhage into the soft parts of the neck, near the line of strangulation, or at some distance above it, and marked injection of the mucous membrane of the upper air passages. In infants, while the external conditions are found the same, only congestion of the brain and its coverings is seen internally. The mechanism of death by strangulation or by hanging is the same, yet the lesions found are different. Reuter has looked over the statistics of 300 cases of autopsy after hanging. He states that there are, as a rule, no cyanosis of the face, no marked congestion of the brain or meninges, and no hemorrhage into the muscles of the neck; that injuries to the larynx are frequent; and that rupture of the intima of the carotids is frequently found. Reuter concludes, after quoting a few cases, that the differential diagnosis of death from strangulation or hanging, should not be difficult when the anatomic conditions found have been thoroughly examined. [M. O.]

CENTRALBLATT FUER CHIRURGIE.

May 11, 1901. (28 Jahrgang, No. 19.)

1. Intermittent Ether Narcosis. KRONACHER.
2. An Apparatus for the Administration of Schleich's Inhalation Anesthesia. LUDWIG MOSZKOWICZ.

1.—In spite of the various methods of local anesthesia general anesthesia has not been superseded, nor has the new spinal anesthesia yet fulfilled expectations. For minor operations chloroform in small quantity is all that will be needed; and it may be given in women and children without harm, little by little, for some time. But much better, according to Kronacher, is intermittent ether narcosis. He gives the ether a few drops at a time, removing the inhaler between a series of inhalations, letting the patient take five to ten long breaths of air, after which the inhaler is replaced. This is continued, thus alternating air and ether, until the excitement stage is reached. Then the ether is pushed for a few inhalations, before it is stopped. By this time, about ten minutes, the patient is anesthetized, and more ether is only given should he begin to come to. Then the same process is gone through again. Thus very little ether is given, and there is no danger. Kronacher has proved that the patient does not feel any pain between etherizations, nor has he any recollection after the operation, of having awakened or cried out during the operation. After effects by this method are gen-

erally absent. Kronacher has used this intermittent ether method for three years with great success. [M. O.]

2.—Moszkowicz describes an **apparatus** consisting of a bottle with two rubber tubes from its stopper, at the end of one of which is a cannula. The Schleich cocaine solution is poured into the bottle till it is half full, and air is pumped in through one tube; closing the stop-cock upon that side, and opening that connected with the cannula-tube, the solution is thus easily injected. As this apparatus makes the procedure much more rapid, Moszkowicz hopes that Schleich's infiltration anesthesia will be commonly employed. [M. O.]

May 18, 1901. (28 Jahrgang, No. 20.)

1. The Use of Magnesium for an Absorbable Anastomosis Button and Other Surgical and Technical Purposes. ERWIN PAYR.

1.—Last year Payr reported the idea of employing an absorbable metal for suturing blood vessels and nerves, and suggested using magnesium in intestinal anastomosis. This Chlumsky has already carried out. Payr has used magnesium plates in a plastic operation on an ankylosed joint to prevent the separated parts of the joint from uniting again. He expects to publish his experiments soon. He has used it in suturing nerves, in injuries of the parenchymatous organs to stop hemorrhage, and in irreducible fractures and pseudarthroses. Payr believes that many more indications will be found for the use of magnesium. [M. O.]

May 25, 1901. (28 Jahrgang, No. 21.)

1. The Limit of the Pupillary Reaction in Chloroform Narcosis. ADOLF FLOCKEMANN.

1.—Schleich says that in giving chloroform the pupil must be watched. It becomes smaller as the patient goes under the influence of the drug. Just enough chloroform should be given to keep the pupil a moderate size. Flockemann describes the first sign that the patient is coming to himself as follows:—though the moderately contracted pupil will react when one eye is opened, yet should both eyes be opened, the pupils suddenly become contracted. This he calls the **limit of the pupillary reaction to light in chloroform narcosis**. If the patient is still under the influence of the chloroform, a few more drops are added slowly; if he is almost awake, they must be dropped on rapidly. When the corneal reflex remains throughout the anesthesia, enough chloroform should be given till it disappears. Flockemann believes that the patient will be better off, should this phenomenon be watched. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

May 7, 1901.

1. The Symptomatology of Rheumatism (Tendenitis Rheumatica Ocularis.) A. PICHLER.

2. The Diagnosis of Tumors of the Frontal Lobes. HOENIGER.

3. Tuberculous Meningitis with Tuberculosis of the Male Genital Organs. M. SIMMONDS.

4. Action of the Kissingen Carbonic Acid Baths in Heart Disease. LEUSSER.

5. The Bath Cure of Heart Disease. STIFLER.

6. Gun-Shot Wound of the Bladder. B. BAYERL.

7. Treatment with the Ultra-Violet Rays. GOERL.

8. The Extra-Cranial Ocular Manifestations of Syphilis. O. SCHWARTZ.

1.—Pichler reports the case of a man who for 15 years had had frequent attacks of acute articular rheumatism. In the last attack the pain appeared to be localized at the attachment of the tendons to the bones, and not in the joints. In these attacks the eyes became red, swollen and painful. The points of greatest tenderness appeared to be the insertions of the inferior and external recti, finally extending to all the insertions of the muscles of the eye. There was no involvement of the lids and no discharge from the conjunctiva. In addition, the patient had an erythematous eruption upon the skin. A diagnosis was made of **rheumatic tendinitis of the eye**. The treatment of this condition is purely anti-rheumatic. If, which is readily conceivable, the attachments of the muscles of the periosteum to the posterior portion of the orbital cavity should become inflamed, very extensive lesions might be produced. [J. S.]

2.—Hoeniger discusses the diagnosis of lesions of the frontal lobes and reports several cases. The first, a woman of 50, one year after the climacteric, developed melancholia and suicidal tendencies. As there had been some family difficulties the symptoms were ascribed to them. The patient also had slight paresis of the muscles of the right side of the face followed by persistent agrypnia, then vomiting, twitching of the hands and a peculiar staggering gait. Later a left-sided hemi-paresis occurred, and the patient endeavored to make obscene jokes regarding her condition. She then became apathetic, choked disks appeared in the eyes, and tenderness over the frontal bone, and she finally died of exhaustion. Hoeniger believes that the tendency to make jokes is the result of irritation of the motor speech centre. He supports this hypothesis with numerous examples drawn from his clinical experience. A second case, a woman 32 years of age, had slow drawing speech, commencing papillitis, right hemi-paresis with increased reflexes, tenderness over the frontal bone, and a tendency to make jokes. The 3rd case, a man of 54, had paralytic cramps at the age of 51. There was also severe pain in the lumbar region and a feeling as if something were pressing him apart in the middle of his body. Upon examination it was observed that his mind became rapidly fatigued, that the muscles of his body were so weak that he could not rise in bed. Later, that his memory was impaired, and finally inability to walk developed. Commencing papillitis was observed on both sides. It seems unreasonable to suppose that a tumor could be situated in the motor or parietal region with so few localizing symptoms. The disturbance of the muscles of the body, however, appear to indicate a lesion of the brain. It was finally observed that in the epileptic attacks the left side was more affected than the right, and the diagnosis was therefore made of tumor of the right frontal lobe. An operation was discussed, but the patient suddenly developed high temperature and died. At the autopsy a large tumor was found in the frontal lobe, which, upon microscopic examination, proved to be an endothelioma, arising from the under surface of the dura. It could have been easily removed by operation. Hoeniger draws the following conclusions. It is permissible to think of tumor of the frontal lobe if the earliest symptoms are psychical in character, or, if in the course of the disease, psychical symptoms are more pronounced. The diagnosis becomes more certain if there are cerebral atopia, spasms of the muscles of the trunk or disturbance of speech. In addition there may be motor disturbances of symptoms of nervous lesions. [J. S.]

3.—Simmonds reports the case of a man, 24 years of age, who had tuberculosis of the seminal vesicles and tuberculosis of the meninges. The author has collected 80 cases of tuberculous meningitis, 35 in men. Sixteen of these had tuberculosis of the genital organs. He believes that there is probably a distinct relation between the two conditions, and that in cases of acute meningitis the discovery of tuberculosis of the genital organs will be of value in leading to a correct diagnosis. [J. S.]

4.—Leusser has endeavored to show by means of the sphygmographic tracings, that the effect of the carbonic acid baths of Kissingen upon heart disease, is exceedingly beneficial. He reports the histories of 9 cases, illustrated by the tracings. The paper is still unfinished. [J. S.]

5.—Stifler has also attempted to demonstrate the effect of various forms of baths, both the ferruginous carbonic baths, and the mud baths. He concludes by the comparison of various tracings made with the sphygmograph, and by careful studies of the blood pressure with Basch's blood pressure instrument, that the ferruginous baths have a hydrostatic action, and the mud baths a dynamic action upon the system. By hydrostatic action he means the condition of equilibrium between the heart's action and the vessel tone, whilst by dynamic action he implies an increase in the heart's tone and capacity for work. He therefore recommends ferruginous baths for the temporary forms of heart weakness, and also in aortic disease and arterial sclerosis, but in mitral disease and dilatation of the heart the mud baths are probably better. [J. S.]

6.—A boy of 8 years was shot by his brother with a small Flobert pistol, the bullet entering just above the os pubis, and passing down toward the right. There was a considerable amount of urine extruded from the wound, and subsequently there was some edema of the scrotum and penis. Incisions allowed the escape of considerable urine and the bullet was also extruded. The patient rapidly recovered

There was probably an extra-peritoneal injury of the bladder. [J. S.]

7.—Gouli has devised a method by which it is possible to obtain the ultra-violet rays in a state of great purity for the purpose of dermatotherapy. This consists essentially of a small cap containing 2 aluminum electrodes between which several others are introduced for the purpose of causing deviation of the spark. The electrodes are attached to the 2 poles of an induction coil. The cap is placed as close to the skin as possible. [J. S.]

8.—Schwartz concludes his paper upon syphilitic disease of the eye. Choroiditis is atypically disseminated as the result of syphilitic infection. Sometimes there is also a central choroiditis. There may be a fine dust-like obscuration of the vitreous. The retina is frequently not involved, although the choroid is distinctly diseased, but sometimes small dark specks appear in it and we then speak of choroid-retinitis. Typical disseminated choroiditis and areolar choroiditis are not usually present. There may be gummatous formation, and even syphilitic chorioretinitis, and sometimes a chorioretinitis with cloudiness of the papilla, that occurs particularly in congenital syphilis. Central chorioretinitis is rare. It is characterized by a white, or a greenish-white exudate in the macula. Several months to a year after the infection small grayish spots may appear upon the blood vessels. Simple syphilitic retinitis accompanied by hyperemia of the papilla, and involvement of its boundaries is probably the purest form of retinal disease produced by syphilis. The optic nerve may show various forms of inflammation characterized by hyperemia of the papilla or central or peri-central papillitis. Gummatous disease outside the cranial cavity is rare. Sometimes there is neuritic and occasionally central atrophy. Acute glaucoma may be produced by disturbance of the circulation in the uvea. In the treatment of these conditions, especially in those requiring very rapid action of the remedy, Schwartz prefers preparations of iodine given in rapidly increased doses. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

April 18, 1901. (XIV Jahrgang, No. 16.)

1. The Gastro-Intestinal Symptoms of Nephrolithiasis. MAXIMIAN STERNBERG.
2. An Otitic Brain Abscess Cured by Operation. OTTO PFEIL.

1.—Though stone in the kidney is a condition which generally permits of easy diagnosis, the variety, in which gastro-intestinal symptoms predominate, nausea, vomiting, constipation, flatulence, etc., is with difficulty diagnosed. The gastro-intestinal form is not rare, and shows very few, if any, urinary symptoms. After a review of the literature of nephrolithiasis, Sternberg reports the case of a physician, aged 41, who had his first attack of intestinal colic 10 years ago. Three years before this he noticed unusual frequency of urination. Four years after his first attack another occurred, on the right side of the abdomen; followed, the next year, by another still. Appendicitis was diagnosed, but he recovered without operation. Another attack of colic occurred this year, with the passage of a uric acid calculus. After that, all the minor symptoms which had existed for 13 years, disappeared. Sternberg reports two similar cases. In these cases the main symptoms were intestinal. He has also seen cases in which gastric symptoms were most pronounced. The gastric symptoms are anorexia, nausea, vomiting, coated tongue, etc. The intestinal symptoms are always found in attacks of renal colic. Sternberg has studied 20 ordinary cases of nephrolithiasis in none of which intestinal symptoms failed. Constipation and flatulence were always present, with pain. This probably results from reflex irritation of the splanchnic nerves. The arterial tension is increased, and the pain is felt in the iliocecal region, in the ureter; or in the skin upon the level of the tenth rib, reflexly. There seems no doubt that cases of renal calculus exist with no changes at all in the urine. The tenderness over the ureter must be differentiated from appendicitis. Both Roentgen photographs and the fact that the pain grows much less when the lower end of the body is raised will aid in the diagnosis. [M. O.]

2.—Piffel reports the case of a child of six, who had otitis media for over two months. Mastoid operation was performed, but as there were no brain symptoms, the dura

was not opened. Two weeks later unconsciousness followed, with paralysis of the facial nerve, of the right arm and leg, and double neuritis. As a brain abscess had evidently formed, Piffel operated again, through the former wound, opening an abscess in the left temporal lobe as large as an egg. After irrigation, drainage was left in place. The child had collapsed, but reacted after operation. For two months the abscess made little progress toward recovery; after that, however, it healed well. The child has had no cerebral symptoms since, though some otitis media exists from time to time. The diagnosis in this case was simple. Perhaps the abscess would have healed more quickly, had it been opened upon both sides. The prognosis, nowadays, in operation for brain abscess, is better than it was formerly, as over 10% recover. [M. O.]

JOURNAL DES PRATICIENS.

April 27th, 1901. (15me. Année, No. 17.)

1. The Treatment of Eczema. PROFESSOR GAUCHER.
2. The Treatment of Chlorosis by Copper. LIÉGEAIS.
3. Acute Dilatation of the Heart in the Infectious Diseases and Rheumatism. H. HUCHARD.

1.—In eczema the cause and the lesion must both be considered. Professor Gaucher considers eczema a diathetic dermatosis due to auto-intoxication. The exciting cause may be any irritation of the skin, physical, chemical, animate, etc. Menstruation, the menopause, teething, etc., may cause it; or a traumatism, emotion, etc. But it must not be forgotten that eczema is an inflammation, with great congestion of the cutaneous blood vessels. The treatment will be constitutional, for the cause, and local, for the lesion. Constitutional treatment will be necessary in both acute and chronic forms of eczema. It should also be given prophylactically. Lithemic, nephritic, and dyspeptic individuals should take especial care of their skin, and they should observe a strict diet, without ferments, extractives (fish, game, cheese, or bouillon), acids, or alcohol in any form. They should take milk, eggs, green vegetables, little meat boiled or roasted, and fruit. Besides, benzonaphthol can be given as an antiseptic, and laxatives should be frequently employed. The ordinary constitutional treatment of eczema will be alkalies with feeble purgative properties, cod liver oil, iodides, arsenic, etc. The local treatment will consist of water, with perhaps a little boric acid or picric acid in acute cases. A dusting powder may prove beneficial and should be continued after the eczema has healed. For chronic eczema, alkaline baths, tar, lead, or tannin ointment, ammoniated mercury, salicylic acid, nitrate of silver, etc., can be used. Should pruritus also exist, chloral, menthol, and carbolic acid can be employed. For chronic eczema of the scalp, the hair must first be removed, then boric or tar ointment applied under a rubber cap. For eczema of the nostrils, behind the ears, etc., he advises boric or calomel ointment; for eczema of the lips, wet compresses followed by oxide of zinc. Above all tar, mercury, and salicylic acid will prove useful in old chronic cases. [M. O.]

2.—Mendini 39 years ago first prescribed the salts of copper in chlorosis and amenorrhea. Liégeois began to use them 25 years later, especially in chlorosis with cervical lymphadenitis. Only 15 patients, out of 100 cases of chlorosis seen, gave a tubercular history. Of the 85 without tuberculosis, 50 recovered upon iron, and 35 upon arsenic. But the 15 "scrofulo-tuberculous" cases did well upon copper. Following Cervello's experiments in animals, his pupils, Scarpinato and Mercadente, have used copper in cases of anemia with marked increase in the number of red blood corpuscles. Giudicendrea, who has used copper in chlorosis, reports an increase in the hemoglobin and erythrocytes. Liégeois prefers the acetophosphate of copper, which he gives in doses of $\frac{1}{2}$ to 1 cg. three daily. [M. O.]

3.—Huchard has reviewed the work of Henschen upon acute dilatation of the heart in the infectious diseases and rheumatism. Henschen shows that acute dilatation of the heart can occur in acute rheumatism, and reports four cases in which, as no valvular lesion could be found, the lack of resistance of the myocardium permitted the dilatation to occur. Henschen thinks that the mechanical obstruction from valvular lesions has too often been used to explain cardiac dilatation. Huchard agrees with this, but still doubts the occurrence of myocarditis in the acute dilatation of the heart seen in the infectious diseases and rheuma-

tism. He divides dilatation into two classes, the one due to primary atony of the myocardium, to be treated by digitalis, etc.; the other due to secondary atony of the myocardium, following vasoconstriction and arterial tension. It is the latter form of dilatation of the heart that Huchard has found in the acute infectious diseases and rheumatism.

[M. O.]

ARCHIVES DE MEDECINE DES ENFANTS.

April, 1901. (Vol. IV. No. 1.)

1. Stenosis and Atresia of the Larynx. VON BOKAY.
2. The Diseases due to Growth. DERSCHIED-DELCOURT.
3. Perinephritic Abscess due to Staphylococci. HALLE.

1.—Vide abstract of the *Deutsche Zeitschrift fuer Chirurgie*, February, 1901.

2.—During growth, the bones are the most vulnerable part of the human organism. While true osteitis may occur, many cases of slight "growing pains," with or without fever, but with no morphological changes, have been observed. Derscheid-Delcourt reports five cases: two cases of pseudo-coxalgia, one in a girl of 8, very large for her age, with little fever, cured in two weeks, though she wore a celluloid bandage for three months or more; in the other, occurring with dorso-lumbar Pott's disease. Rest and bandaging cured both conditions. The third case was osteitis of the diaphysis of the tibia, in a child of 14, with slight lumbar scoliosis, which recovered in a few months. The fourth case was pseudo-Pott's disease, in a boy of 10; and the last case was a rare case in a girl of 15, with congenital dislocation of both hips, who had remained very small. Growing suddenly, distinct striations appeared, from the thigh to the knee, due to her rapid growth. [M. O.]

3.—Halle reports the case of a girl aged 8 years, admitted to the hospital with pain in the abdomen and back, of three weeks duration. She had been hurt in the right lumbar region two months before. No ecchymosis had occurred, but pain persisted. Later this became worse upon walking. Fever appeared, with anorexia, and she grew thin. She took great care in walking to put her right foot down slowly, on account of the abdominal pain, which was constant in the right lumbar region. No ascites was present. The liver reached two inches below the margin of the ribs. As Pott's disease did not exist, purulent perinephritis was diagnosed. Exploratory puncture drew forth greenish pus, containing pure cultures of the staphylococcus aureus. The abdomen was opened through Petit's triangle, and a retrorenal abscess evacuated, with drainage left in. Three weeks later the child left the hospital. Halle says that perinephritic abscess is rather rare in children. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

April 7, 1901. (31me. Annee, No. 14.)

1. Vaginal or Abdominal Hysterectomy for Cancer of the Neck of the Uterus? ANDRE BOURSIER.
2. Pultaceous Angina as a Prodromal Sign of Measles. R. SAINT-PHILIPPE.

1.—Professor Boursier reports the case of a woman of 58, who looked in perfect health. She had had 7 children. For two years she has had frequent micturition, with pain toward the end of urination. Three months ago she menstruated for a month, since when she has noticed pain in the left iliac fossa, radiating down the left groin. Vaginal palpation showed the neck of the uterus to be a hard mass with a large central opening. She refused operation. But three weeks later she returned with another hemorrhage from the womb, and the pain had increased. The ventral and left sides of the vagina had also become indurated. Cancer of the uterus spreads along the mucous membrane, along the uterine muscle, or secondary tumors may appear anywhere in the uterus. In this case it is impossible to decide how much of the uterus is involved. When she was seen formerly, vaginal hysterectomy was indicated. Now larger intervention seems necessary: the lymph-glands in the pelvis, being perhaps already affected, will also need removal. Boursier advises thorough examination under chloroform to decide how deeply the uterus is involved, and then hysterectomy, most probably abdominal, as soon as possible. [M. O.]

2.—In a recent epidemic of measles, Saint-Philippe noticed a pultaceous angina from two to seven days before the measles appeared. He observed it in 15 cases, out of 190 seen. Small white points appeared, isolated, bluish white rather than dirty, with fever and dysphagia. Some white spots are still present when the erythematopultaceous eruption appears on the roof of the palate, with Koplik's sign. In a few cases diphtheria bacilli were found in these throats. These cases of angina have already been mistaken for diphtheria. Saint-Philippe considers this sore throat a distinct premonitory symptom of measles. [M. O.]

JOURNAL DES SCIENCES MEDICALES DE LILLE.

May 4, 1901. (No. 17.)

1. Treatment of Chronic Hydrarthrosis of the Knee. A. BALLENGHIEN.
2. Fracture of the Diaphysis of the Ulna. AD. PLATEL.

1.—Ballenghien reports a case of hydrops articuli in a man of 28. He had already had his left knee treated by ignipuncture, after which the effusion returned. The next year it was again punctured, and again the year later, but it always recurred. Then the right knee became affected. No cause for the condition could be found. The left knee was incised, and irrigated with carbolic acid solution (1-20). For some time he wore a knee support, but has done well without it since. No microbes were found in the liquid evacuated. The right knee, which had been treated off and on, was operated upon three years later, by the same method. He recovered and is now perfectly able to walk. In using carbolic acid irrigation there is always danger of absorption, with poisoning. Should symptoms appear while the carbolic acid is still in the joint-cavity, immediate arthrotomy should be performed. Massage, electricity, and a support composed the after-treatment necessary. [M. O.]

2.—Platel reports two cases of fracture of the diaphysis of the ulna, in adults, from direct violence. After being reduced, massage was employed every three to five days. The splint and bandages were removed, friction rapidly done, and the arm again put into the splint. In from four to six weeks both patients had recovered and were back at work. [M. O.]

LA PRESSE MEDICALE.

May 18, 1901. (No. 10.)

1. Lateral and Circular Sutures of the Veins. G. CLERMONT.
2. Orthoformic Eruptions. W. DUBREUILH.

1.—Suture of the veins was first attempted by Nicaise in 1872, since when it has been done about a hundred times. Clermont reports a case upon which he operated for tubercular cervical lymphadenitis. As he had separated the internal jugular vein, he applied temporary cat-gut ligatures, while he sutured the opposing edges with fine silk. This healed well. Clermont then performed successful venous sutures in rabbits and in dogs. Thrombosis occurred only at the periphery, and the vessel was not obliterated. In 10 days the endothelium had again joined, over the sutured surfaces. The lateral and circular suture can only be attempted in the large veins. A round needle and fine silk are needed. From this now simple operation, it is but a step to suturing the wall of the heart. Clermont thinks that will soon become possible. [M. O.]

2.—Orthoform may produce two separate varieties of eruption, erythema, alone or complicated with vesicles or pustules, and gangrenous eruptions, which are rare. The former may appear even when the orthoform is applied upon healthy skin, not necessarily upon an open wound. They are readily cured in a few days. The gangrenous eruptions occur when varicose ulcers are treated with orthoform. There is much pain. Dubreuilh reports two such cases, both of which recovered after a long time. The fact that the physician would not stop using the orthoform increased the period of duration of the gangrenous eruption. [M. O.]

Original Articles.

THE FATHER RIEGEL MURDER CASE.

By WILLIAM G. PORTER, M. D.,

Philadelphia.

Surgeon to the Presbyterian Hospital.

On the 5th of January, 1901, at 6.30 A. M., at 400 North 8th street, Philadelphia, the dead body of a man was found in the vestibule, resting on a marble floor with marble sides, his arms extended, his head resting on a marble step. His clothing was disarranged; he was without an overcoat; his coat, vest and shirt were pulled up over his arms; his chest, abdomen and back were bare from the waist up. The door from the vestibule to the street was open about 6 inches, the body of the deceased preventing the closing of the door. The temperature varied from 32 to 35 degrees F. As soon as the body was discovered a patrol wagon was summoned, and shortly afterwards it was removed to the Hahnemann Hospital, where the resident physician, on duty at the time, pronounced the man to be dead, and the body was at once removed to the Morgue. It was subsequently identified as that of the Reverend Charles P. Riegel. A post-mortem examination was made about noon of the same day by the Coroner's physician. The body was that of a man about 32 years of age, of approximately 160 pounds in weight and of good muscular development. There were no external marks of violence, and no evidence of organic disease. The brain was considerably congested, the lungs slightly congested, and the kidneys rather noticeably congested, the bladder well filled, and the mucous membrane of the stomach considerably congested. There was a small amount of a dark fluid in the stomach. The contents of the stomach were sour, and there had been some change in the wall by action of the sour contents of the stomach. There was a rather more marked amount of fluid in the intestines. There was an odor of alcohol perceptible in the stomach contents. The liver was slightly enlarged, just a little larger than normal. No chemical analysis of the stomach contents was made. A preliminary inquest was held by the Coroner on the 7th of January, and a certificate was issued from his office that the deceased came to his death from congestion of the brain. The body was interred on the 9th. On the 19th of January the final inquest was held and the verdict of the Coroner's jury then was that the deceased came to his death from opium poisoning. The original certificate on file at the office of the Board of Health was not amended until the day of the trial, in which the certificate was shown in court by the defense. As soon as the body had been identified, detectives were put on the case by the Police department, and it was soon discovered that the watch, chain, cuff buttons, overcoat and money of the priest had disappeared. Suspicion fell on the occupants of the adjoining house (a furnished room house), and on investigation it was found that some of its occupants had disappeared, and that on the night of the occurrence, one of them had purchased a small bottle of laudanum at a drug store in the neighborhood. One of the suspects was arrested in New York, and

other was found hiding in the loft of his residence in Philadelphia. The various missing articles belonging to the dead priest were recovered from different pawn shops, and as a result of the investigation of the police, seven persons, 3 men, 2 women and 2 boys, were arrested, charged with the robbery and murder of the priest, and two more suspects are fugitives from justice, and have never yet been apprehended. The defendants having elected to have separate trials, on the 7th of May, 1901, Jacob Wynne was brought to trial before Judge Stevenson and a jury, charged with murder. Under the law of Pennsylvania, any murder which occurs in the perpetration of a felony, such as rape, arson, burglary or robbery, or results from the administration of poison, is murder in the first degree. Great trouble was experienced in securing a jury, and three days were consumed, and three venires of jurors containing 160 talesmen were exhausted before the jury box was filled. The allegation of the Commonwealth was that the deceased had been inveigled into the furnished room house where he was filled with beer which was later drugged with laudanum; that while he was unconscious he was robbed, stripped, carried out, and finally deposited in the vestibule of the adjoining house, where he was found dead a few hours afterwards; that the defendant had purchased nearly half an ounce of official laudanum, and had himself put it in the victim's beer, and insisted on his drinking the whole of it, and that the deceased had come to his death from opium poisoning. The links in the chain of evidence were skilfully forged by the District Attorney from the first meeting of the defendant with the deceased to the finding of the dead body, the recovery of the stolen articles from the different pawn shops, and the arrest of the defendant while in hiding. The Coroner's physician testified that the death was caused by opium poisoning. The experts summoned by the Commonwealth endorsed this opinion, and swore that the amount of laudanum administered to the priest was sufficient to have killed several persons. The evidence of the leading expert for the Commonwealth was particularly emphatic, and was as follows: "When opium or laudanum is administered for the purpose of destroying life, or in large doses, in the amount that has just been claimed, half an ounce, which half ounce contains, or should contain, if it is the official preparation of laudanum, 24 grains of opium, any subject or individual taking 24 grains of opium in the above named time will have their lives speedily destroyed, and they will present the evidences that the Coroner's doctor pointed out here in his testimony as being the changes produced upon that body. The changes in the patient's, or in the subject's stomach, the change in the patient's kidneys, the change in the patient's bladder, the retention of the urine in the patient's bladder, which is one of the decided evidences that the bladder has been paralyzed, the change and engorgement of the patient's lungs, the change and the engorgement of the patient's brain, the marked engorgement of the lower portion of the brain, at its base; these are all decided evidences of opium poisoning, and I would not hesitate a moment in deciding that this man was killed with opium or laudanum." Question:

"Was there enough laudanum there, assuming it to have been 10 per cent. of powdered opium in strength, to have killed a man?" Answer: "There was enough there to kill six persons." Question: "Enough laudanum in that half ounce to kill six persons?" Answer: "To kill six persons." Question: "When a person dies of opium poisoning the opium is, I understand, absorbed by the system, is it not?" Answer: "The opium or laudanum given to a healthy subject, as this individual was healthy from the description of his own family doctor, and the description of the Coroner's physician who found no evidence of organic disease, and as all the organs of his body were in a good state, the absorption is very rapid. Opium is taken up and carried by the circulation to the nerve centers and the opium is burned up in the system. This is one of the actions of opium. Opium, laudanum, or morphine cannot under such circumstances be detected after death by the most expert chemist in the world in a patient's stomach or intestines. The laudanum is burned up or destroyed in the system and destroys the patient's life. Under no circumstances is it necessary to examine the contents of the stomach or bowels, or the tissues, or any portion of the body. You cannot find the morphine and opium. It is destroyed, and the most expert chemist cannot bring it back, sir." The drug clerk who sold the defendant the laudanum identified him, and swore that but one grade of laudanum was kept in the store, and that was the official. He was corroborated in this by the proprietor of the store. Two of the co-defendants swore that the defendant first suggested giving something to the priest to fix him. He left the house with the avowed intention of procuring it, and came back to the house after a short absence with a small bottle in his hand, emptied its contents into a glass of beer which he gave to the priest to drink, and when the priest only drank half of it, insisted on his drinking the rest of it, which he did. He then gave the empty bottle to one of these witnesses, who, by his orders, destroyed it. The defense claimed that the priest was intoxicated when he was first met by any of the party, that he took them to two saloons, where he treated three of the party and himself to four drinks of beer each, that then at the suggestion of the defendant they all went to the furnished room house, where the priest paid for, and helped to consume with ten others, 24 kettles of beer containing about one quart and a pint of beer each without the froth, and also a bottle of wine. They denied that the priest died of opium poisoning, but claimed that he died of alcoholism and exposure, and that even if laudanum was administered to him it was not given to him by the defendant, but by one of the other defendants, who has not yet been apprehended. The defendant himself was placed on the stand, and, while he admitted the purchase of the laudanum, he denied that he had given it to the deceased, but said it was purchased by him for, and given to, one of the defendants who is still a fugitive from justice, for the relief of a violent toothache. The defense had purchased several samples of laudanum from the same drug store at which Wynne had purchased his, and had them analyzed, and they were declared by the expert chemist who examined them to be only half

the standard strength as directed by the Pharmacopoeia. The principal expert for the defense declared on the witness stand that except for the recovery from the body, of opium or some of its constituents, there are no characteristic signs of opium poisoning found in the body after death, and that those which were described by the Coroner's physician as having been found by him at the autopsy were much more characteristic of poisoning by alcohol than of poisoning by opium, and on cross examination the Coroner's physician himself admitted that the congestion of the various organs which he described might have been produced by alcohol. Great stress was laid by the defense on the condition of the brain, which was described by the Coroner's physician as wet, or moderately wet, and this was claimed by all the experts for the defense to be more characteristic of alcohol than of opium poisoning. In reply to the positive statements of the chief expert for the Commonwealth, that the death was undoubtedly due to opium poisoning, and that no chemist could, after death, recover opium or its constituents from the body, he was confronted with the following quotations from his own text-book on therapeutics. "If a fatal dose has been taken the above symptoms intensify, the pulse becomes slower, respiration is reduced to 5 or 6 to the minute, the reflexes become abolished, and death occurs from paralysis of the respiratory center, or carbonic acid accumulation in the blood. Post-mortem examination may show some of the drug yet remaining in the stomach or intestines, and the internal organs reveal considerable venous congestion, especially the lungs. Alt has shown that after injection subcutaneously morphine can be detected in the stomach. Rosenthal points out that the salivary glands also separate morphine from the blood. In the case of patients who were taking no more than 5-6 of a grain daily the characteristic reaction of morphia could be obtained. Morphine does not appear to be destroyed, or materially altered, in passing through the animal organism. It seems probable, however, that small amounts of the alkaloid are decomposed within the body, while larger quantities escape without change. Morphia is likewise eliminated by the skin and kidneys. Elimination seems to proceed slowly, as morphine has been found in the urine several days after the drug had been discontinued." In rebuttal the chief expert for the Commonwealth testified: "What I have stated in this book is (referring to his text-book on *Materia Medica* and *Therapeutics*) that if an individual takes so much laudanum, takes so much opium, takes so much morphine, and that individual survives the opium poisoning, that you will be able to detect it in the bladder, and in the tissues and organs of the body. But if that patient dies, the opium so taken in the body, in the condition that this subject was in, is burned up in the body and the chemist cannot obtain the opium." The opinion of the chief expert for the defense was corroborated by two other eminent experts. After a rather extended and careful investigation of the leading authorities on the subject of deaths from alcohol and opium, it must be confessed that it is a little hard to decide how far, where one or more lives are in jeopardy, the medico-legal expert is justified in stating positively on the

witness stand that such a death was due to opium poisoning or to alcohol poisoning, where an excessive quantity of both has been taken. In the case at issue there can be no doubt that if the deceased was given 24 grains of opium, that alone would have been sufficient to have caused his death unless he vomited it, or the stomach pump was used. But was the laudanum, which it was alleged was administered to him, of that strength? Three samples of laudanum obtained from the same store at which Wynne purchased his, and analyzed by an expert chemist, contained only half of that amount. It is a fact well known to physicians that there are drug stores where laudanum of several different strengths is constantly dispensed, the standard laudanum for prescriptions, and different strengths for customers who come without a prescription, or who are unknown to the druggist. It has happened to the writer to see a whole ounce of such laudanum consumed by a patient within twelve hours without the slightest anodyne, narcotic or other effect. On the other hand, a man who was intoxicated when he was first met, and no one knows what he had been drinking before, whether malt, spiritous or vinous liquors, and then continued to drink beer for an indefinite time, and is then exposed as this man was, practically on the street, half stripped, with the thermometer ranging from 32 to 35 F., could very readily have lost his life from the alcoholism and exposure. There certainly are no conditions found after death which are absolutely characteristic of opium poisoning. Then, too, while opium and its constituents have frequently been recovered from the body after death, there are cases reported of undoubted death from opium in which the most careful chemical analysis has absolutely failed to discover any trace of the drug. The practice of giving "knock-out drops" to intoxicated, or even sober men, is constantly on the increase in all of our cities, and there is no doubt whatever that many cases in which this has been done are never even suspected. Druggists should be held to a stricter accountability, and no poisonous drug of any description should ever be dispensed without a physician's prescription. The verdict in this case was Guilty of Murder in the Second Degree. A second defendant plead guilty to murder in the second degree, which plea was accepted by the Commonwealth, and a third was convicted of the same grade, with a recommendation to mercy on account of his youth, and the rest of the defendants are either tried, or are fugitives from justice.

COXALGIA.*

A New Form of Treatment, with Report of Cases.

By E. H. COOVER, M. D.,

of Harrisburg, Pa.

This paper outlines a form of treatment curative of and adapted particularly to the early stages of all the coxo femoral inflammatory affections as well as to the distinct arthritic, acetabular and femoral forms of hip joint disease; and proposed as at least of marked advantage in well-developed cases, used

either alone or in conjunction with extension and the other usual procedures.

Until the introduction of the X-ray, the early structural change undergone by the bones involved was largely a matter of surmise, although post-mortem examinations revealed a degree of absorption, necrosis and local thickening, with pelvic distortion and inflammation of periosteal, ligamentous and muscular tissues. The writer believes that the diseased processes could usually be here arrested



Coxalgia.

and the patient be saved great pain and deformity; but if the disease be allowed to progress until the rim of the acetabulum is eroded away, the head of the femur is forced out of its socket and seeks a new home where newly formed bone granulations are massed together, receive the head and form a new socket, with from two to four inches of deformity to the leg, with the consequent formation of pus and leading to tissue destruction, exhaustion and death unless nature is strong enough to arrest these later degenerative processes.

S., aged 17 years, consulted me April 28th, 1900. He was a shoe fuster by occupation and walked two miles every morning and evening going to and from his work. Pain was first noted by him about the first of the preceding January, and in the lower anterior portion of the left thigh and extending to the hip, and much increasing in severity in February, and in March accompanied by stiffness of the muscles of the leg and some lameness. In April his suffering increased to a degree obliging him to remain at home, his rest at night being greatly disturbed by pain. When I first saw him, he had night sweats, a temperature of ninety-nine and a pulse at seventy-six in the forenoon. The limp in his gait was well marked and the adductor muscular rigidity above the left knee was very prominent, this leg was $\frac{3}{4}$ of an inch shortened, the gluteo-femoral crease was raised and nearly obliterated, the muscles of the left hip were widened and elongated, below the femoral crease, the left thigh measured one inch less in circumference than did the right one, pain was greatest at night, and the heel

*Read before the Dauphin County (Pa.) Medical Society.

tap gave some pain in the hip joint but was more severe above the knee anteriorly.

On May 2d, 1900, an X-ray photograph of the pelvis of the boy was taken at the Harrisburg City Hospital, by Dr. Thomas S. Blair. There was some slight penciling done on the flesh shadows of the negative to give contrast to the outlines of the bones upon the photographic print here shown. Observe the great change in the left pelvic bones. The head of the femur is still in its socket, although the rim of the acetabulum is being absorbed and a degree of effusion exists. Careful measurements of the original photograph show considerable inequality between the two sides as regards the pelvic rim, the ischil and obturator foramen and the trochanters major. The radiograph was taken with the face of patient nearest the photographic dry plate. A second one taken six months after treatment begun, showed no effusion and some degree of improvement in the contour of the bony tissues particularly the trochanter major and the acetabulum.

Treatment.—Dr. Keen says: "General treatment is indicated if called for by an enfeebled and tubercular state, but local medicinal treatment is of no value except that which will secure the destruction of the bacilli and the condensation and cicatrization of the newly-formed granulation masses." The tendency of professional thought is now toward attributing all fevers to bacteria and to substances produced in the blood by their growth, such toxins invariably causing fever. It is very plain that we had a progressive microbic disease existing in this boy's left hip for some time, and all are familiar with the fact that when once such disease involves the osseous structures of the hip, it continues usually from one to four years, creating great suffering and deformity of the pelvis and from two to four inches shortening of the affected limb. Where the disease is detected early and the foot is raised above the ground by using crutches and an extension shoe upon the sound foot, and the child given plenty of fresh air and sunshine, most cases do well and in some instances recover with no shortening of the limb. Early drainage also has saved many patients from great and continuous suffering and deformity.

Since cold bathing and sponging and the local application of ice and refrigerating media is of such general use in allaying inflammation, why not give it some consideration in the treatment of coxalgia? Ice is applied to the head in inflammation of the brain, to the chest in pneumonia, to the abdomen in inflammatory diseases of the viscera, and to the pelvis in certain uterine and ovarian affections; then why not apply it to the hip in diseases of the joint? Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania, writing in the *Pennsylvania Medical Journal*, Dec., 1900, says: "The primary object of the cold bath is not to reduce temperature; its value is mainly as a stimulant and supportive. It causes increased force and reduced rate of the respiration, it strengthens and slows the pulse, it reduces temperature, it probably aids in the elimination of toxic products; but, above all else, it stimulates and supports the nervous system. * * * * The theory that is receiving the most support is that the action of cold is not so much to lower the temperature; it is eliminative."

The writer of this paper claims that in hip joint disease the action of cold is to allay inflammation, arrest suppuration, and promote a healthy nutrition. It shortens the stages and lessens the severity of

the disease, and if cases are taken in time, there will be little or no deformity, and the danger of wasting the strength of the body and a fatal issue resulting in consequence is made very remote indeed. It is a rational method of arresting this most formidable disease when it accomplishes so much in inflammatory conditions of other parts of the body. It is not claimed that cold destroys the bacilli, but rather renders them inactive and gives nature a chance to restore broken down tissue. The continued application of cold, like all other methods of treatment, must be carefully watched. If the cold has a depressing effect upon the patient, the direct application of the ice cap must be desisted from and several layers of some fabric or dry paper be interposed between it and the skin. Good judgment must be used and the condition of the patient be always considered.

Now to return to the consideration of the boy, S. Following out the treatment as here indicated, the region of the joint was surrounded with ice caps kept constantly replenished. Great comfort resulted to him from the cold applications, his night sweats disappeared the first week, he slept better, and was more free from pain, and in fifteen days his appetite returned and he was relieved from all suffering and distress, although the knee and heel tap was still painful. July first, a thorough examination showed that the rigidity of the thigh muscles had nearly disappeared and had lessened below the knee, and the limb was more free and easy in movement, the shortening had lessened half an inch, while the measurement below the gluteo-femoral crease had gained half an inch, his face and skin showed that his blood was in a better condition and he was gaining in weight and strength. August first, his leg was its full length and thickness, and he walked without limp or pain. The ice was now continued through the day only, and tonic medication still administered as before. September first, continued the ice daily from 7 A. M. to 2 P. M., permitting short outdoor walks in the afternoon. October first, discontinued the ice as the boy was quite well. *No extension or counter extension* was employed in the case.

The first case I ever placed upon the ice treatment was Miss S., a lady aged twenty-four years. When a child three years old she had disease of the left hip joint that continued about four years and terminated with the leg four inches shortened. With one crutch and a high shoe she got along very well until she was twenty-two years old, when disease began in the right hip, continuing there for sixteen months when the left hip again took on the disease. It continued in both hips for six months, making twenty-two months in the right hip. May first, 1899, she came to me for advice and treatment. A full history of the case would be long and doubtless tiresome; she was, however, in good medical hands at home. She had spent months at seashore and mountains, had had extension and periods of additional rest in bed but was yet on crutches and growing worse. I found her suffering great pain in the right thigh above the knee anteriorly and in both hips, with groins very much swollen and overlaid with large purple veins and the glands much enlarged and painful. Abduction and adduction was not permissible on account of pain in the hips and right thigh, neither could she turn nor lie upon either side. The knee and heel tap were exceedingly painful, the temperature was 102, pulse 98, there were night sweats, anemia, no appetite, disturbed sleep and the urine was nearly half pus in bulk and swarming with bacteria.

After a few days careful watching of the case, and learn-

ing that every treatment familiar to the profession at large had been faithfully tried without avail. I frankly told her there was nothing more to be done unless she consented to a treatment for which I had neither book nor doctor to sustain me. She replied that she would rather return home to Pittsburg dead than to suffer longer, and agreed to the remedy, viz., ice caps applied to the hips and kept there continuously. She was carefully watched, the skin under the ice never being allowed to become deep red, and purple red was prevented by interposing several layers of flannel or newspaper. The treatment soon proved to be very grateful, giving her sleep all night and much relief within fifteen days when she no longer required a night nurse. Temperature was then 99, pulse 78, and the night sweats disappeared. In thirty days she could turn on either side and remain there awhile. In sixty days she threw either leg across the other, could tolerate knee and heel tap better, the swelling in the groin subsided, the enlarged glands became normal, the pus in the urine lessened but continued in smaller quantities up to the seventh month, when, after steady improvement, the ice was discontinued and at nine months she left for home perfectly recovered. A few weeks ago I heard from her. She had been very ill with some throat trouble but the hips remain well.

The third case was one of traumatic hip joint disease. The patient, John B., was aged fourteen years and was tall and slender. September 14th, 1900, he was thrown from his bicycle against the curbing, striking his left hip. He went about his work as usual but in three days developed a temperature of 101, with pulse at 100. For several days the greatest degree of pain was in the left knee joint which began to enlarge, but about the fifth day it was experienced in the left hip and groin which also enlarged and the glands became very painful. This condition continued with some slight changes in temperature until October 5th, when I was called in consultation. He was in bed upon his back, with a pulse of 95 and a temperature of 101, the left thigh flexed upon the abdomen and leg upon the thigh, movement gave great pain in hip and knee, the tissues over the acetabulum were swollen and doughy, the entire left inguinal region hard and painful to touch and the pain in left leg and hip was so great that it was impossible to extend the leg so as to make an intelligent comparative examination of the two limbs. In consultation, the ice cap applied to the left hip was suggested and agreed to by the attending physician and the German parents of the boy. October 8th, I saw him again, when the pulse was 86, temperature 98½, the pain in hip and leg much better, the swelling in hip and groin much reduced, there was less pain and the leg was in a condition to be readily extended. A comparative examination was made and showed the left leg to be one inch longer than the right one and the gluteo-femoral fold lengthened one inch, this lengthening occurring in the hip. From appearance, the head of the femur was resting upon the rim of the acetabulum and at times a sudden pain would come in the hip joint and then extend to the foot. A movement of the limb would give sudden relief as though a nerve was caught and released. Iron tonics were continued in conjunction with the ice treatment. November 11th, the attending physician reported that the ice had been continued until the fourteenth of October, when the pressure against it in the community became so great that it was removed and extension and iron tonics used. The ice had been used for nine days, however, and the boy was looking well, suffered little pain, the swelling around the hip and groin did not return and the thickened condition of the knee joint disappeared. It is my opinion that if ever the parts are entirely restored to physical activity, it will be a long time; but the condition is greatly improved.

Dr. Edward Rosenthal, of Philadelphia, says: "New treatments and new remedies are always successful in the hands of the one who first advised or originated them, when, however, a remedy becomes universally successful its standing is assured." He further says: "If by such work as this we can claim the saving of one life, then we can prove to the world the necessity of our existence and our labors will not have been in vain." So I say, if we can prevent the deformity and suffering of one person, then our life and labor will not have

been in vain; even if it follows that "the accepted facts of to-day may be proven fallacies to-morrow" and that "we live in a transition period in medicine."

THE CITY'S OBLIGATION TO PROVIDE SPECIAL EDUCATION FOR DEFECTIVE CHILDREN.*

By CLARENCE E. MELENEY, A. M.,

of New York.

Associate Superintendent of Schools, New York City.

Public education is the business of the State, and by the State I mean to include the municipalities to which as corporate units the State delegates its powers for educational purposes. Free public education rests on the broad principle of self-preservation. Every child has a right to an education in the rudiments of knowledge and in the fundamental arts of acquiring knowledge and of expression. This statement needs no elaboration or argument. The existence of public school systems in states and cities the world over establishes this truth. The State has the right not only to provide the means of public education, but to compel attendance upon instruction. The Compulsory Education Law of this State reads: "Every child between 8 and 16 years of age, in proper physical and mental condition to attend school, shall regularly attend upon instruction in a school in which at least the common school branches of reading, spelling, writing, arithmetic, English grammar, and geography are taught, or upon equivalent instruction by a competent teacher elsewhere than at a public school."

The law does not compel the attendance of children not "in proper physical or mental condition," but there is no definition to determine what such proper physical or mental condition is. The State has, however, provided and supported institutions for the education of defective children, thus recognizing the obligation to such persons.

Under the subject of "Defective Schools," which I understand to be "Schools for Defectives," the State Superintendent of Public Instruction of the State of New York said in his annual report: "There undoubtedly rests upon the State under the provisions of the Constitution the same obligation to educate and train for citizenship our defective children as those in more fortunate condition. These schools are, in my opinion, strictly educational and in no degree to be considered eleemosynary."

In the last report of the Massachusetts Board of Education the Secretary says: "It is the policy of Massachusetts to make schooling as free for educable children whose defects forbid them from attending upon public day schools as for their more fortunate fellows."

The census of 1890 gave over 97,000 feeble-minded and idiotic persons in the United States; but this does not take into account many who attend public and private schools and for obvious reasons are not enrolled as feeble-minded, but whose intelligence is so low that the usual means of education produce little or no results. One good authority states that there are 100,000 defective children under 21 years of age in the United States, and that less than ten

*A paper read before the N. Y. Academy of Medicine.

per cent. are receiving any kind of instruction or training in schools designed for the education of defectives.

The subject assigned to me embraces a consideration of all defectives; classified as deaf, dumb, blind, and feeble-minded.

There is no longer any question as to the obligation of the State to provide adequate and appropriate means for the education of the blind, the deaf and the dumb. The suggestion to allow persons with these defects to grow up without a common school education by which they may learn to be wholly or in part self-supporting, would be considered in this day and generation nothing less than criminal. There are in the United States thirty-five State institutions for the instruction of the blind; fifty-six for the deaf and nineteen for the feeble-minded. Besides these State institutions there are twenty-nine public day schools for the instruction of the deaf; eleven of these in Chicago; Cincinnati has two; Boston, Detroit, St. Louis and Cleveland have one each. New York has none. Philadelphia has a school for backward children, thus far supported by the Civic Club and the Public Education Association. Councils has now under consideration a proposition to appropriate funds and to have this school incorporated into the Public School System.

So far as I can learn there are only a few schools for defective children in the United States supported by municipalities. Some cities have special classes. The city of Providence has five classes for backward children and several schools of two or more classes each for incorrigibles. Boston has one school for dull or feeble-minded children. Other cities are considering the establishment of such classes. We have recommended the organization of ten special classes, and the collection of information and facts bearing on the subject is now being made. Some of these classes are to provide for truants who need special instruction, and the others are intended for children of such low intelligence as to require special instruction by teachers trained and educated for the purpose.

The marvelous success, after slow and patient, but scientific instruction and training, accomplished in institutions for the feeble-minded is a justification for and incentive to more extensive facilities for such schooling.

The term "feeble-minded" covers a large class of persons ranging from the profound idiot, up through the imbeciles to the class who are slightly below normal, and whose defect is revealed only by the lack of good sense, or the failure to learn in special subjects, or unusual dullness in all the arts of learning.

In every city and in almost every large school there have been found in attendance children whose intellects are so low that the usual methods of instruction and the unusual patience and skill of devoted teachers fail to produce educational results. Such children are to be classed in the middle and higher scales of defectives.

A careful census should be made of all children of school age in the city from four to twenty-one years of age, and all defective children should be classified. Many such children will be found to be neglected and in the streets; many more may be in public and private schools.

One great error in the education of defectives is the neglect to find them out and put them under training at an early age. Many children attend common schools for some years before teachers ascertain that they have mental defects, and often parents keep their defective children out of the schools until compelled to send them under the Compulsory Education Law. If children are defective, the sooner it is found out the better, since a longer period and special means are necessary to give them even a rudimentary education. Even a normal child, if left in a poor home or allowed to run the streets till eight years of age, will scarcely make up for the lack of instruction and appropriate early training. The great majority of them never recover their loss, and drag through three or four grades and drop out at fourteen to go to work or to remain in idleness. Much more does the defective lose in the lack of early training. I would, therefore, have a careful census to find all defective children of kindergarten age and begin their education as early as possible.

In the States of Illinois, Ohio and Wisconsin, means have been provided by which teachers may be sent to defective children in their homes. If this can be done, education may be begun early, in the child's own environment, and the people among whom the defective lives may also be trained how to teach, to manage, and to live with their unfortunate children.

The examination for purposes of classification should be made by experts. After the teachers have discovered children deficient in sense perception or in intelligence, the expert may easily determine the degree and kind of defect. Year by year teachers would become more skillful in detecting defectives, and a scientific system could be established. At the present time it is very difficult for teachers to determine the deficiencies of the pupils.

The necessity for the examination of "suspects" by experts is apparent, from the fact that it is considered a disgrace by parents, friends and teachers to acknowledge intellectual defects, and it is a serious matter to pronounce persons defective except after examination by a technical board of experts. Parents often attribute failure to teach their children to lack of interest, or lack of skill on the part of the school; the reference to such children as dull and defective, by teachers, would only result in attacks upon the teachers, and charges of incompetence.

In my experience of many years in trying to solve this problem of dealing with backward and defective children in the public schools, I have found the greatest obstacle to the establishment of special classes and the appropriate education of such children to be the unwillingness of parents to admit that their children are defective, or to permit them to be segregated in special classes. An attempt was made recently to organize a class of very backward children in one of our large schools by selecting such from several classes of the primary department, and the effort failed chiefly because the parents were not willing to have their children picked out and separated from the regular primary classes, because they felt it would be a disgrace to the children and the parents to be thus stigmatized. Thus through ignorance or sentimentality the children are deprived of an education that might fit

them for useful living, and are allowed to grow up as useless beings to be a greater humiliation to their families in later life, when it will be too late to cover up the shame and possible disgrace.

I once had a similar experience when I discovered an eight-year-old boy, who was deaf and dumb, in one of my schools. I got the parents to consent to send him to one of the Massachusetts institutions for the deaf, but when the time came for his departure, they would not allow him to go, because they were unwilling to acknowledge that they had a deaf and dumb child. Now this is a prejudice which cannot be easily overcome. If, however, we could quietly grade defective children and place them in small classes in the regular day schools under specially trained teachers, without drawing special attention to them, and allow them to live at home and mingle with their brothers and sisters, much of the difficulty could be overcome.

A complete census and classification of defective children will show two main classes: 1st, those incapable of education; for such special institutions are necessary. 2nd, those who may be educated. The latter class includes: (1) the blind, for whom an institution is the best home; (2) the low grade of feeble-minded, also needing special schools; (3) the deaf and the higher grade of feeble-minded, who could live with their parents and be taught in special classes near home; (4) the highest grade of weak children, who could be taught in special classes by the public school teacher in the regular day schools. (5) There is still another class known to the teacher as dullards; these, when classed with the normal children, usually fair poorly, often fail of promotion, and leave school as soon as the law allows. This class may be backward in a particular subject or may be slow or generally dull in all studies. In many cases the dulness is due to causes that might be removed by scientific treatment, or by special sense training, or by the use of special means or methods of training. Provision should be made for the expert examination of all such cases, an exact diagnosis of the defect or ailment, and an appropriate treatment. There are two main reasons why such differentiation should be made, and why special schools and classes should be established. First, The interests of the unfortunate pupils themselves; Second, the interests of the normal children, and of the teachers, whose entire time is required for the instruction of large classes of average children entrusted to their care. The improved results in the regular classes, to be accomplished after the elimination of defective children, would more than pay the cost of rooms, appliances and teachers of the latter class. Says one authority who has spent many years in trying to solve this problem: "It means success and victory all along educational lines, if untrammelled by defectives; but defeat which will lead to tedious and endless readjustments, if teachers are forced to continue the impossible task of dragging normal and abnormal up to a common standard."

If defective children are to be excluded from the common schools for their own good and for the sake of progress of the average children, what should be done with them? Of course, it cannot be supposed that such children can be taught in their homes except by specialists. The ordinary home does not

possess adequate facilities for instruction of the normal child, much less then can the abnormal child thus be taught. Should the parent be compelled to provide private education for such children? There can be no contention as to the right of a parent with means to so educate his child, and upon such the Compulsory Education Law cannot lay its hand. But we must not forget that the great mass of such children belong to parents who have no means with which to provide private instruction. In such case the duty falls upon the State or the city, as a means of self-preservation and defence, on the same principle that justifies free public education. Children of this class growing up in ignorance are sure to become public charges and inmates of asylums, whereas, patient, and, if need be, expensive instruction and training may produce persons capable of self-support and possessed of a sense of virtue and of morality.

There remains, then, nothing but the provision of appropriate special schools or classes as a part of the public school system. There are now practically no such schools available for New York children. There is one on Randall's Island containing 130 children, but there are personal objections on the part of most people to sending their children to the island. There is a State institution for feeble-minded children at Syracuse, but that is inaccessible. Most of the New York children of this class are either in asylums or in the public schools, in both instances receiving no adequate instruction; or on the streets in still greater danger and neglect.

We must have special schools. Such schools must be in an environment adapted to special work—where facilities favor the careful study by specialists of all physical and mental impediments to development. There must be trained teachers possessed of human sympathies and parental instincts, such as to draw out all moral elements in the lives of the children; of special skill and power in dealing with the problem of mental development; and of ripe and well-balanced judgment and common sense. Born teachers with added special training are needed for such work. The means of education should be:—not only strong and beautiful personality in the teachers and other persons engaged in the care and training of these children, but also the peculiar objects, scenes, events in life, that will stimulate dormant elements of activity. There should also be means of stimulating the emotions of pleasure, as in music, play and systematic physical activity; also opportunities for training of skill in the making of objects and other manual work. It is not recommended that such children be sent to large institutions. As a general principle, I do not believe in asylums and institutions. I believe in keeping children in their natural environment as much as possible, and in teaching them to adapt themselves to the environment in which they are to live. A child who is deaf, dumb, blind or feeble-minded will have to live with people, and must learn, if possible, how to communicate with them. In institutions where most of the inmates are afflicted with similar infirmities a defective child is removed from the environment in which he will have to live, and has no means of adapting himself to normal conditions. That is not the place or the way to educate him for living, how-

ever well suited it may be to teach him how to live while he is an inmate. These children, while not in school, should be, as much as possible, in the environment of active, intelligent social life.

REMARKS ON THE TREATMENT OF ECZEMA.*

By W. R. INGE DALTON, M. D.,

of New York.

Dermatologist and Syphilographer to the Metropolitan Hospital and Dispensary, Professor of Dermatology and Syphilography in N. Y. School of Clinical Medicine; Dermatologist to the West Side German Dispensary.

A tremendous advance is evident from researches made in the last twelve years, having as their ultimate object the increase of all natural resources of defense, possessed by the economy, against toxic and noxious outside agencies. Even at the risk of being classed among ultra-conservatives—those who ride hobbies, far afield—I still adhere to my theory, enunciated at Atlantic City last June, that the "chyme passing in a hyperacid condition from the stomach into the duodenum entails such increased labor upon it that its contents cannot be rendered sufficiently alkaline for physiologic metabolism." "This acid dyscrasia, I believe to be the inevitable *foens et origo* of the pathological lesions which lead certainly to nearly all diseases of the skin." I am still devoting my energies particularly, to the study of the *vis medicatrix naturae*, which the system holds, and which empowers it to overcome the causes of skin affections, especially eczema. A successful and rational treatment, a thorough therapeutic method, confirm me in my determination to pursue assiduously the same object, viz.: the elimination of the uric acid diathesis, before, and in conjunction with, topical applications, by the use of my tablets—Vide: "The Journal," March 30th, ult. I am watching with great interest the results of serum therapy. While I believe the serum does not kill the germs directly, it acts in a secondary manner by influencing the white corpuscles of the blood to augmented activity. Metschnikoff ascribes their action to phagocytosis. Buchner claims the alexin (the defensive powers of the blood) originates in the white corpuscles. If these theories are correct, then it is of paramount importance that the vitality, strength, and general health be not impaired. These causes may be cold (as shown by Bouchard), heat (as demonstrated by Wyssokowitsch), hunger or thirst (Canabis, Alessi), poisons (Zulzer), ferments of bacterial origin (Charrin and Roger.) Treatment must consist in taking into consideration the general underlying conditions, not forgetting the state of the disease, the necessary attention to any abnormal condition of the other organs, which may aggravate, or continue the inflammation. Those patients suffering from chlorosis, or anemic subjects, should have tonics, such as phosphorus, iron, strychnia, and mineral acids. Above all, a dietary should be strictly enforced—meat, if allowed at all, only once a day. No oatmeal, no strawberries, no sugar, not even in coffee or tea. This dietary is to be adhered to for several weeks. Water, in large quantities, should be drunk every day. Gottlieb favors a milk diet for

some time. The alimentary canal should be kept as antiseptic as possible by means of the administration of (such as I use in my tablets) naphthalin, charcoal, and ipecac. Lately I have been exhibiting ichthyol, combined with arsenic, in the so-called strumous diathesis, as follows:

R	Ammon-sulph-Ichthyolat.	drams iii
	Acid-arseniosi	gr. iv
	Glycyrrhizae	q. s. et ft. Pil. No. 180
	M. Sig. 1 or 2 after each meal.	

Those cases where the surfaces are excessively influenced by inflammation (vesicular forms) should be treated by removing all causes of it. Water, for bathing purposes, in all eczemas, should be prohibited, as far as possible, unless rendered alkaline. A good lotion for the bath is soda-bi-carb., one part to fifty of water. All irritants, thermic, chemical or mechanical, scratching with fingers, the secretions from sweat, the use of soaps, etc., should be attended to first. If there are scales or crusts, an oleaginous application, such as olive oil, after hot water and lotion of green soap, may be used. Of course, if the eczema is caused by parasites, or is of the form, called by Unna, *Eczema-schorrhoeicum* (undoubtedly caused by micro-organisms), such as pediculi, the itch-insect, or the trichophyton, a germicide is demanded, such as kerosene oil, salicylic acid, sulphur ointment. A 5% ointment of chrysarobin and pyrogallol, or ichthyol, or tar preparations, in the squamous varieties, if there is not much secretion, ought to be exhibited. Finally, those etiologic factors, springing from neurotic conditions, anemia, leukocythemia, constipation, etc., or, whether the cause be local or external, internal or general, should be completely regulated, and appropriate remedies prescribed. I give my tablets in all forms of eczema.

SKIN GRAFTING BY MEANS OF FREEZING, WITH REPORTS OF SOME CASES.

By GASTON TORRANCE, M. D.,

of Birmingham, Ala.,

During my service as resident physician in the Pennsylvania Hospital it was my privilege to see a number of cases with large areas of denuded epidermis, due to operation, burns, ulcer, etc. While casting about for some convenient and simple method of skin grafting without using a general anesthetic, freezing with ethyl chloride suggested itself. The following cases will illustrate the operation:

CASE 1.—Wm. H., colored, age about 30 years, was admitted on September 10, 1899, with severe burns of the right arm and slight burns of the chest. Almost the entire circumference of the arm from the shoulder to the finger tips was burned. When I went on duty in the ward to which he was admitted, on October 1st, the wounds of the chest had healed, but the arm was a mass of raw granulation and was discharging freely. The arm was thoroughly washed. One of the thighs was shaved and sterilized and then washed with alcohol to remove all oily substances. An area about the size of a silver dollar was frozen on the thigh, with an ethyl chloride spray and a round section about the size of a silver half dollar was removed with a sterile razor and immediately applied to the arm while frozen. During the process of thawing it became "glued" to the wound, and in a few moments had become closely adherent. Several grafts were put on at this time. Some green protective strips were applied over the grafts and the arm enveloped in a piece of lint covered with boracic

*Delivered before Manhattan Clinical Society, May 3rd, 1901.

ointment. The dressing was changed on the third day and the grafts found to be doing nicely. In making the section a portion of the corium was removed with the epidermis. Several graftings were made after this. The patient was discharged on November 24th with the arm perfectly healed and without any scar tissue having formed.

CASE 2.—E. M., white, age 45 years, was admitted October 31st, 1899, with recurrent carcinoma of the breast, having submitted to amputation about a year previous to this time. There was a cauliflower-like growth involving an area about six inches square. This was removed the following day and the skin brought together as closely as possible, leaving a large uncovered space. About three weeks later I applied three grafts taken from the thigh and using the same dressing as in the above case. All grew nicely, and when she was discharged December 27th, the wound had completely healed over. I saw this case six months later, and there was some evidence of a recurrence, but the grafts stood out as healthy islands of skin surrounded by the unhealthy carcinomatous tissues.

CASE 3.—R. B., white, age 8 years, was admitted December 11, 1899, with quite severe burns of the neck and upper part of the left arm and slight burns of the face. When I took charge of her on January 1st all of the wounds had healed except those of the neck and deltoid region. Two weeks later three grafts were applied to the neck. At this time it was noticed that some scar tissue had formed, causing slight contraction of the tissues of the neck. During the night following the operation the dressing was rubbed off and only one of the grafts "took." Several others were applied at a later date and a good result was obtained. There was very slight contraction of the neck, notwithstanding the fact that some scar tissue was in evidence when the grafts were first applied.

CASE 4.—D. C., white, age 21, was admitted September 8th with large specific ulcers of the left leg and groin, the one in the groin following bubo. The patient was put on mixed treatment, and his general condition improved very much and all ulcerated points healed kindly, except one place on the leg about midway between the ankle and knee. It seemed almost impossible to heal this up. About the first of December I put on a frozen graft, and when he was discharged December 21st the whole ulcer had healed over.

In my estimation this method has many good points. It is painless. It enables one to cover considerable areas at a sitting and dispenses with the use of a general anesthetic which must be used in the Thiersch method. It seems especially applicable where the surrounding tissues have become degenerated as in ulcers and malignant diseases, as the newly formed skin apparently partakes of the character of the graft. Some of the advocates of the Thiersch Method hold that it is better to remove only the epidermis. I believe that the cases I have observed have been benefited by the transplantation of some of the true skin. This method is very simple and can be carried out as well in private practice as in a hospital. With a healthy granulating surface every graft should take. I have only seen one failure which was due to the dressing being pulled off in the case of the child, Case 3. I am indebted to Dr. R. G. Le Conte for the privilege of reporting the above cases.

A Case of Prolapsus of Unusually Long Duration.—P. I. Gundegger presented before the Society of Hospital Physicians of St. Petersburg (*Bobritskaya Gazeta Bolnikov*, Vol. XII, No. 10) a patient, 45 years old, who suffered from dyspnea dependent on emphysema and diffuse bronchitis. There was also a sclerosis of the peripheral arteries. On the second day of admission to the hospital the patient was awakened at night by an erection of the penis which in spite of various methods of treatment has been persisting for 16 days. The patient denied venereal excesses or disease of the genitals, nor was there any disturbance of the urinary organs. [A. R.]

REPORT OF A CASE OF COMPLETE RIGHT OCULO-MOTOR AND COMPLETE LEFT TRIFACIAL PARALYSIS.*

By C. A. VEASEY, M. D.,

of Philadelphia.

Demonstrator of Ophthalmology in the Jefferson Medical College
Assistant Attending Ophthalmic Surgeon to the Jefferson Medical
College Hospital Ophthalmologist to the Methodist
Episcopal Hospital, etc

The patient I have exhibited before the section this evening presents the somewhat unusual condition of a complete oculo-motor paralysis on one side and a complete trifacial paralysis on the opposite side, and has the following history:

J. S., an Italian, 25 years of age, consulted me first on the 13th day of March 1901—about five weeks ago. Seven weeks before he had observed some difficulty in seeing well, together with deep seated ocular pain, and visited a hospital dispensary for advice. His eyes were examined and no lesions other than a refractive error being found he was given a mydriatic for refraction. Two weeks later, the pain growing worse, instead of better, he went to another dispensary for examination, where the notes of his condition show no internal or external ocular changes, though at this time there is no record of any accommodation tests having been made. Had they been made, it is probable they would have revealed some weakness of the right ciliary muscle. Four days before my examination, or six and a half weeks from the beginning of the ciliary pain and the dimness of near vision, there appeared a slight divergence of the right eye together with some drooping of the lid and dilatation of the pupil. At the same time there was diplopia, loss of sensation on the left side of the face, some difficulty in passing the urine, a soreness and "pulling" at the back of the knees which made walking painful, considerable vertigo and some headache which, though by no means marked, was worse at night. There was also a history of slight staggering at times and inability to keep on the feet very long at one time. This last symptom was especially annoying to the patient as he was employed as a caretaker in a pool room. At the time of my examination there was partial oculo-motor paralysis on the right side which, according to the patient's statement, first began four days earlier, but which did not become complete until between three and five days later.

The pupil was moderately dilated, gave no reaction, and accommodation was entirely abolished. There were no fundus changes and visual acuity equalled 6/22. The left eye showed no involvement of the internal or external muscles and the pupil reacted promptly to light, convergence and accommodation. The Westphal-Piltz orbicularis reaction was absent. Visual acuity equalled 6/15, there being a moderate hypermetropia in each eye, and the fundus was normal. There were also no changes from normal in either of the visual fields.

The whole left side of the face supplied by the trifacial, including the conjunctiva and cornea, as well as that portion of the mucous membrane of the mouth and nose supplied by distribution from the same nerve, were found to be totally anesthetic, severe scratching with a sharp instrument of the bulbar and palpebral conjunctivae producing no reflex movement whatever. Further examination showed some impairment of the right patellar tendon reflex with the left normal.

The patient stated that his general health had always been fairly good until the beginning of the above series of symptoms. He denied having been inoculated with syphilis, but acknowledged that he had soft chancre ten years before and many attacks of gonorrhoea. He had never been under any course of treatment. There was also a vague history of eczema which may have been a syphilitic eruption. The urinary examination was negative.

Believing that nothing but multiple lesions could produce such diversified symptoms, and that in all probability they were syphilitic in character, the patient was placed upon mercurial inunctions and rapidly increasing doses of

*The patient was exhibited and an abstract of the history read before the Section on Ophthalmology of the College of Physicians, April 16, 1901.

potassium iodide. He is now taking 180 grains of the latter in 24 hours and the right lid presents a small amount of upward movements, though there are no other changes in his ocular condition. His general health is very much improved. The bladder symptoms, the soreness and "pulling" at the back of the knees, the vertigo, the headache, the staggering gait have all either disappeared or diminished in intensity.

Dr. Wm. G. Spiller very kindly made an examination of his condition from a neurologic standpoint a few days ago though the patient had at this time been taking large quantities of mercury and potassium iodide for a month, and reported that the diminution in tactile and pain sensation amounted to complete loss in the inner portion of the territory innervated by the left trifacial nerve, but to partial loss near the limits of this territory. The anesthesia is sharply defined by the median line of the face and implicates the left side of the tongue in its anterior portion. The motor portion of the left trifacial nerve is as much implicated as the sensory portion, and there is marked paresis of the left muscles of mastication easily perceived when the patient places the hands over the masseters and makes slight chewing movements. When the mouth is opened the jaw moves to the left. Voluntary movements of the jaw to the left are normal, but movement to the right is impossible beyond the median line on account of paralysis of the left external pterygoid muscle. When the tongue is protruded it is carried to the left because it is pulled towards the left in the direction of the jaw. Taste is lost on the anterior left side of the tongue through preserved normally on the right. There is no implication of either facial nerve. The left knee jerk is distinctly prompter than the right. No Babinski reflex is obtained on either side and the absence of this sign and the weakness of the limbs indicates that the central motor tracts are not much implicated.

From a study of the symptoms and their course, both before and since the institution of treatment, it is believed that the case is one of cerebro-spinal syphilis with meningeal involvement at the base, probably most marked in the interpeduncular space and over the pons, and involving principally the right oculo-motor and the left trifacial nerves.

NOTE.—Since the above notes were written the patient has been under treatment for two months with complete disappearance of the ptosis, marked return of power in all of the ocular muscles except the inferior rectus and ciliary muscle and return of sensation and motion in the larger portion of the area described as affected. It is interesting to observe that the order in which the paralyzes of the ocular muscles appeared was as follows: ciliary muscle, inferior rectus, superior rectus, internal rectus and levator. The order of returning strength has been the opposite, that is, levator, internal rectus and superior rectus. The inferior rectus and the ciliary muscle are as parietic as ever.

PHOTO-MECHANICAL REPRODUCTION.

By B. H. BUXTON, M. D.,

of New York.

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Every photo-micrographer wishes, sooner or later, to have his best pictures reproduced for publication, and some general knowledge of the various processes by which this is attained, must be of interest to him, and may be of some use in enabling him to make an intelligent choice of the process most suitable for his requirements, and in impressing a sense of his extensive knowledge on the minds of his publisher and printer.

By photo-mechanical reproduction is understood those methods by which the final prints are obtained in a printing press without the direct action of light upon them. Silver, platinum and carbon prints are therefore excluded by this definition; and indeed these processes, although undoubtedly giving the finest results, are, on account of the immense amount of manual labor required and consequent

expense, of no value where large numbers of impressions at a reasonable rate are desired.

Before the days of photography there were three methods in use of reproducing pictures. In speaking of them the present tense may as well be used, as they still linger to a certain extent, though probably doomed to final extinction, except for special purposes.

I. Wood Cuts. Relief Printing.

The pictures are translated by hand on wood to a series of lines or dots of equal intensity, but varying in number and thickness according to whether shadows, half-tones, or high lights are to be represented. Between these lines the wood is cut out and the printing is done in relief; that is to say, on inking over the surface, the ink remains on the lines and dots and an impression can be taken on paper or other suitable material. The lines and dots can always be observed on examining a wood cut closely.

II. Lithography. Flat or Surface Printing.

The lithographic stone is a porous limestone found in a faultless quality only at Solenhofen, in Bavaria. The surface of the stone is polished, the drawing traced on it with a fatty substance containing soap, say, for example, potassium stearate, and the surface is then treated, etched, as it is called, with a solution of gum arabic in weak nitric acid. Where the lines are traced the nitric acid combines with the potassium and the liberated stearic acid forms an insoluble calcium soap with the calcium of the stone. The chemical reaction may be expressed by the equation $2K^+ H^+ O^- + 2HNO^+ + CaCO^+ = Ca (C^{11}H^{17}O)^2 + 2KNO^+ + CO^+ + H^+ O^-$. The calcium stearate being partially derived from the stone itself, adheres very closely to it, and being a fatty substance, will take fatty ink when this is rolled over it.

Gum arabic is composed of potassium and calcium arabinates and on addition of nitric acid is decomposed into potassium and calcium nitrates and arabinic acid; the latter remaining in solution in an excess of nitric acid. After drying out, however, arabinic acid changes to metarabinic acid, which will not dissolve in water. On the bare parts of the stone, therefore, as the gum and nitric acid solution dries up, the arabinic acid sinks into the pores of the stone and closes them, changing to the insoluble metarabinic acid. The surface is now damped and the bare parts, since the pores are here hermetically sealed, remain moist for a considerable time, and therefore repel a fatty ink, whilst the lines of the drawing being of a fatty nature will repel the water and remain dry, so that after inking over the surface an impression corresponding to the lines of the drawing may be taken. The drawing can also be made on paper and transferred to the stone. Except for the transfer, however, the processes are precisely similar.

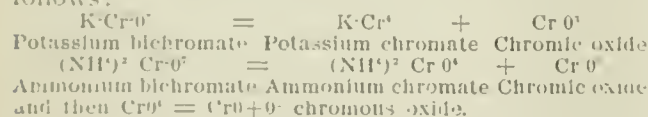
III. Copper Plates. Deep or Intaglio Printing.

For intaglio printing the lines or dots which are to compose the picture have to be sunk below the surface of a copper plate, so that each line is represented by a furrow. In engraving proper these furrows are cut into the plate by hand; in etching chemical means are used for the same purpose. Nitric acid will corrode copper, but has no effect

upon resinous substances. A copper plate, therefore, is covered with a resinous varnish, and the picture traced in lines with a steel point in such a way that each stroke of the point lays bare the copper. On applying nitric acid the bare places are etched in, the parts covered by the varnish being left in relief. On printing, the ink is dabbed in, filling up the hollows. It is then wiped off from the parts in relief and the impression is obtained by the paper taking up the ink lying in the hollows, more or less according to their depth. By this process the shadows can be printed deeper and the high lights lighter than by either of the preceding ones, giving better contrasts and a brighter picture.

Coming now to the modern photo-mechanical processes, it will be well to explain at the start that they depend on a change which takes place in certain soluble organic substances when mixed with bichromate of potassium or ammonium and exposed to light, by which they are rendered insoluble in water. Gelatine—soluble in hot water—glue, gums and egg albumen, soluble in cold water, are susceptible to this action of light and are all made use of in various processes.

The bichromates themselves have no action on these substances, but on exposure to light are reduced to chromates and chromic oxide, the latter being still further reduced with liberation of oxygen, which, combining with the organic matter, renders it insoluble. The reaction takes place as follows:



It is evident, therefore, that if a metal plate be coated with bichromatised gelatine or other soluble organic matter, and exposed to light under a negative, the bare shadows of the negative will allow the light so to act on the sensitive layer below as to reduce the bichromates and cause them to render the gelatine insoluble in hot water, whilst the high lights not being affected can be washed out, leaving the plate bare in the high lights, but covered in the shadows. If now some fluid which has the property of eating—etching—into the metal plate without affecting the gelatine be applied it will attack the uncovered parts, leaving the covered parts in relief. In other words, shadows are left in relief and the high lights hollowed out, or vice versa if a positive has been used instead of a negative.

Now, however, comes the difficulty of reproducing the half-tones of a picture. If the original be made up of lines or dots as in a pen and ink drawing, in which the shadows are represented by thick lines, the high lights by very thin and the half tones by lines of varying thickness between them as follows:



Diagram 1

there is no difficulty in representing the half tones on a sensitive surface, since in the negative

these lines would remain completely bare, whilst there would be a thick deposit of silver on the intermediate spaces. On the sensitized metal plate, therefore, after exposure, the intermediate spaces would wash completely away, the resulting print in relief, consisting entirely of black and white lines, would represent the half tones exactly as in the original.

In the case of a negative taken from a painting or from nature, however, the half tones are homogeneous, not being represented by lines or dots, and if the negative be laid on the surface of a sensitive metal plate, the following diagram shows what would occur on exposure:

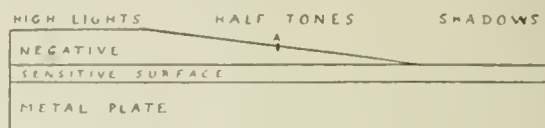


Diagram II

After exposure the surface to the right of A, a movable point depending on the length of exposure, would be insoluble, and to the left of A would remain soluble, so that on washing over with hot water, the plate would appear thus:



Diagram III

and after etching thus:



Diagram IV.

so that on printing in relief the shadows and deeper half tones would come out dark, while the high lights and lighter half tones would be white. In other words, the half tones would be lost and the print appear black and white without any gradations between. In order to avoid this and enable the half tones to be preserved the picture must be translated into lines or dots, grained in fact, and this must be done whether the printing is to be in relief, on the level, or in intaglio.

I. RELIEF PRINTING.

Theory.

If a glass plate ruled with very fine cross black lines, be interposed between the subject to be copied and the sensitive glass plate in the camera, the resulting negative will show these lines on it as clear glass, breaking up the surface into a multitude of minute dots on which the light will act and on which silver will be deposited during development. If the glass screen were laid actually on the sensitive surface, the dots would all be of the same size and the picture would not show, but when the screen is placed a short distance away the light spreads according to the amount admitted through the meshes.

Rays, therefore, coming from the high lights of the subject spread much and produce large black

dots on the negative, whilst those coming from the shadows hardly spread at all and produce dots varying in size according to the depth of the tone. Between the black dots are white lines: very thin and minute in the high lights and gradually thickening throughout the half tones to the shadows. On printing from such a negative by contact on the sensitized surface of a metal plate the effect is of course reversed, and the picture may be represented by diagrams 5 and 6.



Diagram V. Surface View

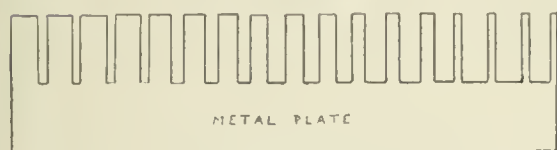


Diagram V. Side View.

The light having been able to act fully through the screen lines of the negative, on which they are represented as bare glass, the bichromatized gelatine or other matrix beneath them is rendered insoluble, so that on etching the lines remain in relief, whilst the etching fluid attacks the dots which have been protected from the action of the light.

Printing is then done in relief, the network of lines of varying thickness preserving the half tones. On examination of the resulting print with a pocket lens the lines and dots can be resolved. The lines in the high lights appear as dots, the reason for which can be appreciated on examining diagram 5. In the deeper shadows the screen effect of dark lines and white dots is more evident.

It is found that the shape of each dot is exactly that of the aperture of the lens, so that if diaphragms with square instead of round holes are used, the dots are square instead of round, and the appearance would be as in diagram 6.



Diagram VI.

By means of square apertures the corners are better filled up with light than with round ones. In practice, however, it is found that where much light passes through there is overlapping with the round diaphragms (see diagram 5), so that the high lights are sufficiently and better filled in with these than with square ones. It is usual, therefore, to make the first part of the exposure with a round stop in order to fill up the high lights; the lens is then capped and a square stop put in for the remainder of the exposure, the effect of which is to brighten up the half tones by cutting out the corners. Stops of various other shapes are also used, but for illustration the above mentioned are sufficient.

Screens are ruled so many lines to the inch; from

75 or 80 for the coarsest, up to 200 or 250 for the finest. As the screens become finer more care and skill are required in etching and printing, so that when quick work is wanted and common paper used, as for the daily papers, a screen of 80 lines to the inch is the usual one. For magazines and similar publications about 125 to 150 lines. Above 150 lines the printing can hardly be done satisfactorily along with the letter-press, and special plates on special paper usually have to be prepared.

The ruling is done with a fine diamond point, and the lines filled in with a black pigment.

PRACTICE.

Since the process worker, as he is called, starts from a positive picture it is usual to supply him with a silver print of the subject to be reproduced. This is pinned up on the flat board of a copying camera, a long focus, 14 to 16 inch lens selected, and the screen set up in the camera 1-16 to 1-32 of an inch in front of the sensitive plate for the negative. Special holders are made which contain both the screen and the plate, and the former can be moved backwards and forwards by a rack and pinion arrangement. The finer the screen the nearer it must be to the plate.

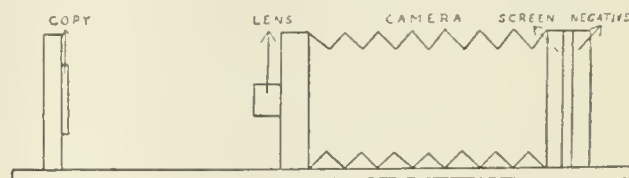


Diagram VII.

For taking the negative, dry gelatine emulsion plates are specially manufactured, but the wet collodion process affords better results with less trouble and expense, and is usually preferred. The only drawback to the wet plates is the long exposure necessary, about four times longer with the screen than without it, so that the film is liable to dry out.

The negative is developed, fixed and intensified pretty much in the usual way, and may then be taken into the light and examined through a pocket lens. If good the dots will appear clear and distinct without any fuzziness around the margins, whilst between them the glass shows perfectly clear.

The next step is to prepare the metal plate, which may be of copper, zinc or brass. Copper gives the best results and is more generally used than either of the other two. The surface of the copper plate, even if this is bought machine polished, must be thoroughly hand polished with charcoal just before coating with the sensitive solution. There are numerous methods of preparing the bichromatized organic substances for the sensitive coating; albumen, gelatine, etc., being, or having been used, but all may be disregarded with the exception of the enamel process, which has glue for its basis and which is rapidly ousting all the others for ordinary work. From among the many formulas for the solution, the following may be taken as an example:

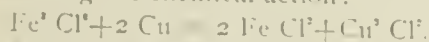
Fish glue	3 oz.
Ammonium bichromate	120 grains
Water	10 oz.

As the bichromatized substances are not sensitive

to light until dry, the solutions may be made up in full daylight and will keep for a week or so in a cool place, though after a time the bichromates are liable to undergo spontaneous decomposition. The solution, after being filtered through absorbent cotton, is flowed over the plate and, as an even coating is absolutely essential, the plate is put in a machine called a whirler—a very simple affair—and dried gradually whilst spinning round over a gentle heat from a gas stove. The drying must be done in a yellow light—a yellow shade over the window is sufficient—and as soon as the plate is cool it may be exposed to sunlight or strong electric light in a printing frame under the negative. As the progress of the printing cannot be watched, it requires a good deal of experience before exposure can be rightly timed, but three to five minutes in a strong sunlight is usually sufficient. Generally speaking, the quicker the printing the better the results. The plate is next taken out of the frame in a yellow light and washed under a gentle stream of water for a minute or two to get rid of the glue which has not been acted upon by light. The picture will now show up faintly and may be brought out by treating with a weak solution of gentian violet, which will stain the glue more or less deeply according to the thickness of the film, and the experienced eye, with the aid of the pocket lens, can judge if everything is right up to this stage.

Burning In.—The next step is to burn in the glue so that it will adhere closely to the plate, and not lift up whilst the etching is going on. This is done by holding the plate face up in a pair of pincers over a small gas stove, and the burning in is continued until the plate assumes a rich brown hue, the picture coming out clearly on account of the brown color showing more or less according to the thickness of the enamel, as it is now called, on the surface. The back of the plate is then coated with paraffin to protect it from the etching fluid, the plate is allowed to cool and is ready for etching.

Etching.—For zinc plates the etching fluid is nitric acid, but it will be sufficient to describe the process for copper plates, with which ferric chloride is used, ferrous and cuprous chloride being formed whilst the copper is being etched away, the following representing the chemical action:



A tray is half filled with the etching solution and the plate is laid in it face up. The action commences at once and about 15 to 30 minutes is sufficient to complete the etching, during which the black precipitate of Cu^2Cl^2 , which is constantly forming, should be occasionally brushed away with a camel hair brush, and the plate should be carefully examined now and then with a pocket lens to see that the etching is not being carried too far. The lines in the high lights must not be allowed to disappear altogether or there will be no support for the paper on printing and a smeary look will be the result. The plate is then washed under the tap, dried, mounted on a wooden block, and is ready for printing in relief, either on special plates or along with the letter press.

II. FLAT OR SURFACE PRINTING.

Photo-lithography and Collotype.

The principle of both these processes is the same in that certain parts of the surface for printing from are so prepared that they will take fatty ink from the roller, whilst other parts will repel the ink, but the methods of arriving at this result are entirely different in the two processes.

Photo-lithography is more suitable when large plans, etc., in relatively small numbers are required, whilst collotype is the best for small pictures and large editions. The former method of reproduction, therefore, is not likely to be chosen by the photo-micrographer, and it will be sufficient to mention that the process is essentially similar to that already described under lithography, the only difference being that instead of tracing the lines with a fatty soap, the stone is covered with bichromatised glue or gelatin and exposed under a negative. Where the light acts the glue becomes insoluble and remains on the stone after washing, whilst on other parts it dissolves out. The surface is then etched with gum arabic and nitric acid solution to close up the pores of the bare parts and dried. On damping, the insoluble glue quickly dries and takes ink, whilst the rest of the surface remains moist for a considerable time and repels ink.

If homogenous half tones are to be reproduced the exposure can be made under a negative taken through a screen as in the enamel process; or the stone, instead of being polished, can be roughened with fine emery powder, converting the surface into a number of fine points. Between these points the light coming through the negative will not be able to act with so much energy as on the points themselves, so that the glue here will wash away, the insoluble points appearing larger or smaller according as the light has been able to act with more or less intensity. In this way the modulations from shadows to high lights can be preserved.

Collotype is a very valuable process for the photo-micrographer, producing prints almost equal to those of silver and platinum, but the expense is greater than in the screen half tone process, since much greater care is required in the printing, so that the number of copies produced in a given time is far inferior, although this can be remedied to a certain extent by preparing a large plate with several pictures on it, by which means a dozen or more can be taken together. The impressions cannot be taken along with the letter press except by double printing and special plates on special paper must be prepared as a rule.

(To be Continued.)

On the Influence of Acids on the Secretion of Gastric Juice.—A. Sokoloff (*Bohnitchnaia Gazeta Botkina*, Vol. XII, No. 18) performed experiments on a dog with a gastro-duodenal fistula, which established the following facts: Under normal conditions the maximum secretion of gastric juice takes place during the first two hours, when it diminishes gradually, ceasing altogether at the 5-6 hour. This diminution of the secretion of gastric juice is due to the accumulation of hydrochloric acid. The latter, when in excess, inhibits the secretion, while lactic or butyric acid greatly increase it. [A. R.]

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Plague in Australia.—"It will be seen at last that careful attention to the more commonplace details of municipal sanitation during the absence of disease, alone affords a reasonable prospect of future safety." Nothing would seem more obvious, and yet it is certain that nothing can be more difficult than to convince the public of this simple principle.

The Report of the outbreak of plague at Sidney, in 1900, a copy of which has just been received by us, is one of the most eloquent appeals for the exercise of sanity in regard to infectious disease on the part of a supposedly intelligent populace, that it has been our good fortune ever to read. Dr. J. Ashburton Thompson, the chief medical officer of the Government, and the President of the Board of Health of New South Wales, had foreseen the epidemic, and had made all possible efforts to secure the observance of reasonable precautions. He watched the result of its effects as they slowly developed, that is, the increase in the popular terror and the willingness on the part of the inhabitants to submit to any measures, no matter how expensive or inconvenient, that were suggested by the most ignorant and blatant of the popular leaders. For some years the Board of Health had been carefully studying the plague bacillus. Stocks of Haffkine's preventive serum were on hand, and even such minute details had been attended to as the possibility of destroying rats and mice by producing in them some infectious disease not communicable to man, such as inoculation with the bacillus typhi-murium, or the organism of Danysz. In the early stages the Board of Health had recommended that in addition to the protection of the human passengers, measures should be taken to prevent the landing of rats, either by some method of mooring, or by the destruction of the rats on ship-board. Means were also taken to destroy them in the wharves, and to put the wharves and their vicinities in a thorough hygienic condition. As usual, these measures were easily applied to the Government wharves and vigorously resisted by private owners, whose wharves, moreover, were found to be in such a dilapidated condition that little could

have been done without destroying them. It was urged that at these wharves a considerable volume of a particularly valuable form of foreign trade was conducted, and that any interference would necessarily result in a severe loss to the entire district. It is questionable whether the entire destruction of these wharves, and the stoppage of this trade, until they could have been rebuilt in a proper manner, might not have been an exceedingly economical proceeding. In the end they were closed in sections and thoroughly cleaned, but long after the epidemic had broken out. The chief criminals, for they certainly deserve this name, because for the sake of saving a little money they exposed the whole city to the ravages of an epidemic, were certain wharf companies and firms that are named in the Report.

Haffkine's prophylactic inoculation was at first employed for the protection of those persons intimately concerned in the treatment of the plague cases, and for the scavengers who necessarily worked in the plague districts. As the epidemic gradually reached its height the populace became more and more anxious to be protected, until they finally overflowed the building of the Health Department, blocked up its approaches and really threatened the stability of the structure, so that it was necessary to remove to larger quarters in the Exposition building. With the fatuity of plague communities, as the epidemic declined and became less severe, all this anxiety ceased, and from thousands presenting themselves every day, the number was reduced to a few hundreds. It may be worth while to mention that among 10,000 persons inoculated, and as far as possible only those likely to be exposed to infection were so treated, only 13 cases of the plague occurred, and these were exceedingly mild, and the patients recovered. Yersin's serum was also employed, but as the supply did not reach the Health Department until late in the epidemic, no very definite results were obtained. On the whole, the conclusion was reached that this serum stimulated the circulation but could not be relied upon as a very active curative measure. So much for the human side of the subject. The other is of extreme interest.

Some form of contagious disease in rats had been observed on one particular wharf before the epidemic, and this gradually spread to other wharves in the district. The first case occurred in a car-man who was working on one of these wharves. The glands in the groin enlarged from below upward. Upon the ankle there was the evidence of an old flea-bite, and the Commission strongly suspected that a flea from one of the diseased rats had bitten the man. It might be mentioned in passing that some sick and dead rats were obtained, and examined bacteriologically, and the plague bacillus found in them, proving beyond peradventure that the epidemic among them was the plague. Accordingly active measures were taken for the purpose of destroying rats upon in-coming vessels, and of destroying those in the city. Of all the measures employed, exposure to the fumes of burning sulphur seems to have been the most effective, and by this means nearly 300 carcasses were obtained from a small steamer that was presumably very little infested. A bounty of sixpence per head was paid for all dead rats brought to the Health Office, and over 100,000 carcasses were thus obtained and burned. This probably had very little effect upon the total number of rats, but as these animals, whenever persistently annoyed, always wander to other places, it probably served to disperse them and perhaps to spread the epidemic somewhat.

A valuable lesson in regard to the management of the epidemic was one suggested by the Board of Health and subsequently carried out. This was the formation of a committee of prominent citizens with sub-committees in all the wards, acting with the Board of Health, the object being to inspire the public with confidence in the measures that were being undertaken, and to educate as large a number of the leaders among the people as possible in their necessity. Such was the plague at Sidney. Conditions there were not unlike those in our own sea-port cities, and are presumably the same as those that must be met among our own populace. It remains to be seen whether, if need occur, we shall rise to the occasion and meet the emergency as successfully and intelligently as it was met at Sidney, despite the defects that were there manifest and perhaps inevitable, or whether the invasion will find us unprepared and criminally unwilling to admit its existence.

Plague on its Travels.—The fact that our Pacific coast is more or less constantly threatened by the approach of plague is shown by the prevalence of that disease in the several countries which border on that great sea. Recently the steamship *Carlisle*

City arrived at San Diego, California, with the report that several of her crew had died of plague en route. This vessel touched at Honolulu, Hawaii. At that time only one member of the crew had died, and the disease does not seem to have been recognized at that port. After she left the Sandwich Islands the disease broke out with renewed violence, resulting in a number of deaths before the vessel reached California.

This event need not be taken as a cause for panic. It should simply be recognized as indicating the need for extreme caution on the part of the health authorities on the Pacific coast. Plague is prevalent now in Honolulu, which is one of our newly acquired possessions, and which is in constant and direct communication with this country. A letter from Surgeon L. E. Cofer to Surgeon-General Wyman, under date of June 8th, gives details of a number of fatal cases in that island. Dr. Cofer believes that the appearance of the disease at this time is a recrudescence similar to what has occurred in other places. Plague is also prevalent actively in Amoy and Hongkong, in China. In fact, the *Carlisle City* sailed from Hongkong, where, apparently, she took on the disease. Bubonic plague in epidemic form has appeared at Amoy, in China, two weeks earlier than last year. This is probably due to the early warm rains following upon a long dry winter. The spread of the disease at that place has been rapid and the fatalities most appalling. According to United States Consul Johnson one hundred deaths per day have occurred in Amoy and its suburbs. In Australia the disease has been studied and controlled, we believe, in a masterly way, to which we refer in another column. To be forewarned is to be forearmed, in the opinion and practice of all trustworthy health officers. We do not doubt that the United States authorities are thoroughly alert to the situation.

Oumikoff's Reaction for Woman's Milk.—In 1898 Dr. N. Z. Oumikoff described a reaction obtained with human milk by means of which not only is the latter distinguished from the milk of any other mammalian, but the period of lactation can also be approximately determined. The reaction consists in a violet-red coloration obtained by the addition of 2.5 cc. of a 10% solution of ammonia to 5 cc. of milk and heating in a water bath to 60 degrees C. The intensity of the reaction bears a more or less definite relation to the periods of lactation, being greater during the latter months. It appears that this reaction, simple and practicable as it is, received but little attention, for neither has it been extensively tried nor have its determining factors been

studied. Recently, N. Ziber made a careful study of the subject with a view of verifying the claims made by Oumikoff, as well as determining the substances in the milk which are responsible for the reaction. The results of the author's investigations are embodied in a paper contributed to the *Archiv. Biologicheskikh Nauk*, Vol. VIII, No. 4. Concerning the external conditions under which the reaction appears, the author found that a higher temperature than 60 C., as well as a stronger solution of ammonia interfere with the reaction. On the other hand, milk several days and even months old, as well as boiled, gives the reaction as strongly as when fresh. The addition of common salts, soda, sodium sulphate or phosphate and ammonium sulphate, does not interfere with the reaction. The same is the case when various acids are added, while absolute alcohol or ammonium chloride prevents its appearance. All attempts to isolate the specific color failed. On precipitation of the solids of the milk by metallic salts or tannin and filtering, the reaction was obtained in the sediment as well as the filtrate. On the other hand, when the milk was distilled the distillate failed to give the reaction. With regard to the substances causing the reaction, it appears from the author's experiments that these probably are the sugar of milk, the iron, and the citric acid contained in the milk. The interesting fact was observed that when dialyzed, not only human, but also cow's milk gave the reaction. This is explained by the fact that in cow's milk the addition of ammonia precipitates all of the citric acid, the latter entering into combination with the lime abundantly present in the milk. Human milk contains less lime and a part of the citric acid is therefore left in solution. On dialysis, however, only a small portion of the calcium of the cow's milk passes through the membrane, while all of the citric acid is dialyzed. The author concludes by stating that not only does the reaction offer convenient means to distinguish human milk from that of herbivora, but it also serves as an indicator of the period of lactation from the fourth to the eighth month. Prior to the fourth, or after the eighth, the reaction cannot be depended upon. In view of such conclusive evidence, it would seem desirable to give the test a wide application and also study it under various pathological conditions.

Leprosy in the United States.—Two years ago a special board was appointed from the Marine Hospital Service to investigate the prevalence of leprosy in this country. This board, consisting of Dr. J. H. White, Dr. G. T. Vaughan and Dr. M. J. Rosenau, has now about completed its report, which we understand is to be submitted to Congress in De-

cember. A preliminary statement has appeared in the newspapers to the effect that the board has discovered about 900 cases of leprosy in the United States. The largest numbers of cases are reported to be in New Orleans and San Francisco. In the latter city the disease is found chiefly among the Chinese. The investigation has not been extended to our new insular possessions, the Philippine and Sandwich Islands, which are both well known to be active propagating grounds for this affection. The report will give a complete census of lepers in the United States, and will contain special histories of several hundred cases, showing the natural history of the disease and its manner of dissemination.

It has long been apparent to thoughtful observers that this country is exposed to the immigration of this disease from several quarters. Leprosy comes not only by way of the Pacific, but also through Atlantic ports. From the Scandinavian peninsula we have probably derived a fair quota of lepers. Possibly more alarm is felt about leprosy as a contagious disease than the facts warrant. It is not and never can be so dangerous an endemic affection as tuberculosis. Instances are cited of lepers who continued in their daily avocations among men. By means of extreme cleanliness and secrecy, the disease is sometimes successfully concealed; so it is just possible that the 900 cases reported by the Marine Hospital Board do not include all the lepers now living in the United States.

The Intraocular Complications of Beri-Beri.—There appears to be considerable room for investigation concerning the microscopical changes that occur in the visual apparatus in beri-beri, and notwithstanding that that disease is indigenous to the East, a study of these changes may be of value in as far as it may assist in clearing up some of the problematical factors occurring in allied polyneuritic affections. At a recent meeting of the Belgium Ophthalmological Society, Coppez reported a case of beri-beri, in which the visual acuity had been reduced to 1-16, with central scotomata for red and green as well as partially for yellow and blue. Holmgren's test showed normal color perception. The peripheral fields of vision were normal. Ophthalmoscopic examination showed hyperemia of the papillae, full and distended retinal veins, the condition as a whole being a partial retrobulbar neuritis with participation of the macula. Diaphoresis, potassium iodide, strychnine hypodermically, and abstinence from tobacco, resulted in gradual improvement, with restoration of visual acuity to 1-6. It has been observed in Brazil that the oculomotor palsies, nystagmus, amblyopia, and blind-

ness, which result from beri-beri, may be cured by change of climate and the disappearance of the beri-beri. This in itself should be an incentive to neuropathologists to investigate the structural changes occurring in the optic nerve in beri-beri, and, if possible, determine whether and to what extent the papillo-macular bundles are involved.

The Mortality from the Hot Wave.—Now that the returns are all in we can form some estimate of the deadly effects of the recent hot weather. As one journal has remarked, the newspapers during that never-to-be-forgotten period contained lists of the dead and prostrated that looked like reports from some great battle. The *Literary Digest* has collected the returns. The death list for the country at large contains the names of more than 1500 persons. Of these more than one-half (about 800) occurred in New York City alone. Philadelphia came next with considerably more than 200. Boston and New England lost 100; Pittsburg, 100; Baltimore, 90; Newark, 75; Jersey City, 40; St. Louis, 35; Chicago, 30; Cincinnati, Cleveland and Washington, 20 each; and so on in diminishing numbers in smaller or cooler cities and towns. It is a remarkable fact that most of the suffering was in the North. The southern cities were comparatively comfortable, and one newspaper in New Orleans invited northern people to come to that city to escape the heat. A Boston paper at the same time reminded us that "at eleven miles up it is eighty-eight below zero." Both suggestions were lacking in practicability.

It is well to remember that we are still in the midst of the summer, and while we are not likely to have another such phenomenal "hot wave," we are still destined doubtless to have the weather uncomfortably warm. As a people, we have not yet learned to endure our hot summers. Our houses, our clothing and our habits are not suited to them. It remains a grave problem in hygiene how to meet these emergencies, and this appalling death list of 1500 should be regarded in a measure as a reproach to our collective recklessness. Certain it is that the burden of toil and poverty should be lightened at such times by all the devices that can suggest themselves to a humane but too strenuous civilization.

A Locomotor Ataxia Club.—The tendency to form clubs is one of the vital phenomena of our civilization. Men and women nowadays organize themselves into associations for every imaginable purpose. The growth of "trusts" is only a larger application of the same principle. Thus far we have had no "medical trust," and we make bold to express the hope that we never shall have one. But,

if reports are true, our patients are beginning to organize. There has been formed, according to rumor, a Tabetic Association. It is not to be an in-coordinate body, but well organized, and is to offer a prize of \$10,000 for a sure cure for locomotor ataxia. In the present state of pathology we fear the offer is a safe one, but we sympathize heartily with the new club, and can even see ground for believing that some good can come out of it. A community of interest is certainly a vital principle among men, and there is no reason why the victims of posterior sclerosis should not find in one another's society a bond of fellowship that may make the general burden of their infirmity less grievous to be borne. To be sure, we have known some tabetics who could hardly be classed as "clubable" men, but a unity of purpose will do much to mitigate the slight asperities that might arise from social distinctions and individual idiosyncrasies. It is a curious fact that locomotor ataxia is one of the few very chronic affections that constantly appeal to the imagination of doctors and patients alike as having in reserve some latent tendency towards recovery. Many experts refuse to be discouraged by it; many patients linger on in the fond hope and expectancy of cure. Let us trust that these hopes will yet be realized, and that the new club will be an active agent in securing such earnestly desired results.

Typographical Errors.—The editor of the *Journal of the American Medical Association* is to be congratulated. He knows how to acknowledge a typographical error, and to get out of it neatly. This is a rare virtue and much more commendable than the cry of the editorial Pharisee, who claims that he makes no errors and who thanks God that he is not as other men are. A paper devoted to "The Cause, Prevention and Cure of Poverty and Pregnancy" will doubtless excite curiosity until the world reads the editor's graceful announcement that the author meant "Poverty and Degeneracy." This is not quite so bad an error as the one that occurred in an old edition of the Bible (a copy of which is preserved in the Bodleian Library at Oxford), in which the little word *not* was left out of the Seventh Commandment. The few rare copies that were preserved when the edition was suppressed, now command a premium among bibliophiles. Perhaps this will yet be so in the case of our contemporary.

The editor who proclaims that he never makes any typographical blunders is on dangerous ground. With his own types he is likely to be condemned. Thus an editor who makes a specialty of being typographically immaculate, recently made one of his contributors speak of "a hemi-anesthesia of

the conjunctiva of the arms and body." This was a great stretch for the conjunctiva, but as the editor is an eye-specialist, the world probably accepted the statement as authentic. Again, an author recently wrote a paper on Spinal Cocainization, but the title was printed in large letters by this same editor as *Special Cocainization*. Such an error is not strictly typographical—it is, rather, an editor's blunder, for an editor should see at a glance that such a title is a misnomer. The *Lancet* recently spoke of "a sour correspondent" (as some of them really are), when it only meant to say "as our correspondent."

But editors have good precedent in this field. Disraeli tells us (*Curiosities of Literature*, Vol. I) that when Pope Sixtus V. issued his edition of the Vulgate he prefixed to the first volume his bull excommunicating all printers who should make any alterations in the text; but the work was found to be so full of errors (although the Pope himself had corrected the proofs) that scraps of paper containing the corrections had to be pasted over the errata. This should be a warning to our infallible editors who proclaim constantly that they never make a mistake.

The great trouble that can come from a little misplaced comma was illustrated once in a small New England seaport. A clergyman read a notice from his pulpit that "Captain Jones, going to sea his wife, desires the prayers of the congregation." And so may all editors, going to print, desire the forbearance of their readers.

Pulmonary Hypertrophic Osteo-arthritis.—Marie first described this condition in adults, in 1890. In children it is very rare. At a recent meeting of the Medical Society of the Paris Hospitals, (*Bulletin et Memoires de la Societe Medicale des Hopitaux de Paris*, 1901, No. 5). Rendu and Bouloche reported a case which occurred in a boy of 11, who had pneumonia at the age of 4. During convalescence it was noted that his fingers became deformed and the right side of his chest retracted. At 6 years, exploratory puncture was made into the right pleura without result. Now he is tall and thin, with a small head, in contrast to acromegaly. The right side of his face is better developed than the left. His nose, upon which are a few varicosities, is usually red. The right side of his thorax is markedly retracted, and is immobile during respiration, while the left side moves more than normally, to compensate for it. There is also a compensatory scoliosis. There is dulness over the entire right side. The arms are very thin, but the hands are immense, especially the wrists, and the end phalanges of the fingers. His nails are enlarged and curved, and grow rapidly. They resemble a parrot's beak. The ankles and toes are also enlarged. Both knees are enlarged, with some effusion. He walks well but slowly. His extremities are generally cold, but perspire profusely. Pain occasionally appears in the wrists, ankles, and knees. There is neither cough nor expectoration. Such a well marked, pronounced, and persistent case is very rare among children. As a rule the affection is acute and curable. In this case the disease followed its course as in an adult. Röntgen photographs show osteoperiostitis of the affected bones. These cases must be carefully distinguished from chronic rheumatism. The relation to the lung condition is hard to understand. Yet the symptoms of hypertrophic osteo-arthritis first develop with some pulmonary disease of long duration. [M. O.]

Reviews.

Oral Surgery. A text-book on General Medicine and Surgery, as Applied to Dentistry. By Stewart Le Roy McCurdy, A. M., M. D., Professor of Anatomy and Surgery in the Pittsburg Dental College. Cloth, 8vo. pp. 368. The Calumet Publishing Company, Pittsburg, Penna. 1901.

This is not a very satisfactory attempt to prepare a text-book on the subjects in general medicine and surgery of interest to the dentist, without discussing the special pathological changes which occur in, and immediately about the teeth. While the author has undoubtedly brought knowledge and personal experience to his difficult task, he has failed to do justice to his self-imposed duty.

Haste or carelessness in the preparation of a scientific publication is always regrettable; and this volume appears to suffer from one or the other, or perhaps both, of these editorial faults. The proof reading, especially of the technical terms, has been very defective, the selection of topics does not seem always judicious, and the literary style is at times neither clear nor correct. As accuracy is the foundation of science and a necessity in didactic teaching, a new applicant for the favor of professional readers makes a bad impression when it speaks of atersia, acna, feruncle, and tie dolonreaux, and misspells proper names.

A well-informed medical reader will find much of interest in this book; but a dentist, unless he has had the advantage of a thorough course of instruction in modern medicine and surgery, will be confused by many of its statements and fail to gain the definite and exact knowledge which he seeks in its pages. These defects should be corrected in subsequent editions. [J. B. R.]

The Hygiene of Transmissible Diseases; their Causation, Modes of Dissemination and Methods of Prevention. By A. C. Abbott, M. D., Professor of Hygiene and Bacteriology, University of Pennsylvania. Third Edition. Revised and Enlarged. Octavo, 351 pages, with numerous illustrations. Philadelphia and London: W. B. Saunders & Company. Cloth, \$2.50 net.

Progress in the important field to which this book is devoted has been rapid and striking during the past few years, and the present edition contains, therefore, much new matter. The part taken by insects and rodents in disseminating diseases, long suspected, is now established upon a scientific basis. The original plan of the work has been retained in this edition, but special sections, notably on malaria, yellow fever, plague and tuberculosis, have been much enlarged. Naturally typhoid fever occupies a prominent place. Its dissemination by drinking water is fully discussed. We are glad to note that the germ is designated *B. typhosus*, and not *B. typhi abdominalis*, as the latter perpetuates an old error as to the relations of the disease. The increase of typhoid fever in Philadelphia in 1897-8 is discussed at some length, and its connection with accidentally polluted water is pointed out. An equally valuable evidence of this fact is to be found in the change in condition of the so-called Kensington district of Philadelphia, upon the abandonment of the pumping station at a highly polluted point of the Delaware river. We miss allusion to the typhoid epidemics of the late war and any account of the official reports thereon.

Expansion has not only brought us new problems in politics, and ethics, but also very important ones in hygiene, hence the discussion of the newly indicated methods of distribution of yellow fever will attract much attention. Unfortunately some of the more striking of the discoveries were published too late for incorporation into the present volume. No less interesting is that in Porto Rico one of the most prevalent fatal diseases is infection with the intestinal parasite, *Anchylostoma duodenale*. During October, 1899 one thousand deaths were reported from this cause in 57 municipalities. This serious condition probably depends largely upon the use of unfiltered surface water and uncooked food.

The book is a useful addition to the literature of hygiene. It is well written and well printed. In the next edition the index and table of contents should be enlarged. [H. L.]

24th Annual Report of the State Board of Health of New Jersey and Report of the Bureau of Vital Statistics. Trenton, N. J., 1900.

This is an octavo volume of three hundred and ninety-three pages and index, containing the usual statistical matter of such reports. Each county receives separate consideration. Thirty-five pages are devoted to a summary of the source and general management of the public water supplies of the State. New Jersey has been rather fortunate in this respect, good artesian waters being found at a moderate depth in many places. Even at the seashore, water free from all but small amounts of mineral matter and of high organic purity is abundant. Undoubtedly this fact has had something to do with the immunity of these resorts from serious epidemics.

An interesting item is an account by D. C. Bowen, local inspector at Asbury Park, of the "cleaning" of a hotel kitchen, which he had a chance to observe. We have not space to insert his letter, but it states that the cleaning consisted principally in throwing about sixty gallons of hot water on the floor, and sweeping this by common brooms into puddles which were allowed to drain through the cracks into the ground below. The same brooms were used without cleaning for wiping off the table tops. The table legs and brackets were not cleaned.

No report is made concerning food supplies. Possibly this is to be found in another volume or the work is now in charge of another department. [H. L.]

Correspondence.

COLD WATER IN THERAPEUTICS.

By ALFRED GORDON, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

A recent meeting of the Philadelphia County Medical Society was particularly interesting, owing to the very important paper of Dr. Simon Baruch, who gave us a very able and scientific presentation of the value of water in Therapeutics.

Your correspondent takes the opportunity thus presented to say a few words in favor of a treatment which in the hands of many authorities and his own, gave the most unexpected and brilliant results.

Nervous diseases among all derive the most benefit from water-treatment. While at Salpêtrière the writer could observe that a great number of patients with various forms of spinal diseases were driven daily or walked to the building assigned especially for hydrotherapeutic purposes. He could see a number of tabetic patients suffering from intense pains greatly benefited by water. He could see a number of patients sent from the remotest places of the country, suffering from various forms of nervous disorders, in which a prolonged medicinal treatment was of no avail, greatly benefited by a daily cold douche. Particular notice was taken by the writer of cases of cerebro-spinal syphilis or syphilis of the cord, in which the cold douche was the most efficacious treatment. As to functional disorders of the nervous system, the number of cases is legion. There is not a single patient with neurasthenia, hysteria or epilepsy, who does not get his daily douche. Experiments were made and the douches were withdrawn for a few days and patients kept exclusively on medical treatment; immediately the symptoms of the diseases returned.

Last year the writer had under his care a boy affected with petit mal. In addition to the general hygienic and medical treatment he advised cold spongings twice a day. The number of attacks diminished and gradually disappeared. The cold water was obnoxious to the little patient and it was difficult to prolong it. The parents suppressed it entirely, but continued the drug treatment. The attacks returned in spite of increased doses of bromides. The cold water was readministered and the epileptic attacks disappeared. The same experience the writer had

in cases of migraine, hysteria and chorea. At the Jefferson College Hospital he has under his care a case of syphilis of the cord. The patient affirms that he cannot do without the cold applications suggested to him; the rigidity and numbness of the legs, of which he complains, become aggravated, whenever he omits the water-treatment for a few days. As to the use of cold douches in other diseases, we have seen in the services of Dr. Lancereaux, in Paris, a very great number of cases of cirrhosis of the liver, due to alcoholic intoxication, of diabetes (fat and thin types), gastro-enteritis, enteritis. Particularly we were impressed with the good results in the first stage of alcoholic cirrhosis of the liver, when there is only congestion of the organ and later hypertrophy. Also in cases of pulmonary tuberculosis developed in alcoholic individuals the general health began to improve, the cough diminished, insomnia and night-sweats disappeared and weight increased. Pure alcoholism without complications, M. Lancereaux treated exclusively with a cold douche of one minute duration over the spine twice a day. Cases of enteritis accompanied by diarrhea he treated with a daily cold douche. As to diabetes we could see marked decrease in the percentage of sugar under the influence of a cold douche.

Dr. Simon Baruch made a very interesting assertion, that a few ounces of cold water act upon the mucous membrane of the stomach as a cold douche. I heard it often from the late Potain. I can corroborate it in the most emphatic way. I remember particularly a neurasthenic Italian, for whom I prescribed a form of "bitters" for anorexia. He could not buy the drug, I advised then to take one swallow of ice water before each meal; the patient's appetite returned as if by magic. I do not affirm that it will do so in every case, but it is nevertheless very illustrative, that cold water acts as an excitant upon the gastric secretions.

From personal experience and that of others, the writer can make the following statement: Water, and particularly of low temperature, is one of the most powerful agents in therapeutics and it is regrettable that it is neglected by many physicians. The writer had the pleasure of listening to the favorable remarks on hydrotherapy of such authorities as Drs. Sinclair, S. Solis Cohen and Musser, and joins his voice to theirs in urging the Philadelphia County Medical Society to take some steps towards promoting the usefulness of hydrotherapeutic applications. The writer is a firm believer in applying natural resources in treatment of diseases.

THE CIGARETTE.

By D. BERRY, M. D., of Wetumka, Ind. Ter.

To the Editor of the Philadelphia Medical Journal.

I was both amused and surprised at Dr. Robinson's defense of the cigarette in your Journal of April 27th. It amuses me to see a defense set up for so worthless an article, and it surprises me that Dr. Robinson will make the statement: "and that cigarettes are in any way more injurious than cigars is positively false." Why is cigarette smoking more injurious than cigar smoking? For the simple reason that 9 out of every 10 cigarette smokers inhale the smoke; while cigar smokers do not. The cigar would be far more deadly than the cigarette, if inhaling were practiced, because the quantity of nicotine in one cigar is probably 20 times greater than in one cigarette. I have made cigarette smoking rather a close study in an off hand way, or I might say practical way. I now have under observation a young man who has just abandoned the habit after smoking them for 10 years or more. He became a neurotic of pronounced type. His complexion assumed that "ashy" sallow so peculiar to the cigarette fiend, and his mental faculties became impaired to such an extent that he was almost incapacitated for business at times. He has now reached a point where that insane desire for "a smoke" (abandoned the habit about 4 weeks since) only comes on once in 2 or 3 days and the improvement in both his physical and mental condition is, to say the least, remarkable. His gain in weight is over 4 lbs., and the complexion is becoming pink instead of "ashy," and the mental balance is assuming normal. The point I wish to firmly impress on Dr. Robinson is that the constant inhaling of a small quantity of nicotine (with its necessary absorption by the delicate mucous membrane of

the trachea and lungs) is far more injurious than large quantities simply taken into the mouth and immediately thrown off. I do not doubt that if cigarettes were simply smoked by the mouth, no harm (practically speaking) would result.

HEMOSTASIS IN AMPUTATION AT THE HIP-JOINT.

By H. A. INGALLS, M. D., of Cincinnati.

To the Editor of the Philadelphia Medical Journal.

Referring to an article on page 1132, your issue June 15th, regarding hemostasis in amputation at the hip joint, I beg leave to state that this operation was reported by Dr. C. S. Muscroft, in a paper read before the Cincinnati Academy of Medicine, March 14th, 1887, and published in the *Lancet-Clinic*, April 2, 1887, the operation having been performed August 10th, 1886, by Dr. Muscroft. Dr. Wyeth is reported as stating that the operation was first reported at Nashville in 1890.

CHAIR OF EMERGENCY SURGERY.

By EDWARD WALLACE LEE, M. D., of St. Louis.

To the Editor of the Philadelphia Medical Journal.

In your issue of March 9th, p. 459, under the head of "Chair of Casualty Surgery" you state that Jenner Medical College is the first institution to establish this branch of practical surgery, etc. I wish to call your attention to the announcement of the "John A. Craghton Medical College," Omaha, Neb., where I have held the chair of "Emergency Surgery" for some time, and I believe I am the first to teach Emergency Surgery in a systematic way.

On the Changes Occurring in Sterilized Milk Depending on the Methods of Preservation.—M. A. Zausaloff (*Bolnitchnaia Gazeta Bolkina*, Vol. XII, Nos. 16, 17, 18) found that sterilized milk undergoes chemical changes even in the absence of bacteria. These changes affect principally the fat and casein. The cream separates out of the milk, a large portion of it turning into butter. When such milk is taken by healthy persons for several days severe nausea, vomiting and general malaise are produced, showing that certain poisonous substances are developed. The chemical changes depend on light, air and temperature. If the former two are admitted to the sterilized milk, the chemical alterations take place very rapidly; more slowly when under such circumstances the milk is kept in a cool place, but when both air and light are excluded it remains unchanged almost indefinitely. To accomplish the latter the author recommends (1) that the milk for sterilization be perfectly fresh, especially in hot weather; (2) that the bottle containing the sterilized milk should be free from air; (3) that the milk should be kept in a dark place. Regarding the utility of sterilized milk in infant feeding, the author, after an experience with 265 children, comes to the conclusion that healthy infants from the age of one month thrive on it quite satisfactorily. Gastro-intestinal disturbances are no more frequent than in the breast-fed babies. In children suffering from gastro-intestinal diseases sterilized milk acts almost as a specific cure. The milk should be diluted one-half with water and 10-12% of sugar added. In the case of infants unable to digest such milk, the latter should be diluted with an equal quantity of artificial gastric juice. [A. R.]

A Contribution to the Pathological Anatomy of the Cardiac Ganglia.—G. S. Koulescha (*Bolnitchnaia Gazeta Bolkina*, Vol. XII, Nos. 15-17) found marked and fairly constant degenerative changes in the cardiac ganglia in cases of typhoid fever and membranous enterocolitis. In the nerve-fibers he demonstrated disintegration of the chromatin bodies, chromatolysis and changes in the form of the nucleus; achromatolysis, shrinkage and swelling of the protoplasm and, finally, necrobiosis of the nerve cells. The stroma presented interstitial changes characterized by acute inflammation accompanied by round cell infiltration and multiplication of the nuclei in it as well as the endothelium of the capsule. These changes, the author believes, are functional in origin. [A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Dr. Thomas R. Neilson has been elected assistant clinical professor of genito-urinary diseases at the University of Pennsylvania.

The Lancaster Board of Health.—The following officers were appointed to constitute the Lancaster Board of Health: Dr. D. R. McCormick, James Shand, Dr. Oliver Roland, R. M. Reilly and Dr. E. T. Prizer.

Berks County Medical Society.—At a recent meeting of the society, Dr. L. Thompson read a paper on pertussis, which was discussed by Drs. Keiser, Stryker, Pelk, Kurtz, Bachmann, Beuhley and Frankhauser. Dr. Frankhauser read a paper on some uses of adrenalin, having used it in a number of cases of conjunctivitis, iritis, scleritis, to relieve the congestion, in enucleation to control the hemorrhage prior to cutting the optic nerve and blood vessels, as an injection of ten drops into the tonsil prior to excision. In all those cases it has acted as a powerful astringent, blanching the parts, for several minutes or until the operation is about completed. In hypertrophic rhinitis it acts as an astringent and relieves the congestion for some time after the application, when it again returns.

Dr. Simon Flexner's Report of the Plague in California.—Dr. Flexner's comprehensive report concerning the plague in California, appearing in the *Alumni Register* of the University of Pennsylvania for June, 1901, should be read by every physician. It will be remembered that on account of the controversy which had existed between the State officials of California and the national authorities, the Secretary of the Treasury appointed a Medical Commission to proceed to San Francisco and to determine the presence or absence of plague in that city. The personnel of the Commission consisted of Professor Simon Flexner, of the University of Pennsylvania; Professor L. F. Barker, of the University of Chicago, and Professor F. G. Novy, of the University of Michigan. Upon the arrival of the Commission the municipal authorities cheerfully and promptly rendered material assistance, and no time was lost in becoming acquainted with the sanitary conditions of the city. A description of "Chinatown" in San Francisco can be well appreciated by Dr. Flexner's own words, "The quarter comprises fourteen blocks in the heart of San Francisco and contiguous to the business portion of the city on one side and the newer residence portion of the city on the other. Trolley cars pass through the streets of the quarter and a lively pedestrian traffic continues all day and late into the night. While the white population mixes only slightly, except clandestinely, with the Chinese, yet the central position occupied by the quarter brings about mingling of the races to a much greater extent than is usual between native and foreign populations in other cities. The habitations of the Chinese are for the most part poor in character; the houses which they occupy are commodious and were evidently respectably built; but as they have long ceased to be subject to repair and as the Chinese have a peculiar passion for subdividing rooms and subletting compartments, they have long since fallen into a state of wretched neglect and insufficiency as measured by air capacity. If to these conditions is added an indifference to filth that is most apparent in, if not limited to the Oriental, a fair, although scarcely adequate idea of the local conditions of habitation may be obtained. To quote from the report of the Commission: "The dwellings of the poorer classes of Chinese were found to be here, as they seem to be everywhere, shockingly unsanitary. In places there is marked overcrowding; the rooms are small; they are often entirely devoid of light or means of ventilation, and nearly always insufficiently lighted and ventilated; many of them are filthy; some of them, especially those situated in basements, are damp and emit a foul stench. These faults in sanitation are not confined to the tenement houses of the Chinese; on the contrary, in the rear of, or over or under some of the more pretentious business buildings are to be found sleeping and living apartments which are most objectionable from a sanitary point of view. The Chinese in San Francisco, however, on account of higher wages and the abundance and cheapness of food, are in

better condition than their countrymen in the East. Some of the difficulties encountered by the Commission were the temperament and social habits of the Chinese, especially deterring being their superstition concerning the presence of death and their incomparable secrecy. A bacteriological laboratory completely equipped for the study and cultivation of bacteria was soon established, and the conclusions reached by the Commission not only established the existence of plague among the Chinese of San Francisco, but evolved the important fact that a complete bacteriological study is absolutely essential for the establishment of a definite diagnosis. As soon as the report of the commission was in the hands of the Secretary of the Treasury and of the Surgeon General of the Marine Hospital Service, the municipal and national health authorities co-operated, and took steps to eradicate the disease. The efficacy of these steps will be awaited with interest, and are especially important in that they may prevent the dissemination in the United States of this insidious malady, by the migratory Chinese.

Vital Statistics of Philadelphia for the week ending June 13, 1901.

Total mortality	668	
	Cases.	Deaths.
Inflammation of the appendix 3,		
bladder 2, brain 12, bronchi 5,		
heart 3, kidneys 24, larynx 1,		
liver 5, lungs 29, peritoneum 4,		
pleura 4, stomach and bowels 28,		
nerves 1, spine 1		123
Marasmus 20, inanition 16, debility 9		45
Tuberculosis of the lungs		45
Apoplexy 19, paralysis 18		37
Heart-disease of 28, fatty degeneration 1, neuralgia 2		31
Uremia 13, Bright's disease 6, diabetes 4		23
Carcinoma of the breast 1, stomach 2, uterus 3, liver 2, mouth 1 ..		9
Convulsions 19, puerperal 2		21
Diphtheria	29	4
Brain-disease of 3, dropsy 1, softening of 5		9
Typhoid fever	70	13
Old age		15
Scarlet fever	33	1
Abscess of the face 1, pelvic 2,		
neck 1, prostate gland 1, alcoholism 7, anemia 1, burns and scalds 3, casualties 15, congestion of the lungs 1, cholera infantum 49, cirrhosis of the liver 1, consumption of the bowels 1, croup, membranous 3, cyanosis 2, diarrhea 1, drowned 8, dropsy 1, dysentery 3, fever, puerperal 1, hemorrhage from stomach 2, homicide 1, hemorrhage from uterus 2, intussusception 1, jaundice 2, obstruction of the bowels 1, poisoning 1, rheumatism 3, sclerosis, arterial 2, shock, surgical 1, septicemia 2, smallpox 1, sarcoma, stomach 1, suicide 2, sunstroke 155, tabes mesenterica 1, teething 1, tetanus 1, ulceration of the stomach 1, unknown coroner case 1, whooping cough 8		292

NEW JERSEY.

Acute Contagious Conjunctivitis in Newark.—The *Medical Record*, under the title "Pink Eye in Newark," states that a New York daily paper publishes a despatch from Newark, N. J., stating that the small boys who bathe in the more or less dirty waters of the river, canal, and bay, are suffering from sore eyes. The paper says that "physicians call the disease 'cayri neticito,' and they say it is caused by a germ in the water. It is contagious." The compositor must have had conjunctivitis himself who twisted the word into such awful shape. Would it not be better still to call this affection by its scientific ophthalmological term—acute contagious conjunctivitis?

NEW YORK.

Mortality in New York State.—During May the deaths in New York State numbered 10,327, nearly 500 above the average for that month during the past five years.

Warning Regarding R. G. Stearns.—The publishers of the magazine *Success* have issued a warning to the effect that a man calling himself "R. G. Stearns" is awindling physicians in various cities through offering them a clubbing combination of from eight to twelve magazines at a cost of \$4 to \$5. He uses a form of receipt with the name of the publishers printed on it, which they state is wholly unauthorized. He has operated in Scranton and Reading, Pa., in Utica, Syracuse and Albany, N. Y., in Detroit and elsewhere.

Enteric Fever in Brooklyn.—Only four cases of enteric fever were reported in Brooklyn in two weeks, which is a much smaller number than was reported during the corresponding time of former years.

St. Vincent's Hospital of New York City has received the sum of \$25,000 by will of the late Mrs. Matilda B. Brown.

Hospital Attendants Arrested.—Two attendants of the Manhattan State Hospital, New York, have been arrested and held in \$2,000 bail to await the action of the Grand Jury on a declaration made by a coroner's jury that they had been responsible in hastening the death of an insane patient by ill treatment.

The New York State Board of Charities.—At a meeting held in Albany the New York Board of Charities adopted a resolution calling upon the city of New York to erect a new and modern hospital to take the place of Bellevue Hospital, and that the salaries of the staff be increased.

NEW ENGLAND.

Scarlet Fever in Beverly, Mass.—It is reported that upwards of a dozen cases of scarlet fever of the malignant type have recently occurred at Beverly, Mass., and that several deaths have resulted.

Storage Charges on a Leg.—Several years ago a wealthy resident of Concord, N. H., lost a leg, which he had preserved in alcohol and stored in a drug store. When he died, twelve years later, the leg was taken from its jar and interred with his body. Shortly after the druggist who had cared for the leg sent to the trustees of the estate a bill for \$3,450 for services rendered in connection with the amputated limb. This bill the trustees refused to pay, and the druggist brought suit. The case was tried in the Superior Court; and a jury brought in a verdict for the plaintiff for \$1,979.16.

WESTERN STATES.

Medico-Legal Society.—Mr. Jean Robert Moechel, a Kansas City chemist, has recently been elected a member of the Medico-Legal Society. The society is an international organization of chemists who make a specialty of poison cases and other cases which require expert testimony in court.

Diphtheria in Cats.—Cats are said to be dying in great numbers in Chicago from a throat trouble said to be diphtheria.

Hospital for Consumptives at Fort Bayard, N. M.—The latest reports concerning the hospital for consumptives, which was instituted under the direction of Surgeon General Sternberg, at Fort Bayard, N. M., about a year ago, show that there are 149 patients now undergoing treatment. This establishment is the only one of its kind in the country devoted to military and ex-military patients. Of the 149 patients mentioned sixty-four are soldiers who have been discharged from the army.

Death of Dr. Harkness.—Dr. Henry Wilson Harkness, the noted scientist, died at San Francisco on July 10, after a long illness. Dr. Harkness was prominently identified with the Academy of Sciences, and was the president of that body from 1887 to 1896.

Dr. Hiram P. Merville, of Milwaukee, Wis., was unanimously elected surgeon of the Wisconsin Veterans' home, at Waupaca, in place of Dr. Noyes, deceased.

Poison in Hospital Milk.—It is stated that poison has been found in milk furnished to patients in the Chicago County Hospital. Samples submitted to the City Chemist,

upon analysis, showed the presence of formalin in sufficient quantities to do considerable harm to the patients. The discovery of this adulteration may lead to the criminal prosecution of the venders.

The Ohio State Pediatric Society at its recent meeting in Cincinnati, elected the following officers: President, Dr. D. S. Hanson, Cleveland; first vice-president, Dr. T. V. Fitzpatrick, Cincinnati; second vice-president, Dr. J. H. McCassey, Dayton; and secretary and treasurer Dr. J. V. Kofron, Cleveland.

To Study Plague.—Sergeant Kinyoun, in charge of the marine hospital in Detroit, Mich., has been detailed by the supervising surgeon general of the marine hospital service to proceed to Japan and China on a tour of inspection of the work done by the marine hospital service there. He will investigate contagious diseases, and particularly the plague.

SOUTHERN STATES.

Franklin Square Hospital.—The new hospital connected with the Maryland Medical College will be known as the Franklin Square Hospital, instead of the National Temperance Hospital.

The Death of Dr. Le Conte.—Death has removed from scientific ranks the scholar, teacher and scientist, Dr. Joseph Le Conte. Of an illustrious family, five of which gained distinction during the last century in various scientific fields, Professor Le Conte was born in Georgia in 1823. He was a pupil of Agassiz, at Harvard, in 1850. From that time on he made rapid strides towards fame, and in 1869 was appointed to the chair of geology and natural history in the University of California, which he held until his death. His numerous works on geology, biology, optics, education, art, philosophy, theology and aeronautics have met with universal favor among scientists.

Dr. T. L. Hopkins, of Charleston, W. Va., has been appointed clinical physician at the Maryland Hospital for the Insane at Catonsville.

Dr. E. T. Rucker has been elected city physician for Manchester, Va.

Chimboroya Hospital.—The charter for the Chimboroya Hospital has been obtained and building will begin in the fall.

CANADA.

Meeting of the Ontario Medical Association, held at Toronto, June 19th and 20th. (Continued). First Day—Afternoon Session. President's Address: Dr. McKinnon delivered a very able address on the opening of the afternoon session. He considered that it was a great honor to be elected president of this, the largest and most influential medical association in the Dominion of Canada. Having referred to the success of the meeting so far, he proceeded to contrast the state of medicine at the beginning of the last century with that of the present, and compared the vast advantages we to-day possess over those of one hundred years ago. Anesthesia, antisepsis, asepsis, vaccination, the anti-toxin treatment for diphtheria, the discovery of the bacillus of tuberculosis were mentioned, and he looked for the dawn in no far-distant day, of that grand and glorious day when we can say to the world that tuberculosis and cancer can both be cured. He deplored the growth in the employment of new proprietary remedies, and thought that harm was being done to the medical profession by manufacturing firms making up pills for neuralgia, for malaria, etc. He considered that the literature and drugs sent out to medical men by these manufacturing houses had become an intolerable nuisance. The electric belt man, the Christian Scientist, the advertising cancer-curer, the osteopath, and many other such like fakes which hang on to the skirts of medicine, he scored most unmercifully, and regretted that the public press, both secular and religious, opened their columns freely to these fulsome, untruthful, and sometimes immoral advertisements, because they pay well. There was great danger to the public in permitting Christian Scientists, the "pray-for-hire-healers" and the "Dowieites," impudently undertaking to cure infectious diseases, such as diphtheria, scarlet fever and smallpox—diseases which they are unable to recognize, and he thinks that we have come to a point where toleration and forbearance become criminal. The 2,500 medical men in Ontario should have in

fluence enough to obtain from the Legislature an amendment to the Medical Act that will put an end to this trifling with human life. He directed attention to the delay that occurs in securing admission to the asylums for people, the subjects of acute mania, and thought it was high time the necessary steps in this department in the practice of medicine should be simplified.

Pulmonary Tuberculosis—Its Treatment in Special Sanatoria.—Dr. J. H. Elliott, Medical Superintendent of the Sanatorium at Gravenhurst, read this paper. Speaking generally, it may be said that from fifty to seventy per cent. of the incipient cases are restored to health, while of all classes from fifteen to thirty per cent. are reported cured or arrested, in sixty to seventy per cent. a marked improvement is noted. The first thing noticeable after entering the sanatorium, in most cases, is an improved appetite, a gradual gain in weight, and a decline in evening temperature. With this improvement night sweats disappear without medication, the cough and expectoration noticeably lessen, and the patient sleeps until morning. The principles generally adopted are: First, a continual life in the open air, with rest or exercise as indicated; second, a liberal, suitable diet; third, medicinal treatment according to indications, and to a great extent symptomatic; fourth, hydrotherapy; fifth, a strict medical supervision of the patient's daily life.

Speaking of the "rest-cure" in febrile cases, the object is to reduce muscular exertion to the least point consistent with the ingestion and proper assimilation of a good diet. Referring to medicinal treatment, with a hygienic life, pure medicines are required. The various tuberculins and serums are being used both in America and Europe, with the prospects of yet securing a specific for those cases where mixed infection is absent. Constant supervision of the patient is the most important point in which the sanatorium treatment must necessarily differ from that adopted by the general practitioner. Living, as he does, with his patients, adopting their mode of life, having his meals in common with them, the physician is enabled to individualize the treatment, and though on broad lines the patients all receive the same treatment, each one has to be studied in detail, and the indications met accordingly. The chief point, under all circumstances, is that the patients, wherever they may be, live prudently, and be under the care of an intelligent and firm physician.

Dr. Price-Brown referred to the advisability of sending patients for sanatorial treatment, and stated that we have for every disease places to send our patients—hospitals throughout the length and breadth of the land, except for tuberculosis. Having recently been at Ashville, N. C., he described the treatment which he had seen carried on in that institution.

Dr. John Hunter, Toronto, deprecated sending these patients long distances away from their homes, which was formerly the custom, but is not so now. He hoped to see the time when there would be a large number of these institutions established in this country. Dr. Elliott, in reply, emphasized the point that there should be no exercise when the evening temperature is above ninety-nine degrees; it may be permitted in the morning if it reaches one hundred or one hundred and a half, but not in the evening.

Vaccinal Protection Against Smallpox.—Dr. P. H. Bryce, Toronto, the Secretary of the Provincial Board of Health, presented this paper. In the introduction to his paper he expressed the belief that although the practice of vaccination against smallpox had existed for a century, there never was a time since it was formally accepted by the profession, when there was so much expressed scepticism as there was to-day on the part of the laity with regard to its protective qualities, and never a time when the profession has been so indifferent as to impressing the necessity of its proper performance upon the public. In Ontario, between 1898 and 199, there were but twenty-two recorded deaths from the disease. He made special reference to the art of vaccination and the quality of the lymph, and thought five separate insertions should be made in each case. The quality of the lymph was very important. He thought that a medical man going out from college did not receive sufficient practical instruction on this most important subject.

Mr. I. H. Cameron discussed Dr. Bryce's paper and stated, as a matter of fact, he had no hesitation whatever in seeing a case of smallpox himself, nor would he object

to any member of his family seeing it. If he knew that they had sufficient protection through vaccination. He warned the profession against laxity in dealing with this most important subject.

Empyema.—Medical Aspect.—This subject was introduced in a well prepared paper by Dr. Ferguson, London, who said that the treatment of this condition was essentially surgical, and that the medical aspects of the disease were limited to a consideration of its pathogenesis and prophylaxis. He considered that the conditions of non-purulent or primary effusion are indispensable to an understanding of the pathogenesis of empyema. He gave a description of the pleura and discussed the bacteriological aspect of purulent pleurisy, which he divided into four classes. First, those due to pneumococci; second, those due to streptococci (and staphylococci); third, those due to the bacilli of tuberculosis, and fourth, those caused by saprogenic organisms. In nine cases, extending over eleven years in his practice, three were diagnosed tubercular, three meta-pneumonic, two due to the streptococci, and one undetermined. The prognosis varies with the micro-organism present, the pneumococci being the most benign. It is the only variety of purulent empyema that may possibly yield to treatment by mere aspiration, especially in children. Tubercular empyema is usually mixed infection. The prognosis here will depend upon the general condition of the patient, and the character of the mixed infection. We therefore see the importance of the bacteriological examination; as in any other debilitating disease, supporting and tonic treatment is essential. With the advent of pus, surgical means must be adopted.

Surgical Aspect.—Introduced by Dr. J. L. Turnbull, Goderich. When the presence of pus is determined it should be evacuated at once, as there is always the danger of the abscess bursting into or through the chest wall, or even through the diaphragm and producing peritonitis. Aspiration need not be described; remember not to remove the fluid too rapidly. In this, as in an ordinary abscess, it is not necessary to open at the most dependent point. The preferable way, and the one which Dr. Turnbull always uses when a diagnosis of pus is made, is to remove a portion of a rib; an inch and a half may be cut out, preferably with the saw, under strict antiseptic precautions. Dr. Turnbull advises washing out every day when pus is offensive, and drainage tube gradually shortened until it can be removed altogether. Where a cavity and sinus remains after this operation, the sinus may become closed and a second empyema established. This requires an Estlander's operation, and one of the best ways is to carefully locate size and boundaries of cavity with a probe, and after dissecting up a flap of skin, be sure to remove enough bone. The hard fibrous tissue beneath the rib, which is always present in quantity there, must be thoroughly removed. Dr. Turnbull advises mopping out with pure carbolic acid, then with alcohol to prevent poisoning, and then with sterilized water, the part being carefully dried. He puts a drainage tube in the most dependent part.

MISCELLANY.

More Surgeons for the Army.—Although 45 assistant surgeons in the army have been appointed there are yet 50 vacancies to be filled under the Reorganization law. The surgeons are appointed directly from civil life and are not required to have seen military service. Examinations will be resumed next September.

Gold Blindness.—Hypermetropic members of the dental profession who are also astigmatic are in some cases liable to lose the power of distinguishing gold-filling from the tooth on which they are working. This form of retinal asthenopia appears to be due to abnormally rapid exhaustion of the visual power, and the trouble is noticed to occur when the eyes have been kept fixed upon a small gold stopping for a length of time, the warm yellow color of the metal tending to exaggerate the preexisting defect. In addition to inability to distinguish the filling from the tooth dentists who present this defect cannot recognize clearly the contour of the hole they are stopping. In the *Canadian Practitioner* for June it is pointed out that age does not predispose to this affection nor does youth exclude it. The primary cause of this particular form of blindness indeed is probably the excess of yellow rays from the gold metal. After a few days' rest the sufferer is enabled to resume work as before, but recurrence frequent-

ly takes place, and the intervals during which work can be carried on become shorter and shorter. The treatment suggested by Mr. L. Webster Fox is, first to correct any error of refraction, to examine carefully into the general health of the patient, and to advise that nothing tight be worn round the neck. The last direction is necessary in consequence of so much dental work having to be done with the head bent. The intense white light which accompanies the fusing of gold plates contains an excess of yellow rays, and it is suggested that this constitutes the causative factor in the disorder.—*Medical Press and Circular.*

Enno Sander Prize.—The Enno Sander Prize consists of a gold medal valued at one hundred dollars and one hundred dollars in cash for the best essay on "The Most Practicable Organization for the Medical Department of the United States Army in Active Service." The conditions of the competition are as follows:

1. Competition is open to all persons eligible to active or associate membership in the Association of Military Surgeons of the United States.
 2. The prize will be awarded upon the recommendation of a Board of Award, selected by the Executive Committee. The Board will determine upon the essay to which the prize shall be awarded, and will also recommend such of the other papers submitted, as it may see fit, for honorable mention.
 3. In fixing the precedence of the essays submitted, the Board will take into consideration—primarily—originality, comprehensiveness and the practicability and utility of the opinions advanced, and—secondarily—literary character.
 4. Essays will consist of not less than ten thousand nor more than twenty thousand words, exclusive of tables.
 5. Each competitor will send three typewritten copies of his essay in a sealed envelope to the Secretary of the Association so as to reach that officer on or before February 28, 1902.
 6. The essay shall contain nothing to indicate the identity of the author. Each one however will be authenticated by a *nom de plume*, a copy of which shall, at the same time as the essay, be transmitted to the Secretary in a sealed envelope together with the author's name, rank and address.
 7. The envelope containing the name of the successful competitor will be publicly opened at the next succeeding annual meeting of the Association, and the prize thereupon awarded.
 8. The successful essay becomes the property of the Association of Military Surgeons of the United States, and will appear in its publications.
- The Board of Award, 1901-1902 is as follows: Honorable William Cary Sanger, Assistant Secretary of War; Brigadier General George Miller Sternberg, Surgeon General, U. S. Army, and a distinguished officer of the line to be announced later. John Van Rensselaer Hoff, President; James Evelyn Pilcher, Secretary.

Obituary.—Dr. Edwin Simmer, at Philadelphia, Pa., July 9.—Dr. John F. Trenchard, at Fairton, N. J., July 12, aged 81 years.—Dr. H. W. Harkness, at San Francisco, Cal., July 10, aged 80 years.—Dr. August W. H. Reen, at Peoria, Ill., July 9, aged 76 years.—Dr. Francisco Ezell, at Fayette, Mo., July 9, aged 54 years.—Dr. Freeman H. Chase, at Bangor, Me., July 11, aged 62 years.—Dr. Richard Gardiner, at Gloucester City, N. J., July 12, aged 51 years.—Dr. Thomas J. Cheatham, at Chesterfield county, Va., July 13, aged 74 years.—Dr. Lewis B. Spencer, at Blackstone, Va., July 12, aged 81 years.—Dr. Edward Hewes, at Frederick, Md., July 15, aged 44 years.

Changes in the Medical Corps of the Navy, Week Ended July 13, 1901.

ASSISTANT SURGEON R. T. ATKINSON, ordered to the Washington Navy Yard, July 8.—July 5.
ASSISTANT SURGEON A. W. BALCH, ordered to the Washash, July 8.—July 5.
ASSISTANT SURGEON J. R. WHITING, detached from the Dixie, and ordered home to wait orders.—July 6.
DOCTORS P. E. McDONNOLD and R. M. YOUNG, appointed assistant surgeons from July 2, 1901.—July 6.
ASSISTANT SURGEON M. V. STONE, ordered to Naval Hospital, Mare Island, Cal.—July 8.
ASSISTANT SURGEON R. T. ORVIS, detached from Naval Hospital, Mare Island, July 20, and ordered to the Pensacola.—July 8.
ASSISTANT SURGEON R. R. RICHARDSON, detached from

the Naval Hospital, New York, and to Naval Hospital, Newport, R. I., July 8.
ASSISTANT SURGEON A. E. PECK, detached from the Pen-sacola, July 20, and ordered to the Asiatic Station as the relief of Assistant Surgeon F. L. Benton.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended July 12, 1901.

SMALLPOX—UNITED STATES.

			Deaths
IOWA:	Ottumwa	June 1-29	8
KANSAS:	Wichita	June 29-July 6	4
LOUISIANA:	New Orleans	June 29-July 6	2
MASSACHUSETTS:	Fall River	June 29-July 6	1
	New Bedford	June 29-July 6	1
	Worcester	June 21-July 5	3
MICHIGAN:	Detroit	June 29-July 6	1
NEBRASKA:	Omaha	June 29-July 6	6
NEW HAMPSHIRE:	Manchester	June 29-July 6	1
NEW JERSEY:	Newark	June 29-July 6	1
NEW YORK:	Dunkirk	June 29-July 6	1
	New York	June 29-July 6	25
NORTH DAKOTA:	Buffalo	June 29-July 6	2
	Gaston	June 29-July 6	5
	Lakota	June 29-July 6	2
	Lidgerwood	June 29-July 6	2
	Valley City	June 29-July 6	12
OHIO:	Cincinnati	June 28-July 5	1
	Cleveland	June 29-July 6	2
	Toledo	June 29-July 6	1
PENNSYLVANIA:	Philadelphia	June 29-July 6	2
	Pittsburg	June 29-July 6	4
RHODE ISLAND:	Providence	June 29-July 6	1
TENNESSEE:	Memphis	June 29-July 6	1
	Nashville	June 29-July 6	3
WASHINGTON:	Clallam County	June 18	3
WISCONSIN:	Green Bay	June 30-July 7	4

SMALLPOX—FOREIGN.

AUSTRIA:	Prague	June 15-22	2
BELGIUM:	Antwerp	June 8-15	1
CHINA:	Hongkong	May 18-25	1
COLOMBIA:	Panama	June 25-July 1	1
EGYPT:	Cairo	June 10-17	2
FRANCE:	Paris	June 15-22	11
GERMANY:	Berlin	June 18	2
GIBRALTAR:		June 16-23	1
GREAT BRITAIN:	Glasgow	June 21-28	1
	London	June 15-22	1
INDIA:	Bombay	June 4-11	5
	Calcutta	June 1-8	12
	Karachi	May 26-June 2	1
ITALY:	Naples	June 16-23	149
NETHERLANDS:	Rotterdam	June 15-29	3
RUSSIA:	St. Petersburg	June 8-15	1
SWITZERLAND:	Geneva	June 1-15	3

YELLOW FEVER.

COLOMBIA:	Bocas del Toro	June 29	1
CUBA:	Havana	June 22-29	1 death
		Case came from	
		Santiago de las	
		Vegas	
JAMAICA:	Kingston	June 1-30	1

CHOLERA.

INDIA:	Bombay	June 4-11	2
	Calcutta	June 1-8	63
STRAITS SETTLEMENTS:	Singapore	May 18-25	1

PLAGUE—Foreign and Insular.

AFRICA:	Cape Town	To June 15	714
CHINA:	Amoy	May 11-28	1050
	Hongkong	May 15-25	200
INDIA:	Bombay	June 1-8	86
	Calcutta	June 1-8	40
	Karachi	May 26-June 2	45
TURKEY:	Constantinople	July 3	2
HAWAII:	Honolulu	June 25	1

GREAT BRITAIN.

High Mortality in British Camps.—Lord Raglan, Under Secretary of State for War, in the course of an announcement stated that the whites in the concentrated camps in South Africa numbered 14,624 men, 27,711 women and 43,075 children. He said also that the mortality for the month of June was 63 men, 138 women and 576 children.

Dr. F. W. Hewitt has been appointed Emeritus Lecturer on Anesthetics at the London Hospital, on his resigning the post of Instructor in Anesthetics which he has held for fifteen years.

The Neurological Society of London met on June 22d, at Manchester, on the invitation of the Manchester members. Professor Dreschfeld acted as President. Specimens were shown by Dr. Bruce, Dr. Judson Bury, Professor Delépine, Professor J. Dreschfeld, Dr. Moore, Dr. Mott, Dr. Orr, Dr. E. S. Reynolds, Professor Sherrington, Professor Stirling, Dr. Trevelyan, Professor Young, Dr. Warrington, and Dr. Williamson. Clinical cases were shown by Dr. Ashby, Dr. Judson Bury, Professor Dreschfeld, Dr. Harding, Dr. Harris, Dr. Dixon Mann, Dr. Reynolds, and Dr. Williamson. In the afternoon the Society was entertained at the Royal Asylum, Cheadle, at the invitation of Dr. and Mrs. Mould and the Committee of Management. In the evening the Society dined at the Queen's Hotel.

Medical Press and Circular.—Dr. Henry Jellett, ex-assistant master of Rotunda Hospital, Dublin, has been appointed editor of the *Medical Press and Circular*, to succeed Dr. Archibald Hamilton Jacob.

Plague in Cape Colony.—A telegram received at the Colonial Office on June 6th gives the following statistics of plague at Cape Town for the week ending June 1st: Fresh cases: Europeans, 2; colored persons, 5; Malays, 9; Indian, 1; Chinese, 0; natives, 3; total 11. Corpses found: Europeans, 2; colored persons, 3; Malays, 0; Indian, 1; Chinese, 0; natives, 1; total, 7. Deaths (including corpses found): Europeans, 2; colored persons, 4; Malays, 0; Indians, 2; Chinese, 0; natives, 2; total 10. The total cases up to June 1st are as follows: Europeans, 173; colored persons, 309; Malays, 48; Indians, 11; Chinese, 1; natives, 142; total, 684. The total deaths have been: Europeans, 57; colored persons, 159; Malays, 35; Indians, 8; Chinese, 0; natives, 59; total, 318. The area of infection remains the same. Seven cases have so far occurred at Port Elizabeth, including 1 suspect.

CONTINENTAL EUROPE.

Professor Hyspolte Gosse, of Geneva, has just died. He was appointed to the chair of Forensic Medicine at the University of Geneva in 1875, which position he held until the day of his death.

The Birth of Sextuplets.—The *Pester Lloyd* is the authority for the statement that the wife of a Greek priest in Deligrad, Serbia, has just had three girls and three boys born. They are all well formed and in good condition. 18 months ago she had triplets. This makes a total of 9 children in a year and a half.

Pasteur Institute, Lille.—From the opening of the Pasteur Institute at Lille, on February 15th, 1895, to January 1st, 1901, the total number of patients treated there has been 1,498, of which four have died of hydrophobia, and of these four one refused, after a few inoculations, to go on with the treatment. The total mortality rate, therefore, is 0.26 per cent.

Persian Superstition.—A physician who has recently returned from Persia, says that the natives still believe that human tears are a remedy for certain chronic diseases. At every funeral the bottling of the mourners' tears is one of the chief features of the ceremony. Each of the mourners is presented with a sponge with which to mop his face and eyes, and, after the burial, these sponges are presented to the priest, who squeezes the tears into bottles, which he keeps.

The Treatment of Anal Fissure.—Before operating upon two cases of fissure of the anus in young women, Professor Tillaux (*Bulletin Medical*, 1901, No. 41) said that it is a common affection, very painful, always necessitating operative interference. An anal fissure consists of three things: (1) the wound, a single, small fissure, radiating from the coccyx to the anus, very superficial; (2) the contracture, a spasmodic stricture, as it were, of the anal sphincter; and (3) the pain, severe and paroxysmal, radiating to the lumbar region. The cause of anal fissure is unknown. The contracture results reflexly from the pain of the fissure. The prognosis without operation is grave, as cachexia develops, with death, perhaps. Before giving chloroform, the patient is placed on one side, ready for operation. Just as soon as she is under the influence of the anesthetic, the two index fingers are introduced into the anus, and the sphincter is dilated. Care must be taken, as death may occur reflexly while the sphincter is being dilated. [M. O.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

June 29, 1901.

1. The Cavendish Lecture of Acute Cardiac Failure.
R. DOUGLAS POWELL.
2. Clinical and Experimental Observations upon General Paralysis. LEWIS C. BRUCE.
3. Observations Bearing upon the Question of the Pathogenesis of General Paralysis of the Insane.
W. FORD ROBERTSON.
4. An Experimental Inquiry into the Pathology of Gastric Tetany.
W. D. HALLIBURTON and JOHN S. M'KENDRICK.
5. Changes in the Neuronal Centres in Berl-Beric Neuritis. HAMILTON WRIGHT.
6. Faradisation of the Head in the Treatment of Chronic Insomnia and Associated Neuroses.
SAMUEL SLOAN.
7. Observations on Sea-Sickness. J. R. WORTABET.

1.—Sir R. Douglas Powell in his Cavendish lecture discusses **acute cardiac failure**. The most obvious cause of heart failure is direct injury, excluding, of course, external wounds, as, for instance, the very rare occurrence in which a healthy man during some sudden effort ruptures one of his aortic cusps. The displacement of a clot from a systemic vein, is also a common cause of acute anginal heart failure and is attended with urgent dyspnea, an irregular fluttering pulse, and very variable heart signs. Cases of this class, however, are by no means necessarily fatal. If the clot passes on to the lungs, recovery ensues in a fair proportion and the prognosis in each case must be considered on its separate merits. Next to injuries of the heart of which examples of both right-sided and left-sided injuries are given, Powell mentions cardiac failure from overtaxation. There are two factors always at work in different proportions in different cases in producing cardiac failure from great or prolonged exertion, namely, direct fatigue of the nervo-muscular tissue of the heart and poisoning of the blood of auto-metabolic source. The treatment of acute failure of the heart from over-strain involves a period of a few weeks' complete rest and often many months of careful supervision. Young people make a rapid and generally complete recovery, provided no actual lesion has been produced. In youths and young men a degree of irritability of the heart is often observed for many months, the patient suffering from attacks of palpitation and cardiac pain on slight fatigue or exertion, and often at night. Another form of fatigue heart failure is that frequently met with in acute diseases as in pneumonia, enteric fever, acute bronchitis, in old people during a severe paroxysm of asthma, and in other conditions, such as functional disturbance from some temporary cause. There are a few factors concerning the treatment of heart failure in acute disease which should be looked for as indications. They are: 1. Maloxygenated and otherwise contaminated blood supply to the heart muscle and nerve. 2. Excessive weight of blood burdening the heart. 3. Exhausted innervation from sleeplessness and physical cardiac failure. 4. Positive obstruction to the flow of the blood from the lungs. 5. Changes in the texture of the heart muscle incidental to the disease, and especially to the pyrexia. Speaking of angina, the lecturer believes that in the larger class of cases it is a functional disease, a cardio-vascular neurosis. In many cases it is dependent upon disorderly action of the vasomotor nerves, and is associated with a sound heart. In any other cases we have a similar mechanism, but with an unsound heart-aortic regurgitation, aneurysm, senile fibro-fatty hypertrophy, uremic heart and coronary disease. He also mentions **plethora** as a cause of a cardiac failure as well as the influence of

tobacco and epilepsy. Powell closes his lecture with reference to the condition of "**cardiac hesitation**" with pulse of uneven rhythm not amounting to intermittency, and presenting occasional attacks of fainting. This condition is not unfrequently present among anemic children, especially young boys between the ages of six and puberty. A distinction between this form of heart failure and *petit mal* is often difficult, and he is strongly inclined to regard the two conditions as allied. [T. L. C.]

2.—Lewis C. Bruce contributes a paper on clinical and experimental observations upon general paralysis of the insane. He defines the condition as a disease marked by progressive degeneration of all the bodily and mental functions, commencing first with those most highly developed and recently acquired, and ending with complete wreckage of mind and body. The disease is regarded as incurable, but remissions which often simulate recovery are by no means uncommon. The typical disease is further peculiar in having several stages. In the first stage the patient is often acutely ill with pyrexia, loss of body weight, restlessness and stages of excitement. In the second period the patient becomes fat, facile, lazy and liable to congestive seizures. In the third stage the patient again loses weight, becomes demented and physically paralysed. This writer has made a number of observations upon patients suffering from undoubted general paralysis. He divides these observations into: 1. Those observations made upon patients in whom the disease was steadily progressive. 2. Those observations made upon patients in a state of remission. 3. Those concerned in an attempt to produce remission. He divides the condition of the second stage, the state of remission, into those in which the remission follows acute attacks of intercurrent disease, of which class he has seen remission occur after acute erysipelas of the scalp, severe carbuncles, etc. Such remissions are preceded by a high and long-continued hyperleukocytosis. Secondly, he has observed remission occur naturally and without obvious cause during the course of the disease. The temperature in these cases was never febrile, but the outstanding feature was the fact that the number of leukocytes in the early stage of remission, rose higher than they are in ordinary health, varying between 9000 to 12,000 per c. mm. of blood. As the remission became fairly established, the leukocytosis gradually fell to that of ordinary health. The blood serum of such cases contains some antitoxic substance which is not present in patients in whom the disease is progressive nor in the serum of healthy persons. The power of the blood serum to agglutinate B. coli in dilutions varying from 1 to 5 to 1 to 20, was tested in 10 cases in states of remission; 7 gave a definite agglutinative action. His third observation includes those cases in which there have been attempts to produce remission. He believes that the majority of cases of general paralysis is due to toxic poisoning, the toxins being bacterial toxins absorbed through the stomach or intestines. He accounts for the febrile attack by stating that it is probably due to the actual entrance of bacteria into the blood tissues of the patients, and that during periods of remission the blood must possess some antitoxic substance. His conclusions are of interest. He states that: (1) General paralysis is a disease directly due to poisoning by the toxins of bacteria whose point of attack is through the gastric and intestinal mucous membrane. 2. The poisoning is probably a mixed poisoning, but B. coli is apparently one of the noxious organisms. 3. The result of treatment with serum taken from a case of general paralysis in a condition of remission and injected subcutaneously into an early progressive case points strongly to the fact that some form of serum treatment is the proper treatment for this as yet incurable disease. [T. L. C.]

3.—W. Ford Robertson presents some observations bearing upon the question of the pathogenesis of general paralysis of the insane. There is now practically no dispute as to the fact of the toxic origin of the disease. Nearly all

authorities recognize that antecedent syphilis is the essential cause in a very large proportion of cases. An endeavor has been made to discover some indirect relationship between the original toxic agent and the morbid process which occurs in the nervous system. The theory of the premature involution of the cortical nerve cells is advocated especially by Mott and Krafft-Ebing. In general paralysis there exists a primary progressive decay of the nerve cell which ontogenetically and phylogenetically may be looked upon as a regressive metamorphosis, a degenerative process which starts in the highest and latest phylogenetically developed structures, e. g., the centers of verbal and written speech; the molecular layer with the tangential system of fibres and the association system of the frontal and parietal lobes. This premature decay according to Mott is progressive and cumulative, and it causes phenomena of irritation, manifested by mental and physical symptoms. Robertson approaches the study of the condition by the discussion of this theory of premature involution of the cortical nerve cells, then discusses the theory of chronic toxemia, the source of the toxins, and the state of the gastro-intestinal tract in general paralysis. This writer does not believe that the gastro-intestinal lesions found in such cases are significant etiologically. He concludes with Dr. Bruce that general paralysis depends upon the condition of gastro-intestinal autointoxication which results from excessive growth of the micro-organisms which normally inhabit the alimentary tract. He would exclude the mention of any single form of micro-organism. He states that there is reason to believe, however, that certain forms obtain an ascendancy, especially some belonging to the "colon group." General paralysis is dependent upon the occurrence of chronic toxemia of gastro-intestinal origin. The toxins are mainly bacteria and are formed in consequence of a partial breakdown of those forces by which the harmful development of the micro-organisms that constitute the ordinary flora of the alimentary tract is normally prevented. The toxins are absorbed and tend specially to produce proliferative and degenerative changes in the vessels of the central nervous system. These vascular changes tend to set in earliest in those parts of the brain that are relatively best supplied with blood, because their walls are brought in contact with the largest quantity of toxins. *Tabes dorsalis* is dependent upon the same form of toxemia. The part played by syphilis in the pathogenesis of general paralysis and *tabes dorsalis* is essentially that of altering the natural immunity. There is some evidence in favor of the hypothesis that this alteration in the natural immunity is dependent upon commencing exhaustion of the leukoblastic function of the bone marrow. The treatment of general paralysis and *tabes dorsalis* should be directed primarily to the correction of the disorder of the alimentary tract. Probably the only means by which it will be found possible to check the excessive growth of the gastro-intestinal bacteria is that of the employment of specific antitoxins. To arrest the disease by such means may be more practicable than would at first sight appear, because it is probable that the specially injurious toxins are the products of only a few bacterial forms. [T. L. C.]

4.—Halliburton and McKendrick present a report on the experimental inquiry into the pathology of gastric tetany. Gastric tetany is that tetany observed with dilatation of the stomach. A case is reported of a man about middle life who for fully 15 years had had more or less stomach disorder. Within the last few years there was severe pain after taking food, and this was relieved by the vomiting of a large quantity of sour smelling material. Hydrochloric acid was seldom present in excess. On one examination it was absent, but it was generally normal in amount. Sarcinae were usually present. He had had gastric ulcer when a young man. For the last three years he has used a stomach tube two to three times a day. There was a sudden onset of a state in which the patient was semi-conscious, but soon passed into a state of coma which

lasted for 36 hours. By the use of drastic medicines and injections high up into the bowel an evacuation was obtained which quickly caused the nerve symptoms to abate. The hands and fingers were in a state of contracture, forming the usual and characteristic "accoucheur's hand." The hands were equally affected on the two sides, but the feet were free. There were no spasms of the hands and fingers but a long continued contracture which lasted during the whole period of unconsciousness. After the contracture abated the cardinal signs of Erb, Trousseau, and Chvostek could not be elicited. The stomach was markedly dilated, and the peristaltic wave was readily obtained. The urine during the tetanoid seizure contained a trace of albumin and also acetone. After the cessation of the spasm, these substances disappeared and gave place to a trace of sugar. The specific gravity averaged 1028. The vomit contained acetone, hydrochloric, acetic and butyric acids, but no sarcinae. An operation was performed after the patient had recovered sufficiently, and in a few months his condition was satisfactory in every respect. Mayo Robson has shown that immediate operation of the nature of a pylorectomy or gastro-enterostomy will relieve the symptoms and prevent the recurrence of this grave disorder. This treatment prevents the retention of the food in the stomach, and the consequent absorption into the blood of toxic products. The contents of the stomach from this case of gastric tetany were emptied into a beaker and to them was added six times their amount of rectified spirit. The mixture was allowed to stand 24 hours, then filtered; the filtrate was evaporated on a water bath to dryness. The residue was taken up with alcohol, filtered, and the filtrate a second time evaporated to dryness. This process was repeated twice. After filtration the solution was used for injection experiments. The original tetany fluid had a strong chloroform smell and was extremely acid, and the substance or substances which were investigated were odorless and soluble both in alcohol and physiological salt solution. Five experiments were undertaken upon animals. These authors have found as a result of their experiments that a toxic substance existed in the stomach, which when injected into an animal produced a fall of blood pressure and slowing of the heart beat. This was not present in the normal gastric contents of health. After neutralization of the tetany fluid practically no fall of blood pressure was obtained. They were unable to determine the nature of this substance; it has a marked acid reaction. By its injection into animals it causes either direct or reflex excitation of the cardio-inhibitory center. It is therefore, by no means improbable that other centers in the brain or cord are excited similarly. The gastric contents were obtained after the patient was in a state of partial convalescence, and it is possible, had the fluid been obtained during the period of coma with contracture, this poisonous substance would have been present in a larger amount and would have produced convulsions and death.

[T. L. C.]

5.—Hamilton Wright has studied the changes in the neuronal centers in the neuritis accompanying *beri-beri*. He believes that the neuritis of *beri-beri* is not radically different from other parenchymatous neuritis and that the various parts of each neuron are interdependent, disturbance or destruction of the axonal prolongation resulting in disturbance or destruction of the nutritional center and the poison of *beri-beri* probably works so forcibly on the neuron that its stability is wrecked, and the whole structure soon destroyed. Recovery is impossible from the first. One has only to see a strong coolie enter the hospital with a slight edema, weakness of muscles, and sensory disturbance to observe the rapid progress of the paralysis and wasting of the limbs and often of the diaphragm, with sudden death from respiratory or heart failure, in spite of all symptomatic treatment, to feel that only a specific will be of use in such cases. The dislocation of the nuclei and slight breakdown of the chromophilic granules in the cells

of all these cases is probably a pseudo-degeneration, and the cause, so far as the afferent side of the nervous system is concerned, of the hyperesthesia, paresthesia and algosia constantly observed in this and other forms of peripheral neuritis. This investigator suggests that the atrophy of the fibres probably accounts for the total and partial anaesthesia, and the changes in the cells by modifying the incoming impulses. The important point here, however, is that in the neuritis of beriberi there is more or less change in the bodies from which the atrophied nerve fibres take origin. This is true of both spinal and bulbar neurons.

[T. L. C.]

6. Samuel Sloan discusses *faradisation of the head in the treatment of chronic insomnia and associated neuroses*. In 46 cases of disordered cerebral function the neurosis associated with the insomnia was the common type of nervousness, with headache, lightness of the head, bad dreams, night startings, a feeling of confusion when adding up figures, a feeling of thickness in the head, creepy feelings in the head, etc., while in nearly every one of the cases the primary complaint was loss of sleep or imperfect and unrefreshing sleep. He has observed cure in 45.5 per cent. of cases; marked improvement in 32.5 per cent.; some improvement in 11 per cent.; no appreciable result in 9 per cent.; cases which seemed temporarily worse, 2 per cent. He believes that the real influence of the treatment arises from the restful action induced in each molecule of the brain substance by the gentle rhythmic impulses of the current, reckoning these at over 100,000 during each sitting, and resembling the cerebration following change of scene and of occupation. Essential to this treatment is an instrument for measuring the amount of current employed. For this purpose he has been lately using the newest form of his faradimeter. The maximum amount of current given is one milliamperé. The dose at the first sitting should not exceed 1-3 of a milliamperé. Not only must the secondary current be controlled by a powerful rheostat, but the battery current to the primary should also have a rheostat controlling it, say of 50 ohms. The electrodes are soft and are applied to the brow and nape of the neck. The vibrations of the rheotome should be the fastest attainable. The current should be applied for 15 minutes each time; three times a week for two weeks, or twice a week for three weeks. Six applications in ordinary cases generally prove sufficient. [T. L. C.]

7.—James H. Mortabet discussing *mal de mer* believes that in cases of severe retching and persistent sea-sickness, nothing is so trust-worthy as a hypodermic injection of morphine. He advises those who suffer from sea-sickness to provide themselves with a good flannel roller bandage 12 feet long and six inches wide, and wind it around their trunk over the whole width of the abdominal region. This will frequently afford great comfort by preventing the contents of the viscera from undue movement. A few turns of a surgical bandage around the head also appear to allay a good deal of the accompanying headache. [T. L. C.]

LANCET.

June 29, 1901.

1. The Cavendish Lecture. (See Abstract in *Philadelphia Medical Journal of British Medical Journal* for June 29.) on Acute Cardiac Failure.

SIR RICHARD DOUGLAS POWELL.

2. Three Lectures on the Practical Points in the Treatment of Threatened Asphyxia.

ROBERT L. BOWLES.

3. Intestinal Suture by Means of Continuous Catgut Stitch and Excision of the Mucous Membrane.

H. LITTLEWOOD.

4. A Case of Ectopic Gestation with Septic Infection of the Gestation Sac. H. MACNAUGHTON-JONES.

5. Are Not Some Patients said to be Afflicted with Gastric Ulcer Really Suffering from a Different Disease?

W. HALE WHITE.

6. Foreign Body in the Bronchus; Tracheotomy; Recovery. F. B. JUDGE-BALDWIN.
7. Three Cases of Puerperal Eclampsia; with Critical Notes on the Etiology, Pathology, Prognosis, and Treatment. J. POLLOCK SIMPSON.
8. Invalid Railway Travel. E. M. CORNER.

2.—Will be abstracted when the lectures are completed. [F. J. K.]

3.—H. Littlewood describes a method of performing *gastro-intestinal and intestinal anastomoses* without the use of any mechanical contrivance. After selecting the portion of bowel to be approximated the forceps of Boyen, the blades of which are covered by rubber tubing, is applied and the bowel incised or resected as the case may be. A considerable portion of the presenting mucous membrane is then excised before being sutured. This excision of the mucous membrane permits a wider approximation of the other coats of the intestine. Catgut is used as the suture material. The author has employed this method of resecting the mucous membrane in a number of cases and has found it very satisfactory. [J. H. G.]

4.—Macnaughton-Jones records an interesting case of *ectopic gestation* in which a *septic infection of the gestation-sac* occurred. Operation was performed but despite every means employed, including enemata, saline injections, and washing out of the stomach, death occurred on the seventh day after operation. The temperature never exceeded 102 degrees F., and there was an absence of the usual symptoms of general peritonitis. It would seem that the source of infection must have been through the adherent bowel. The patient having suffered from retroversion of the uterus, the early symptoms might easily have lead to the impression that it was enlarged retroverted and gravid uterus. [W. A. N. D.]

5.—White believes that many of the cases diagnosed as *gastric ulcer, occurring in women*, are instances of some other undescribed malady. He maintains that this undescribed condition occurs almost exclusively, if not only, in women, usually between the ages of 20 and 40. He also states that this disease is in some way associated with chlorosis, and that its chief symptoms are gastric pain, nausea, vomiting, and hematemesis. The patient does not lose weight, and such complications as pyloric stenosis, adhesions, and subphrenic abscesses do not occur. He emphasizes that the differential diagnosis between this condition and gastric ulcer is indeed very difficult. The prognosis of this affection is good, although relapses are frequent; death may occur from hemorrhage, and upon the post-mortem table no cause for it is found. From the standpoint of operative treatment, he calls attention to the importance of separating gastric ulcer proper from this condition, for the surgeon can do nothing to control the hemorrhage which occurs in the undescribed affection, and further, that some patients have died after operation; this condition in itself being rarely fatal. [F. J. K.]

6.—F. B. Judge-Baldwin reports a case in which a five year old boy inspired a portion of beech nut. Examination of the larynx a short time afterwards showed a nearly complete bilateral palsy of the adductors. Auscultation revealed trouble in the left lung. The patient suffered so much difficulty in respiration that on the second day after the accident tracheotomy was performed. A week after the operation portions of the nut were found on the dressing over the tracheal opening. The patient made a satisfactory recovery. [J. H. G.]

7.—Simpson, in recording 3 cases of *puerperal eclampsia*, remarks that whether urea is the actual excitant of the nerve-centers or whether the excitant is a product of decomposition derived from urea, has not been satisfactorily explained, but the uremic theory finds the largest amount of support. The accumulation of the toxins in the blood is due to the faulty elimination by the kidneys of the urea or waste-products of tissue metabolism, which are much increased in the pregnant state. In nephritis these waste-

products accumulate rapidly, but pressure also contributes largely, and it is most in primiparous cases, where pressure and tension are greatest, that eclampsia occurs. According to statistics 60% of the cases of eclampsia occur in primiparae. Constipation, which is the rule in pregnancy, contributes in a great measure to this pathological condition. The author believes that 10% is about the normal mortality of this disease. As regards treatment, he advocates the simpler methods, first—diuretics, diaphoretics, bromide, chloral, and chloroform—before resorting to morphine or hypodermoclysis, keeping in mind the safety of the patient above all other things, and the particular treatment as of secondary importance. Venesection is a valuable form of treatment if the patient is plethoric, but to bleed indiscriminately is bad treatment. [W. A. N. D.]

MEDICAL RECORD.

July 13, 1901.

1. Hydrophobia and the Pasteur-Methods. CHARLES WINSLOW DULLES.
2. The Etiology of Alopecia. DELOS L. PARKER.
3. The Future Treatment of Hay Fever. H. HOLBROOK CURTIS.
4. The Present Status of the Carcinoma Question. N. SENN.

1.—Dulles writes upon **hydrophobia and the Pasteur methods**. The author gives a review of some of the literature pertaining to this disease, and embodies in the article ample evidence to show that after a careful examination of statistics of every country where Pasteur Institutes have been established, the mortality from hydrophobia has actually increased. He strongly recommends the enactment of a dog-muzzling law, as the most important measure for limiting the ravages of this disorder. [T. L. C.]

2.—Parker discusses the **etiology of alopecia**, and after considering practical, as well as experimental evidence, he advances the theory, that it is **not unreasonable to suppose that this condition is due to auto-infection**. The poison, which he calls trichotoxin, is absorbed by the blood from the air vesicles of the lungs. He further states that this poison is elaborated during decomposition of organic matter normally present in respired air. [T. L. C.]

3.—Curtis, after a careful consideration of all sources, from which he has obtained information including his own personal experiences, believes that the future treatment of cases of hay fever, dependent entirely upon rag weed as the exciting cause, will be found in the immunizing plan. Curtis recommends giving from 2 to 10 drops of the tincture or fluid extract of ambrosia artemisiae, in water, three times a day, during the two weeks preceding the time at which the paroxysm is expected. When there exists a mixed infection, and when the cases show a preponderance of asthmatic symptoms, a nasal spray of suprenal extract may be employed with benefit. [T. L. C.]

4.—Nicholas Senn discusses the present status of the carcinoma question under the head of 27 propositions. These include the statement that the direct medication of carcinomatous tissue by parenchymatous injections has no influence in retarding and arresting its growth, while the injection of sclerogenic substances into connective tissue around the border of the tumor appears to restrain the local extension of the disease by impairing the blood supply to the parenchyma of the tumor. Local applications to ulcerating carcinomata must be considered at best in the light of palliative measures. The early and radical operative treatment offers the only prospect for permanently eliminating the disease. The increase of carcinoma, seemingly shown by some recent statistics, is more apparent than real. Heredity is recognized a potent cause of carcinoma. A careful study of the experimental researches and bacteriological and histological investigation concerning the etiology of carcinoma does not at the present time warrant us to claim for this disease a parasitic origin. The positive results of implantation and inoculation experiments have so far failed in establishing beyond all doubt, upon a bacteriological and histological basis, the parasitic cause of carcinoma. [T. L. C.]

NEW YORK MEDICAL JOURNAL.

July 13, 1901. (Vol. LXXIV, No. 2.)

1. The Home Treatment of Pulmonary Tuberculosis. ROBERT H. BABCOCK.
2. Antitoxin and Intubation in the Treatment of Laryngeal Diphtheria, with a Summary of 230 Operations. BURT RUSSELL SHURLY.
3. The Influence of Mouth-breathing Upon the Dental Arch. M. D. LEDERMAN.
4. A Leaf from the Ancient History of the Anatomy of Catarrh. JONATHAN WRIGHT.
5. Address in Pathology, delivered at the Meeting of the Texas State Medical Association, in Galveston, April 26, 1901. ALLEN J. SMITH.
6. Neuroses as seen in Orthopedic Practice. B. E. M'KENZIE.
7. Sexual Intemperance; Some Explanation of What is Meant by the Term. JENNIE G. DRENNAN.
8. An Operation for Prominence of the Auricle. THOMAS R. POOLEY.

1.—R. H. Babcock gives the following points in the **Home Treatment of Pulmonary Tuberculosis**: (1) The most successful treatment of the disease is hygienic and not medicinal. (2) This includes (a) the building up of tissue resistance by superalimentation; (b) a continuous, or as nearly continuous as possible, sojourn in the open air under conditions that are determined by the patient's temperature; (c) hydrotherapy; (d) the careful and methodical regulation of the patient's daily life. (3) Although these requirements can be best secured in a sanatorium, they can be obtained at the patient's home regardless of climatic conditions there prevailing. [T. M. T.]

2.—B. R. Shurly gives three varieties of pseudomembranous invasion of the larynx: (1) True laryngeal diphtheria, usually caused by the Klebs-Loeffler bacillus primarily invading the larynx; (2) A pseudomembranous inflammation following a nasal, tonsillar or pharyngeal exudate, most frequently of the Klebs-Loeffler variety; (3) A pseudomembranous laryngitis secondary to the common infectious diseases of childhood, such as measles, scarlet fever, etc. The predisposing causes that influence the development of the Klebs-Loeffler infection are (1) A lowered resistance from the presence of adenoids and hypertrophied tonsils; (2) Age. Children between the age of one and six years are more susceptible. The administration of antitoxin should be made in every doubtful case of tonsillar exudate in children between one and eight years old. [T. M. T.]

3.—The **Influence of Mouth-breathing upon the Dental Arch** has been studied quite extensively by M. D. Lederman, who gives the following definite conclusions: (1) That the alveolar arch of the newborn is characterized by its shortness. Furthermore, it gradually assumes a higher and broader aspect in proportion to the growth of the adjacent structures; (2) That in subjects where adenoid vegetations exist, the arch is found to be distinctly higher, longer, and narrower than the normal one; (3) That the configuration of the palate is not dependent upon the skull formation; (4) That anomalies of malposition of the teeth are very frequent in abnormal conditions of the maxillary bone and alveolar process. [T. M. T.]

MEDICAL NEWS.

July 13, 1901. (Vol. LXXIX, No. 2.)

1. The Diseases of Nutrition in Infants. T. M. ROTCH.
2. The Medical Treatment of Summer Diarrhea. THOMAS S. SOUTHWORTH.
3. The Hygienic Treatment of Summer Diarrhea in Infants. HENRY C. HAZEN.
4. The After Treatment of Summer Diarrhea of Infants and Children. WILLIAM M. TAYLOR.
5. The Clinical Features and Treatment of Acute Bronchitis in Children. CHARLES O'DONOVAN.

6. Empyema. JOHN A. HARTWELL.
7. Sexual Neurasthenia in the Male; A Plea for a More Accurate Use of the Term; Treatment of the True Form with Citation of Cases. RAMON GUTERAS.
8. Masturbational Neuroses. WILLIAM C. KRAUS.

1.—T. M. Rotch gives the following group of **Diseases of Nutrition in Infants**: (1) Infantile atrophy; (2) Infantile scorbutus; (3) Rhachitis; (4) Osteomalacia. The first two diseases will be found occurring during the first two years of life, while osteomalacia, unlike the other three diseases; only occasionally occurs in children and is more a disease of adults. It, however, at times so closely resembles rhachitis in its manifestation that it should be included in the group, but it is not a disease characteristic of infancy as is the case with the others. He states that the etiology of the whole group is obscure, but classified under one head, clearly presents a picture of a vice of nutrition. Rotch emphasizes the importance of these diseases, and believes that the whole group would be eradicated if more care were used in the preparation of the food for infants and less medicinal treatment used. [T. M. T.]

6.—J. A. Hartwell sums up his article on **empyema** as follows: (1) Children are especially liable to empyema following pneumonia; (2) Pneumonia caused empyema in 50% of the cases considered in his article, and such cases were of severe type; (3) Tuberculous family history exerts little influence on empyema; (4) In about one-sixth of the cases the empyema was sacculated; (5) The pneumococcus was found in 50% of the cases where examination was made; the streptococcus in 33.13%; the staphylococcus in 8%; the tubercle bacillus in 4%; and no bacterium in 16%. The pneumococcus produced the most virulent infection; (6) Chloroform was the anesthetic of preference. Deep narcosis is contra-indicated, owing to the danger of pus being drawn into the other lung from a ruptured bronchus; (7) In adults with general empyema two inches of the seventh and eighth or eighth and ninth ribs in the posterior axillary line should be resected. In children the same length of the seventh rib. Simple incision, with our present knowledge, is rarely advisable; (8) Operation is indicated as soon as diagnosis is made; (9) Irrigation of the abscess cavity with bi-chloride solution, 1-5000, or carbolic acid, 1-100, is indicated, unless drainage is perfect and no sepsis is present. In children the solutions may be weaker; (10) The mortality from the empyema proper was 15%. We may hope to reduce it to one-half that number by earlier and more radical treatment. [T. M. T.]

7.—R. Guteras defines **Neurasthenia** as a chronic, functional, nervous disorder which is characterized by an excessive weakness and irritability of the nerve centers so that the patient is exhausted and reacts immoderately to slight irritation. He differentiates sexual neurasthenia from the others only in the multififormity of its symptoms in their relatively greater severity and in the fact that the chief source of trouble, whether recognized by the patient or not, lies in some part of the genital tract. In a great many cases nothing is found the matter with the genital tract other than a stricture of a patch of granular tissue, or a denuded area of the urethra, and it is advised that thorough examination of the genital tract should be made in every case, as a general practice before attempting any line of treatment. [T. M. T.]

8.—W. C. Kraus warns against giving favorable prognosis in cases of functional nervous diseases with an underlying history of masturbation coupled with a neurotic family history. Cases giving no history of masturbation which fail to respond to treatment after a sufficient interval, should be most rigidly interrogated, and in many cases the suspicion of masturbation will be verified. It is almost useless to try any form of treatment or to expect to obtain any definite results in the functional neuroses if this habit is not discovered and corrected. If, then, this habit is so widespread among the young; if it tends in suitable cases to undermine the physical and psychical forces; if it renders its devotees almost

impregnable to rational scientific treatment, is it not a practice which should be discouraged rather than encouraged, defeated rather than surfeited? The author states that he would rather treat any form of nervous diseases than a case of masturbational neurosis. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

July 11, 1901.

1. Two Cases of Pregnancy Complicated by Mitral Insufficiency. HENRY D. CHADWICK.
2. Albuminuric Retinitis and Uremic Amaurosis, with Especial Reference to Their Occurrence in Pregnancy. EDMUND W. CLAP.
3. Congenital Pelvic Malposition of Left Kidney in a Woman. JOHN W. DEWIS.

1.—Henry D. Chadwick reports two cases of pregnancy complicated by mitral insufficiency. Both patients died. In the first case, death occurred 21 days after delivery. The baby lived and was a strong, healthy child. The second patient died 10 days after delivery of a still born fetus. The author, discussing these two cases in detail, believes that such patients should be watched closely from the beginning and when lack of compensation is shown by pulmonary congestion, it is not only justifiable, but one's duty to advise and urge upon the patient the necessity of terminating the pregnancy as speedily as possible. [T. L. C.]

2.—Clap, in a paper entitled, **Albuminuric Retinitis and Uremic Amaurosis, with Especial Reference to Their Occurrence in Pregnancy**, states that both albuminuric retinitis and uremic amaurosis are rare conditions in pregnancy, but very important when they do occur. "Albuminuric retinitis is a disease accompanied by immediate visible changes in the eyes. Albumin is always present in the urine. It may occur at any time during pregnancy, especially beginning during the first two months or after the sixth month. Its prominent symptom is gradual failure of vision. It is very apt to recur in successive pregnancies, though not necessarily. Blindness is almost never caused by the first attack, but more and more damage is done by each recurrence. Uremic amaurosis is a disorder of the visual apparatus not accompanied by immediate visible signs in the retina, although it may finally lead to atrophy. It occurs late in pregnancy, usually with other signs and symptoms of eclampsia, so that it seldom has to be considered alone. It apparently never destroys vision by the first attack. Like albuminuric retinitis, it is very apt to recur in subsequent pregnancies. The treatment of both conditions is the treatment of the albuminuria and nonuse of the eyes, enforced by atropine and dark glasses, if necessary. The prognosis of uremic amaurosis as to sight is favorable for the first attack, and less and less so for each succeeding attack; but the importance of this is usually overshadowed by the uremic condition present. The prognosis of albuminuric retinitis as to sight is favorable for the first attack, if occurring after the sixth month, but grows worse if it occurs in succeeding pregnancies. Prognosis for sight is bad if it comes on earlier than the sixth month, especially if it begins during the first two months; and in these cases great danger to both child and mother may be expected from eclampsia. As to abortion or premature labor, we are seldom called on to consider it for the preservation of sight alone, since so many and such grave dangers are present to both mother and child from uremia. If we consider the preservation of sight a cause for premature labor, then it may have to be done in uremic amaurosis recurring in successive pregnancies, with progressive loss of sight; the degree of impairment of sight and the amount of damage done to the optic nerve deciding the question. In retinitis albuminurica occurring early, abortion should be considered if the retinitis is of a severe type, especially if hemorrhagic, or if a slight retinitis progresses under treatment, remembering that in these cases the life of the child is uncertain any way, and the mother runs grave risks of eclampsia if the pregnancy goes on to term. In retinitis coming on after the sixth month it is best to wait and watch carefully, especially in a first attack, and not to induce labor unless some other albuminuric symptom demands it. In the subsequent attacks the damage to vision and the severity of the retinitis may turn the

scale in favor of premature delivery, even when slight eclamptic symptoms are present." [M. R. D.]

3.—John W. Lewis reports a case of **congenital pelvic malposition of the left kidney in a woman**. Behind and to the left of the uterus a smooth, firm mass was palpable, somewhat movable with a slight fissure, or notch, in the border. It was not particularly sensitive to touch. The urine was normal. The right kidney could be made out by palpation, but the corresponding locality on the left side seemed thinner, and no kidney could be found. Cello-tomy was performed. The tumor was retroperitoneal, and lay over the promontory of the sacrum, about two-thirds being in the cavity of the pelvis. It was a firm kidney-shaped mass, considerably flattened and imbedded in a soft, thick capsule, and could be moved up and down about two inches. The blood supply could not be detected nor the ureter located. On cutting through about three-eighths inch of the fatty cushion, the kidney cortex was exposed, and the incision again closed with catgut. The patient made an uneventful recovery. As a rule kidneys in malposition are fixed, but in this case there were two inches of movement. Malposition does not interfere with the normal functions of the kidney, although it does predispose to complications. In this patient the kidney lying between the sacrum and uterus, appears to have predisposed the patient to abortion. [T. L. C.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

July 13, 1901.

1. Section on Practice of Medicine. J. M. ANDERS.
2. Appendicitis. JOHN B. DEEVER.
3. Preliminary Work. EUGENE S. TALBOT.
4. The Literature of the Pulp. VIDA A. LATHAM.
5. Methods in the Preparation of the Teeth.
MARTHA ANDERSON.
6. Periods of Stress and their Dental Marks.
JAMES G. KIERNAN.
7. Infectious Diseases. ALICE M. STEEVES.
8. The Treatment of Cutaneous Cancer.
M. L. HEIDINGSFELD.
9. Relations of Syphilis to Blastomycetie Dermatitis.
HENRY G. ANTHONY.
10. A Case of Erythroderma Squamosum. A. RAYOGLI.

1.—Anders delivered the annual address before the section on Practice of Medicine at the 52d meeting of the American Medical Association. In this address he outlines the future work of the section and emphasizes particularly the advisability of appointing a special committee on scientific business for this section. He further suggests that such a committee should hold office for a term covering from three to five years, and that the secretary of this section should be a member of such a committee, and the chairman a member ex-officio. One month prior to the annual meeting all papers intended for presentation should be handed in and scrutinized by the committee. Anders makes a plea for closer and more intimate relations between the medical man and the surgeon. [F. J. K.]

2.—John B. Deaver considers that the **appendix is the most vulnerable of the abdominal organs** because of its delicate blood, nerve, and lymphatic supply, its length and calibre, and because of its liability to traumatism in its association with the psoas muscle. It is shown that it is very difficult and oftentimes impossible to clinically distinguish the different pathological varieties of appendicitis. The majority of cases of appendicitis are of a chronic nature. Many cases diagnosticated acute appendicitis are only exacerbations of chronic inflammation. Not infrequently the whole pathology of appendicitis is demonstrated in one patient. Deaver thinks that obliteration of the lumen of the appendix is of the rarest occurrence, not to be expected, and never to be relied upon. Particular stress is laid upon the rapidity and suddenness with which the appendix may become diseased and gangrenous, giving rise to a fatal peritonitis. The three principal symptoms of appendicitis are pain, tenderness, and

rigidity, and of these pain is much more important. The pain is paroxysmal and may at intervals almost disappear. The site of the pain will entirely depend upon the position of the appendix. In examination of an abdomen for appendicitis always palpate at a point some distance from the supposed seat of disease and then gradually approach the point of tenderness. An abrupt cessation of pain indicates gangrene of the appendix. Both temperature and blood count are considered of little value in making a diagnosis. As soon as a diagnosis of appendicitis is made the appendix should be removed. [J. H. G.]

3.—Talbot read a paper entitled, "**Preliminary Work**," before the section on Stomatology. The author examined 1958 teeth, removing 1017 pulps. These teeth were obtained last winter from the Chicago Dental Surgeons. The technique of removing the pulp consisted in cracking open the teeth; they were then placed into Miller's fluid and a 1% formalin solution. The pulp was lifted out of its chamber, as far as the apex, in nearly every case. In every instance it was found necessary to crush the root of the tooth in order to detach the pulp. From the macroscopical examination he divides the pulps into a number of varieties. He emphasizes that pulps, which were removed from teeth immediately after extraction, were not found adherent to the walls of the canals, and he therefore concludes that it seems evident, from a macroscopical standpoint, that nerve fibres do not enter the dentine. 11.9% of the 1017 pulps collected were found more or less mummified. The teeth that contained mummified pulps were dense and quite difficult to crack. In those possessing partially mummified pulps there was a line of demarcation between the part filled with blood and the dried end. Adhesions existed between the dried portion and the end of the root. In some instances all of the pulps of the teeth removed from the same individual were mummified. Obliteration of the pulp was observed in abraded teeth. He found 1.5% of calcified and calcareous pulps, and 1 instance of fungoid pulps. 11.1% of the pulps were exposed and infected with pus micro-organisms. In some instances inflammation extended throughout the entire pulp. [F. J. K.]

4.—Latham discusses the literature pertaining to the pulp. [F. J. K.]

5.—Anderson gives an account of the methods employed in the preparation of teeth for histological study. He divides the methods into (1) the hard or ground methods; (2) injection methods; (3) structural methods. The latter are divided into those used to demonstrate cellular structures, and those used to demonstrate nervous tissues. [F. J. K.]

7.—Steeves discusses the importance of recognizing the methods by which infectious diseases are conveyed from one patient to another by means of instruments or otherwise, and the character of the infection itself. Syphilis is the most common infection which is carried from the mouth of one patient to that of another. He suggests the probability of conveying the germs of scarlet fever and diphtheria from one patient to another by unclean instruments. The bacillus of diphtheria has been found in tooth cavities. The author states that the bacillus of tuberculosis could be conveyed from the mouth of a tuberculous patient on dental instruments, and deposited into the mouth of another person. [F. J. K.]

8.—M. L. Heidingsfeld discusses the **treatment of cutaneous cancer** showing that because of the indifference of many medical men to this condition, and because of fear of the knife, patients suffering from skin cancer find themselves in the hands of the cancer quack. The methods of these quacks and illustrations showing the results of their work are presented. The author has used with great satisfaction an arsenic paste composed of 5 parts each of arsenous acid and pulverized gum arabic and 2 parts each of cocain and glycerin with sufficient water to make a paste. The cases in which he has employed this method have not

yet stood the test of time but the immediate results have proved very pleasing. The paste is applied upon cloth and is allowed to remain from 12 to 36 hours according to the amount of inflammation which it produces. [J. H. G.]

9.—Anthony writes upon the relationship of syphilis to blastomycetic dermatitis. The author carefully weighs the evidence that supports the view that this condition belongs to the class of vegetating syphilids. He also states the reasons for separating this disease from syphilis. He contends that before any conclusions can be arrived at a more careful and thorough study must be made of blastomycetes occurring in cases of surgical tuberculosis. [F. J. K.]

11.—Itavogli reports a case of erythroderma squamosum occurring in a boy, three years old. This patient had three attacks of this skin disease. The last attack occurred on March 5, 1901, when the skin of the entire body, excepting the palms of the hands and the soles of the feet, were red and covered with scales, that varied in size and appearance in different anatomical regions. The blood examination revealed 5,400,000 erythrocytes per cubic millimeter, and 8,400 leukocytes per cubic millimeter. The differential count was made with the following result: small lymphocytes 23%; large lymphocytes, 2.1%; polymuclear leukocytes, 73%; eosinophiles, 1.4%. The patient did not complain of itching of the skin, or of stomach or bowel disturbances, and during the entire course of the illness there was no fever. The urine was apparently normal. The condition yielded readily to treatment consisting of anointing the body with cod liver oil. [F. J. K.]

AMERICAN MEDICINE.

July 13, 1901.

1. Removal of the Female Urinary Bladder for Malignant Diseases. MATTHEW D. MANN.
2. Total Extirpation of the Urinary Bladder. J. WESLEY BOVEE.
3. Ankylostomiasis in the United States. Report of a Case. HERMAN B. ALLYN and M. BEHREND.
4. Phlebitis Following Abdominal Operations. ALBERT VANDEVEER.
5. Report of a Case of Carcinoma at the Cardiac End of the Esophagus, Etc. C. D. SPIVAK.
6. Impoverished Blood and Its Relation to Insanity. J. W. WHERRY.
7. A Medico-Surgical Bedstead. ADOLFO LURIA.

1.—Mann discusses the operation for the removal of the female urinary bladder from malignant disease. An account is given of the frequency of carcinoma of the bladder, and reference is had to the statistics bearing upon this point. The author also gives a brief account of the pathology and the diagnosis of malignant disease of the bladder. The reports of two cases of removal of the bladder are included in his article. Mann concludes that total extirpation of the urinary bladder for malignant disease is a justifiable operation. To the experienced abdominal surgeon the operation offers no great difficulties, and the patient is given a fair chance for a comfortable continued existence. [T. L. C.]

2.—Bovee discusses total extirpation of the urinary bladder from the standpoint of the history of the procedure, the methods and results of operations, and finally draws the following conclusions: It is not advisable to perform cystectomy for conditions, other than exstrophy, when partial extirpation of the organ is possible, until a more satisfactory means of disposal of the ureters is found. To avoid infection, as far as possible, a small portion of the bladder into which the ureters may be debouched, should be kept intact. The Maydl and the Pozzi operations seem most satisfactory for exstrophy, although the danger of infection is not obviated. Grafting of the ureter into the skin or into the rectum is highly dangerous. Ureterovaginoscopy does not offer perfect results, but practically eliminates ascending infection. The urethral grafting of the ureter does not lessen the constant dribbling of the urine, but seems free from infection. The Mauchaire-Gersuny operation should receive further application, inasmuch as it provides for a sphinctered bladder

and bowel. The author appends a table of 100 extirpations of the urinary bladder. [T. L. C.]

3.—Allyn and Behrend report a case of ankylostomiasis which occurred in an Italian boy, 15 years of age. The patient was admitted to the Philadelphia Hospital on May 28, 1901, complaining of great weakness and pain in the epigastrium. The patient arrived in this country on March 26th, and soon after began to feel ill. On admission he complained chiefly of headache, epigastric pains, muscular pains and weakness, and constipation. He appeared well nourished and the legs were slightly edematous. Upon examination of the heart a loud systolic murmur was heard over the precordial region and over the cervical vessels. Upon examination of the feces numerous eggs of the ankylostoma duodenale were found and also some of the adult worms. A blood examination on May 28th showed: Erythrocytes, 1,220,000 per cu. mm.; leukocytes, 8,650 per cu. mm.; hemoglobin, 15%. Differential count of the leukocytes: Polynuclear cells, 71%; small lymphocytes, 21%; large lymphocytes, 9%; eosinophiles, 1.3%. On June 4th a second blood count was made, which showed that the red blood cells had decreased to 871,875 per cu. mm., while on June 15th the red cells numbered 1,062,500. For a while the temperature ranged between 100°F. and 102°F. The patient steadily improved after admission to the hospital. The number of red blood cells and the percentage of hemoglobin increased. He is still passing ova. The authors state that a later report will be made. [T. L. C.]

4.—Vandever read a paper before the American Surgeons' Association, at Baltimore, on "Phlebitis Following Abdominal Operations, and reported interesting cases. [T. L. C.]

5.—Spivak reported a case of carcinoma of the cardiac end of the esophagus, at the meeting of the American Gastroenterological Association, held at Washington. The points of especial interest in this case were the following: The esophagus was abnormally long, measuring twenty-one inches in length. Insufflation greatly aided in the diagnosis. The patient did not complain of pain in any part of the body, and the appetite was not impaired until three days before death. Only during the last week of the illness the bowel functions were disordered. The breath was offensive during the last two days of the illness. The lower end of the esophagus was not dilated. There was a metastatic involvement of the pylorus. [T. L. C.]

6.—Wherry contends that many cases of insanity are caused by circulatory changes, and that an impoverished condition of the blood is responsible for some of these. In an appended table he gives the averages of blood counts in various forms of insanity. [T. L. C.]

AMERICAN JOURNAL OF MEDICAL SCIENCES.

June, 1901.

1. Cancer Distribution and Statistics in Buffalo for the Period of 1880-1899, with Special Reference to the Parasitic Theory. I. LYON.
2. Chronic Myocarditis and Fatty Degeneration of the Heart. B. ROBINSON.
3. Osseous Cysts of the Tibia. C. BECK.
4. Clinical and Histological Study of a Case of Circumcorneal Hypertrophy of the Conjunctiva. C. OLIVER.
5. Nitrous Oxide and Oxygen as a Surgical Anesthetic. S. GOLDEN.
6. Croupous Pneumonia. G. NORRIS.
7. Heart and Circulation in the Feeble-Minded. J. M. TAYLOR and F. S. PEARCE.

1.—Lyon has made careful studies of the distribution of cancer in the city of Buffalo during the years 1880-1899, inclusive. He has paid particular attention first, to the region of distribution, and second, to the racial distribution. Altogether there were 2113 cases, of which 2005 could be used for statistical purposes. He calls attention to the interesting study of Hebra in the town of Leekau in which the conclusion was reached that cancer infection was probably conveyed by vegetables eaten raw, that had been contaminated by the water of a ditch that ran through certain districts of the town. He concludes that of all nationalities the Irish are the most susceptible to carcinoma. That,

however, a map of the city shows a marked concentration of the disease in the wards inhabited by Germans, and that the Germans and Poles considered together, are distinguished from all other classes by the very high rate of involvement of the stomach, this disease being 10 times more frequent among them than among the native born. In general, about twice as many females are affected as males, but this is not true of the Germans. The disease is increasing, and the proportion of males affected by cancer is greater. The number of cases per hundred thousand of population has increased from 32 to 53. This appears to be largely due to the increased proportion of foreign-born citizens.

2.—Robinson reports some interesting cases in which heart failure occurred in persons who had not previously manifested symptoms of heart disease. In one of these an autopsy was obtained, and atheroma of the coronary arteries was found. He admits that, omitting attacks of acute disturbance, examination of the heart often fails to reveal any signs that are characteristic of myocardial involvement. However, in these cases, very slight exertion will cause distress and perhaps slight cyanosis. He calls attention to the importance of anemia in producing fatty degeneration of the heart, particularly the chlorotic condition that occurs in young girls after acute infectious disease, and the secondary anemia produced by too profuse menstruation. Chronic alcoholism is also a potent factor in those cases in which the process has developed rapidly, or in which a cause exists that can be removed. In young persons there is more likelihood of a cure than in older ones. In pernicious anemia the prognosis is exceedingly grave. The treatment requires the exercise of great judgment. Nauheim baths may be of benefit, or may be detrimental. In some cases one course improves the patient remarkably, and a second makes him very much worse. Iodide of potassium is useful in a variety of conditions. [J. S.]

3.—Beck reports two cases in which cysts developed in the tibia. One, a boy of 10, received a severe injury which was followed by intense pain in the upper portion of the right tibia. Fracture could not be determined. On subsequent occasions he fell on the street and each time was confined to his bed for several weeks as a result of the pain. Swelling developed below the right knee, which, when examined, was found to be painless, and not to involve the knee-joint. Osteosarcoma was suspected, but a Röntgen ray examination showed that the upper portion of the tibia was really paler than the lower part. Incision was therefore performed, and a considerable amount of bloody fluid evacuated, and the cyst closed by crushing its walls inward. The patient made a perfect recovery. Microscopic examination showed the presence of numerous round cells around the blood vessels. The second case, a girl of 13, had received a severe injury 8 months before, followed by swelling of the left ankle. Examination showed enlargement of the lower end of the tibia without involvement of the ankle joint. A skiagram showed the same changes that had been observed in the other case. Incision revealed a large cavity filled with cartilage in the lower end of the bone. This was removed and the patient made a perfect recovery. Beck calls attention to the extreme importance of examining all these cases with Röntgen rays. If this had not been done in the first case amputation would probably have been performed. [J. S.]

4.—Oliver reports a case observed by Dr. J. P. Worrell. A moderately large tumor apparently composed of nodules, pinkish-white in color, had developed in the conjunctiva of the right eye between the cornea and the inner canthus. This was removed, but recurred again, and after excision was thoroughly cauterized. Cauterization was required from time to time as the tumor reappeared. Subsequently a third complete operation was required, and after this the growth did not reappear. Microscopic examination of the growth showed increase in the epithelial structures with marked sclerosis of the surface cells. The diagnosis was hypertrophy of the conjunctiva. [J. S.]

5.—Goldan describes in detail his apparatus for the administration of a mixture of nitrous oxide and oxygen for the purpose of producing anesthesia. As it is difficult to understand this description without the aid of the diagrams, we refer the reader to the original article, in which can also be found the directions for administration. He believes that his method is perfectly safe, producing a mini-

mum amount of shock, and that recovery from the anesthesia is associated with fewer unpleasant symptoms than when any other method is employed. The great objection at present is the expense, on account of the enormous quantities of gas required (100 to 150 gallons of nitrous oxide, and 10 to 30 gallons of oxygen) but when this is a matter of minor importance the advantages are very great. He mentions a number of cases in which anesthesia was maintained for periods varying from 30 minutes to nearly 3 hours. [J. S.]

6.—Norris reports the statistics of cases of pneumonia admitted to the Pennsylvania Hospital since the year 1897. Altogether there were 500. They showed a very marked increase in the disease in latter years, entirely out of proportion to the increase of the city in population. The death rate was 25%; rather more among the Irish and Germans than among the Russian Jews. The negroes are especially susceptible. Among known drunkards the mortality was 67%. It also appears to have been greatest among the aged, and among those exposed to severe outdoor work. The disease was commonest in the months of April and May, and very infrequent from June to September. In 50% of the cases there was chill at the onset. The greatest number terminated on the eighth day, but in 11 cases the disease was prolonged for 20 days or more. In 54 cases there was a pseudo-crisis. Fifty-seven cases gave histories of previous attacks. The great majority of them showed renal complications. Jaundice occurred in 18 cases, of which 11 died. No characteristic changes were noticed in the pupils. The treatment was expectant and symptomatic. Venesection was valuable in the asthenic cases. [J. S.]

7.—Taylor and Pearce report the results of their studies at the Pennsylvania School for Feeble-Minded Children, with special reference to the circulatory and cardiac disturbances. Seventy-two cases among the 955 inmates showed cardiac lesions. Of these there were 40 males and 32 females. In 20 of the males the heart was slightly hypertrophied. In two it appeared diminished in size. In 25 cases the cardiac pulsation was feeble. In 3 cases there was bradycardia. In 6 cases there was a presystolic mitral murmur; in one case, an aortic systolic murmur, in one a double mitral murmur, and in 10 systolic mitral murmurs. In 3 cases there was marked anemia. In 16 cases the pulse rate was over 100. Among the females the heart was hypertrophied in 6 cases, and showed slight displacement in a few others. There were 5 cases of presystolic mitral murmur; one of aortic systolic murmur, and 2 of mitral regurgitation. Irregularity of the pulse occurred in 15 cases. They conclude that the proportion of cases of heart diseases at the school is more than normal, and that, therefore, organic vascular heart disease is a large etiological factor in continuing the downward course of imbeciles. They suggest that careful exercises would be of value. [J. S.]

ARCHIVES OF PEDIATRICS.

June, 1901.

1. Congenital Occlusion of the Duodenum. LOUISE CORDES.
2. Syphilis of the Liver with Large Gummata in Late Childhood. DAVID L. EDSALL.
3. A Report of Two Cases of Cancrum Oris. WILLIAM SEAMAN BAINBRIDGE.
4. Dühring's Disease in Childhood. WILLIAM S. GOTTHEIL.
5. Abscess of the Ethmoid and Antrum of Highmore. J. MORRISON RAY.

1.—Cordes reports a case of congenital occlusion of the duodenum and gives an analysis of 56 other cases from the literature which were diagnosed stenosis and atresia of the duodenum. From an analysis of these cases it is found that total occlusions are more common than stenoses. The cause that may lead to intestinal occlusion are (1) errors of development, (2) volvulus, (3) fetal peritonitis, (4) ulceration, (5) pressure caused by new growths, (6) abnormally long persistence of the omphalomesenteric duct, (7) traction due to inguinal hernia, (8) circulatory anomalies and (9) embolism of the superior mesenteric artery. The

occlusion is most frequently found either just above or just below the orifice of the common bile duct. In the case that the author has had the opportunity of studying personally, a branch of the common bile duct was found opening into the dilated portion of the duodenum above the point of stricture. The child which was of Irish parentage, was born at full term after a normal labor. The baby presented no external abnormalities, except that its face looked old and wrinkled. The child nursed with difficulty and vomited a milk mixture at intervals. The vomitus consisted of a material that resembled bile in appearance and considerable amounts of meconium were passed at intervals. The child was found dead in bed on the fourth day. No evidence of specific disease could be obtained from the child's mother. At autopsy, the duodenum was found to be much dilated and to end blindly just above the papilla of the common bile duct. The walls of this sac, like those of the stomach, were much hypertrophied. The mucosa was smooth and the valvulae conniventes were absent. There was no trace of cicatrization at the point of stricture. Sections of the mucous membrane of the dilated portion of the duodenum showed a normal number and arrangement of the villi and of Lieberkühn's glands. Brunner's glands were found in the submucosa and the peritoneum was normal. [J. M. S.]

2.—Edsall reports the case of a girl, aged 14 years, whose father was strongly addicted to alcohol. There was no history of venereal diseases so far as could be determined in either parent. The child's mother, however, had an opacity of the left cornea, which she stated had existed for many years. The child herself had been an extremely sickly infant, but, according to the mother's statement, had not had snuffles nor skin eruption; nor had she convulsions. The child had been deaf and rather stupid for over 5 years. She complained of swelling of the face, legs and feet which was always worse in the morning, dyspnea, headache and diarrhea. She appeared to be losing flesh and had for some time complained of epigastric distress. Her breath was extremely offensive, the face was puffy, the legs and feet were very edematous and there was light general edema elsewhere. There was some general glandular enlargement, particularly involving the glands of the neck. There was a pleural effusion on both sides. There was a large mass about half the size of the fist in the lower part of the left side of the epigastrium which was evidently attached to the liver. There was, also, a smaller mass to the right of and below the one first mentioned. The area of splenic dulness was apparently moderately increased. There was some slight abdominal effusion. The urine varied in amount, contained albumin in amounts varying from traces up to 3 grams per liter. There was usually a little pus in the sediment, together with a considerable number of epithelial cells and numerous bacteria, but no red bloodcorpuscles. Hyaline and slightly granular casts were occasionally found. The eyes were in a condition of high myopia and showed the remains of an old kerato-linitis. There was absolute deafness in the left ear and impairment of hearing in the right ear. The tympanic membrane on the right side presented a cleftrix from the healing of a large perforation. The tonsil and palate on the right side were joined by a band which was probably the result of previous syphilitic ulceration. The tonsils were somewhat enlarged and there was chronic atrophic pharyngitis, chronic atrophic rhinitis and eczema of the nasal vestibules. Because of the child's severe deafness the presence of an evident ozema and the discovery of the scars of an interstitial keratitis in both corneae it was decided to treat the case as one of gummata of the liver and the child was put upon daily inunctions of half a dram of blue ointment and was given potassium iodide in doses of 3 grains 3 times a day, increased one grain per dose. Under treatment the pleural and abdominal effusions gradually disappeared, and the liver although remaining enlarged and hard, presented no evidence of the existence

of a mass. Six months later, except for the deafness, the nasopharyngeal trouble and the corneal opacities, the child would have been considered to have been practically in complete health. In the absence of definite knowledge of her condition in early infancy and since there were no positive signs of hereditary disease, it is quite possible that her syphilis may have been acquired after birth, although the author thinks that this is impossible. The case is a very instructive example of the necessity in late childhood as well as in adult life and infancy, of keeping in mind the possibility of a syphilitic origin of severe disease of the liver whether this seems to be mere chronic or has the clinical appearance of a new growth. [J. M. S.]

3.—Bainbridge reports the case of a boy, aged 3 years and 6 months, who had a small gangrenous ulcer to the right and left of the center of the external surface of the superior alveolar process extending onto the upper lip. Under chloroform anesthesia $\frac{1}{2}$ of the body of the upper jaw on either side was removed. The under surface of the lip was thoroughly curetted and cauterized with pure nitric acid. At the end of a week a gangrenous area appeared in the left cheek, and at a second operation the larger part of the lip was removed and more of the superior maxillary bone was curetted away. Later on new areas of gangrene appeared in various parts of the mouth and high up at the base of the skull. The temperature increased, the pulse became more rapid and feeble and the child died from exhaustion. After death it was found that all the bones of the face were diseased and that the necrosed tissue extended to the base of the skull and involved part of the body of the sphenoid bone. Another patient was a boy, aged 16 months, who after an attack of whooping cough had a tender mouth, along the upper jaw on account of which one incisor tooth was removed. Two days later an ulcerated patch appeared on the upper lip directly to the left of the median line. Under chloroform the bone was found to be soft and spongy and of a grey color. The diseased tissue was entirely removed and pure nitric acid was applied over the entire surface on the cavity of the bone. The wound was packed with gauze and irrigated every half hour with hydrogen peroxide, followed by boric acid solution. Full diet, strychnin and whisky were given and the patient recovered. [J. M. S.]

4.—Dermatitis herpetiformis is much more common in childhood than is generally supposed. Gotthell reports the case of a girl, aged 9 years, who had suffered from the disease for 5 years. When the eruption first appeared it was spread over the entire body, looked like measles and was called contagious. The face, hands and legs were the regions chiefly involved, but occasional patches have appeared upon the body. All the attacks commenced with severe itching of the part about to be affected. This symptom lasted for several days before the first sign of dermatitis appeared. Then there was a sudden eruption of grouped vesicles, which were surrounded by a very small amount of inflammation. The vesicles finally ruptured and their secretion dried up into dirty scabs which left a reddened and perhaps slightly excoriated surface behind them when the fell off. The pruritis diminished and disappeared as the period of quiescence set in. A second case occurred in a boy, aged 12 years. The attacks came on at very frequent intervals, sometimes only a few days apart, and were distinctly bullous in type. They always began on or around the genitals and thence extended to the abdomen and limbs. Treatment is very unsatisfactory. General tonic and hygienic measures, and when possible change of air and scene are more efficacious than drugs in postponing and preventing relapses. Locally any of the bland or cooling salves or ichthyol in 5 or 10% solution or ointment may be employed. [J. M. S.]

5.—Ray reports a case of abscess of the ethmoid bone and the antrum of Highmore occurring in a child, 4 years of age. The condition was cured after an operation.

J. M. S.

ANNALS OF SURGERY.

April.

1. Conservative Operations for Ileal Retention. CHRISTIAN FENGER.
2. The Appendix in Relation to the Psoas Muscle in Three Hundred Male and One Hundred and Eighteen Female Adult Autopsies. Trauma of the Psoas Muscle produces Appendicitis. BYRON ROBINSON.
3. The Value of the Roentgen Method of Diagnosis in Detecting and Excluding Renal and Ureteral Calculi. CHARLES LESTER LEONARD.
4. Ileus Due to Vascular Obstruction. L. L. McARTHUR.
5. Ileus Due to Mechanical Obstruction to the Fecal Current. D. A. K. STEELE.
6. Ileus Caused by Neoplasms. A. J. OCHSNER.
7. Fissure of the Head of the Radius. CARL BECK.
8. Excision of the Cervical Sympathetic Ganglia for Exophthalmic Goitre. J. SHELTON HORSLEY.

2.—Byron Robinson discusses the relation of the appendix to the psoas muscle in 300 male and 118 female adult autopsies. In this paper the topographical anatomy of the appendix and cecum is carefully considered and many interesting illustrations presented. The author so frequently found the appendix adherent to the psoas muscle and free from adhesions when situated elsewhere that he strongly inclines to the conclusion that trauma of the psoas muscle is most productive of appendicitis. The appendix is considered the weakest segment of the intestinal canal.

[J. H. G.]

3.—Charles Lester Leonard considers the Roentgen method of diagnosis, in detecting and excluding renal and ureteral calculi. He asserts that many patients lose the functional activity of one kidney because an impacted calculus is not recognized. The impaction results in anuria which leads to atrophy and destruction of the kidney. Since the clinical aspect presented by recovery and by destruction of the kidney substance after impaction is the same in both instances a diagnosis of the condition is difficult. This position has been confirmed many times by post-mortem examination and the X-ray has shown impacted ureteral calculi to be more frequent than has heretofore been suspected. Attention is called to the varying symptomatology of renal calculi. A diagnosis of movable kidney, of nervous dyspepsia and of other conditions has been made when the real cause, as shown by the X-ray, was a calculus. In five cases submitted to the author for a confirmation of a positive diagnosis of calculus no calculus could be found by the X-ray and none by subsequent operation. It is no longer necessary to open a hydronephrotic kidney before first of all locating the calculus in the ureter. Reference is made to cases in which the X-ray has shown the presence of a calculus remaining in the kidney after one calculus had already been removed by operation. In four cases examined calculi were present in both kidneys or ureters. The Roentgen method is the only means excepting double exploratory nephrotomy by which it is possible to exclude calculi from an apparently healthy kidney. A calculus which produces complete obstruction is most dangerous because it produces oftentimes so few and indefinite symptoms. Another advantage offered by the X-ray is the fact that a calculus can be diagnosed and removed while it is yet small and before it has produced much change in the kidney structure. The author considers the negative diagnosis by the X-ray in proper hands as absolutely correct. He has examined 136 cases of suspected renal or ureteral calculi and made a negative diagnosis in 100. In but one of these has the diagnosis been disproved by operation and in this case the plate was misplaced and the reading of the negative defective. If the rays "will differentiate between the shadows of tissues less dense than the least dense calculus all calculi will be detected." The differentiation of the tissues in the lumbar and pelvic regions is the basis upon which rests the negative diagnosis. Attention is called to the necessity of using the Bigelow evacuator before operating for small ureteral stones because these minute calculi very readily slip into the bladder. [J. H. G.]

4.—L. L. McArthur reports a case of ileus due to vascular obstruction. If cardiac valvular vegetations, syphilis, endarteritis, etc. produce occlusion of blood vessels in the brain and other viscera why not in the superior and inferior mesenteric arteries? Ileus embolic and throm-

botic are considered. Embolic ileus from obstruction of the superior or inferior mesenteric arteries or other branches is rare, but when it occurs it necessarily means gangrene of the bowel since here there is no collateral circulation. Trauma or disease of the blood vessel wall may produce thrombosis resulting in ileus. Thrombosis of the mesenteric veins is most frequently due to an infective phlebitis which originates in the intestinal mucosa. Hematemesis and blood in the stools is a more constant symptom, of course, when the obstruction is venous. In this condition too, there is much greater exudation from the blood vessels and a more ready infection from intestinal bacteria. When there is obstruction of the arterial supply the bowel dies so rapidly that there is no time for the throwing out of plastic lymph on the peritoneal surfaces, the bowel in this case presenting a shiny, smooth, and black appearance. It is strongly urged upon the surgeon to go well above the apparent gangrene in resecting the bowel for ileus due to vascular obstruction. The most constant symptoms of this condition are described as follows:

(1) Blood seen either in the washings from bowel, in bowel movements or in the vomitus, unaccompanied by the tumor of intussusception.

(2) Colicky-like pains, associated with pains in back and lumbar region.

(3) Early collapse if the embolism has been sudden or extensive.

(4) Cardiac disturbance, arrhythmia, great frequency, albuminuria. [J. H. G.]

5.—D. A. K. Steele discusses the symptomatology and treatment of mechanical obstruction of the fecal current. The symptoms of mechanical obstruction are said to be remarkably uniform if studied before they are masked by the administration of opium. The differential diagnosis between mechanical obstruction and that due to other causes is also discussed. [J. H. G.]

6.—A. J. Ochsner discusses the question of ileus caused by neoplasms. The author's experience in operations for obstruction due to neoplasms has been such as to impress him with the great seriousness of this condition. Carcinoma is the most frequent new growth producing obstruction of the intestine. The neoplasms may originate in the ovary, the stomach, the pancreas, the omentum, or else in the mesenteric glands. Carcinoma is most common in the rectum, next in the upper colon, and next to this in the duodenum. The author has found sarcoma, myoma and myo-sarcoma most frequently to occur in the small intestine while the benign growths, lipoma, adenoma and fibroma are most commonly found in the colon. Not infrequently some undigested portion of food lodges at the seat of disease, producing acute obstruction. Although the symptoms characteristic of the neoplasm develop slowly, the onset of obstruction in these cases is usually quite sudden. Vomiting is present and if it comes on directly after the beginning of the obstruction the neoplasm is probably high up in the intestinal canal. Great pain usually follows the administration of cathartics. Peristalsis can occasionally be observed and is of the greatest value. Auscultation the author has not found a very satisfactory means of locating the obstruction. The history of the patient is of great value in making a diagnosis. The patient generally gives a history of evacuating large amounts of mucus and a severe attack of obstruction is not infrequently preceded by subacute attacks. The age of the patient is of importance as it is seldom that we find obstruction from neoplasms in patients under 40 years of age. The differential diagnosis of the condition is next discussed. In outlining the treatment the author lays stress upon the fact that both food and cathartics should be prohibited in every form of ileus. Where there is great distension from obstruction due to neoplasm it is recommended that the pharynx be sprayed with a 2% solution of cocaine, and gastric lavage be performed. Elevation of the foot of the bed should also be done. As soon as the distension is lessened operation should be performed. If a tumor can be felt it is well to make the abdominal incision directly over it. If the intestines are found greatly distended, so much so as to interfere with work, a coil should be brought out of the wound and a glass drainage tube inserted and fixed with a purse-string suture. In evacuating the bowel in this way it is well not to eviscerate because the pressure of the abdominal wall aids in the evacuation. When the growth is not found at once it is well to search the intes-

tinal tract systematically. If the growth is in the intestine primarily and there is no lymphatic movement a resection done three inches away from the growth may be made if the patient's condition will stand it, otherwise a short circuit should be instituted by lateral anastomosis.

[J. H. G.]

7.—Carl Beck reports an interesting case of fissure of the head of the radius. It was impossible to make this diagnosis at the time of the injury, but two days later a skiagraph which is here reproduced shows distinctly the fissuring of the bone. The author thinks that although a fracture below the head of the radius can be diagnosed without the use of the X ray, in this condition it would have been impossible to make a positive diagnosis without the employment of the rays. [J. H. G.]

8.—J. Shelton Horsley reports a case of excision of the cervical sympathetic ganglia for exophthalmic goitre. The author operated in this case on the theory, advanced by a number of authorities, that the condition had its origin in a derangement of the sympathetic centre. The patient was a Mexican woman 26 years of age. The patient suffered a great deal from cardiac palpitation and throbbing in the neck. The pulse varied from 120 to 140. Under chloroform amesthesia and with considerable difficulty the sympathetic ganglia on the right side were removed. The patient's pulse was very rapid during the operation, varying from 170 or 200 to a rapidity which could not be estimated. Owing to this condition it was thought unwise to attempt an excision of the ganglia of the left side. On two occasions during the operation the pulse suddenly dropped to about 72, which was supposed to be due to irritation of the pneumo-gastric. Subsequent to the operation her temperature rose to 104 and her pulse remained about 160. Vomiting continued at intervals for about 24 hours. The following morning her temperature was 100 and the pulse 110. The wound healed primarily and the patient left the hospital six days after the operation with a pulse of 92. She was greatly relieved from the throbbing which had been so annoying. Two months after the operation her pulse was 90 and she suffered from no throbbing or palpitation. The exophthalmos was greatly diminished but there was little change in the size of the gland. The patient has occasional pain in the right side of the head and face and a keloid has developed in the scar. Great improvement is considered the result of the operation and if the patient does not continue to progress favorably the author will recommend the excision of the left cervical sympathetic ganglia. [J. H. G.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 63, No. 1.)

1. The Surgical Treatment of Gastric Ulcer and Its Sequelae. KOERTE and HERZFELD.
2. Foreign Bodies in the Heart. VON OPPEL.
3. Gunshot Wounds with Small Caliber Rifles, from the Experience of Recent Campaigns. MOHR.
4. Fracture of the Carpal Epiphysis of the Radius. BECK.
5. A Reply to Lubarsch's Criticism of a Case of Multiple Endothelioma of the Scalp. MULERT.
6. Total Extirpation of the Larynx. VON HIPPEL.
7. Luxation of the Scapoid and Semi-Lunar Bones. STAFFEL.
8. The Operative Treatment of Echinococcus Cysts. RA-SUMOWSKI.

1.—After a resumé of the views of various surgeons, Koerte and Herzfeld state that medical treatment for gastric ulcer must always be tried. The diagnosis of gastric ulcer is reached much earlier than that of cancer. The sequelae of an ulcer of the stomach may be cicatricial stenosis of the pylorus, repeated hemorrhages, perigastritis, and perforation with peritonitis. 38 cases of stenosis of the pylorus from gastric ulcer were operated upon. In all cases symptoms had existed for a long time, even 30 years. The general condition was in all cases lowered, in some very markedly. Pain and vomiting were constantly present, and hematemesis or melena existed in almost half of the cases at some time. The ulcer was most frequently found in the pylorus. Abundant hydrochloric acid was present 21 times, lactic acid only 4 times. Of the 38 operations, gastroenterostomy was most often performed, (30 times, with 7 deaths). Resection was done 6 times. The Murphy button was not used once, as it is both compli-

cated and dangerous, for it may fall back into the stomach, and mechanically injure the ulcerated surface. Besides, stitches can be made just as quickly. Koerte and Herzfeld conclude that whenever medical treatment is unsuccessful, gastric ulcer must be operated. When cicatricial pyloric stenosis, with dilatation of the stomach, occurs, gastroenterostomy should be performed. When the general condition of the patient is good, the prognosis will be good. Besides, severe pain which has lasted a long time, with repeated small hemorrhages, also indicates operation. Resection is the radical treatment, yet gastroenterostomy will more frequently be done. When hyperacidity exists, more ulcers may appear, later, in the stomach or jejunum. Von Hacker's retrocolic method of performing gastroenterostomy was used. Should there be marked atony of the stomach, Braun's method of enterostomy may be done. Surgical treatment for acute copious hemorrhage from the stomach has been but doubtfully successful. The detailed history of the 38 cases operated upon, follows. 28 operations were for pyloric stenosis from gastric ulcer; 3 for cicatricial ulcers from caustics; 6 were resections; and one was a gastrotomy for hemorrhage. Ten operated cases for perforated gastric ulcers are also given in detail, only one of which recovered. The long list of authorities consulted follows. [M. O.]

2.—Before the nineteenth century, a wound penetrating the heart was considered necessarily fatal. Von Oppel experimented upon rabbits, introducing a needle into the heart, in some cases without operation, in others after having first exposed the heart by opening the pericardium. From his experiments, the technique of which is given in detail, von Oppel concludes that rabbits bear the introduction of a needle into an unexposed heart better than when the heart has been exposed; that the best method of exposing the heart is through the sternum; that the narcosis must be deep at the moment when the heart is exposed; that if the needle is introduced in the left edge of the sternum, the left side of the heart is more often wounded; that a needle does not wander from the lungs into the heart; that a thrombus forms about the part of the needle projecting into the cavity of the heart, which is later supplanted by connective tissue; that the free point of the protruding needle may cause endocarditis of the opposite wall; and that while, in man, the cause of death after the penetration of a foreign body into the heart seems often to be primary hemorrhage, this is almost never observed in rabbits. After a review of the surgery on the subject, von Oppel decides that a needle introduced into the human heart must be immediately extracted; that exposure of the heart for its removal will not always be necessary; that after the first few days exposure of the heart will be dangerous; that the needle can, under favorable circumstances remain in the heart; and that, to extract larger foreign bodies, the heart must be exposed. The literature is cited and seven drawings are given.

3.—Will be abstracted when completed.

4.—A quantity of splints had been devised for fractures of the carpal end of the radius. The discovery of the Roentgen ray made plain the manifold character of this fracture. Beck studied 104 cases, in 21 of which the head of the ulna was also fractured. 16 of them were fissured fractures, and were only recognized by the Roentgen process. In only 4 cases was even slight motion perceptible upon palpation. The Roentgen rays will perhaps show a fissured fracture when only a contusion has been suspected. And the position of the fragments may become plain under the Roentgen ray, thus facilitating treatment. After the fracture has been dressed, a Roentgen photograph will show the position of the fragments. After four weeks have passed without union, a Roentgen picture will indicate the operation required, and other photographs, taken a year later, will demonstrate the result. [M. O.]

5.—Mulert describes the salient points of a multiple endothelioma of the scalp, already reported by him four years ago, to show that Lubarsch, who not only criticized his work, but considered the tumor cancer, was wrong. [M. O.]

6.—Total extirpation of the larynx is by no means the dangerous operation now that it formerly was. After a description of the improved methods of operating, which have reduced the mortality to 10%, von Hippel reports the case of a man aged 40 years, who had neither tuberculosis nor syphilis. For 9 weeks he had noticed hoarseness, cough, with expectoration and pain in the throat, not, however, upon swallowing. Otherwise he felt well. Aphonia

existed at times. The area about both arytenoids was red and swollen, but there was no ulceration. Between them was a semicircular tumor, coming up to the vocal cords. A pleco was excised, which, on examination, proved to be **sarcoma**. Tracheotomy was performed, then total extirpation of the larynx by Foederl's method. Nine days later, an abscess was discovered in the wound, so that a secondary operation was performed. Six weeks later he was well. A year after operation, he is in excellent health, speaks in a whisper, but complains of no throat symptoms. There are as yet no signs of recurrence. Further examination revealed that the tumor was a round-celled sarcoma. Though the operation was finally successful, von Rippel thinks that its dangers are much greater than its advantages, and believes that he would never employ it again. Infection is bound to follow, due to the expectoration from the necessarily concomitant bronchitis, and the tension of the sutures is so great that the tracheal stump receives insufficient blood, so that gangrene becomes inevitable. The result, after two months' suffering, is no better than that achieved by Gluck's method, inside of two weeks. [M. O.]

7.—Staffel reports the case of a man of 43, who fell backward from a height of 5 meters. He landed with both hands behind him, under his body. When Staffel saw him, two months after the accident, his right hand was comparatively well, but the left hand showed a swelling on the palmar surface, near the head of the radius. All movements were normal except flexion, which was impossible. A Roentgen photograph showed the scaphoid bone broken into two pieces, both of which were displaced (one upon the end of the radius), and the semilunar bone also displaced. While the upper half of the scaphoid was palpable, the semilunar bone could not be felt. Even after two months of medico-mechanical treatment, the upper fragment of the scaphoid remains displaced, and flexion is yet impossible. Staffel has also seen a case of luxation of the semilunar bone alone. Only 15 cases of luxation of both scaphoid and semilunar bones were found in the literature. [M. O.]

8.—A few years ago, Professor Bobrow advised closing the sac surrounding an **echinococcus** cyst of the abdomen, after the cyst has been removed, returning the sac, closed, into the abdominal cavity, and then suturing the abdominal wall. The advantages of his method are that the wound heals quickly, without long suppuration; that there is no open wound, and so no secondary infection; that no fistula can follow; and that no cicatricial adhesions can occur between the abdominal wall and the abdominal viscera. Its disadvantages are the probability of recurrence, the stitches left in the sac, and the possibility of suppuration in the closed sac, with later perforative peritonitis. As suppuration in the closed sack is common, Rasumowsky employs double crossed sutures through the abdominal wall, closing the sac, and suturing it to the abdominal wall with silver wire sutures. These are easily opened, should suppuration occur, and the sac lies close beneath the abdominal wall. Rasumowski operated upon 26 cases of echinococcus cysts, 15 of which were in the liver. 18 of these were treated by opening the cyst, which was then sutured to the abdominal wall. Only three of them died. The other 8 cases were operated by the Bobrow method, with one death. The 26 case histories follow in detail. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

1901. (22 Volume, No. 3.)

1. The Study of Congenital Hernia. CARL BAYER.
2. Inferior Peritoneal Adhesions. JOSEF ALTENEDER.
3. Resection of the Esophagus with Primary Circular Suture for Cicatricial Stenosis. THEODOR ESCHER.
4. Enteroplasty. TRNKA.
5. The Diagnosis and Differential Diagnosis of Extrauterine Pregnancy. JOSEF FABRICIUS.

1.—Bayer, from post-mortem examinations, believes a hernia to be **congenital** when its sac is formed by an unobliterated vaginal process; when the vessels, which are to form the spermatic cord are still separate; when the cremaster muscle forms the next layer of the sac; when the

aponneurosis of the external oblique muscle shows no opening, no external abdominal ring existing; and when the contents of the sac are at all peculiar. Bayer reports three more such cases, one in a boy of 11, the others in men of 18 and 34, in all of whom radical operation was done with success. In each, enough of the above mentioned characteristics were found to make the diagnosis of **congenital inguinal hernia**. The contents of the sac in every case were masses of omentum. [M. O.]

2.—By **inferior peritoneal adhesions** Alteneader means those pseudo-ligaments which are often found attached to the descending colon or the sigmoid flexure. These adhesions are sometimes also attached to the appendix, cecum, ascending colon, ovaries, or other neighboring abdominal or pelvic viscera. Its causes are varied. The symptoms may be many or few, and are extremely variable. When the female generative organs are affected, there is a symptom complex which permits easy diagnosis. Out of 42 cases of inferior peritoneal adhesions, the condition was correctly diagnosed before operation in 35 cases. Intestinal occlusion is rarely caused. **Laparotomy** was performed in all cases, the adhesions being freed. Only one case was fatal. 12 were wholly cured; 18 improved; and 3 unimproved. The eight others disappeared after operation, so that the final result is not known. In three cases a second operation was necessary. The adhesions were attached to the uterus or adnexa 23 times; to the appendix 33 times; to the bladder 9 times; to the sigmoid flexure 7 times; to the small intestine and omentum 6 times. There were tumors found in 8 cases; hydrosalpinx in 6, and tubo-ovarian cysts in 2 cases. The generative organs were free from adhesions in 17 cases. Only two of the 42 cases occurred in men; the age varied from 20 to 50; 29 women had never borne children; and 19 complained of troubles with menstruation. Chronic constipation existed in 10 cases. Inflammatory processes, tumors, former operations, etc., explain the occurrence of the adhesions. Yet in 13 cases, neither the history nor the operation made clear the cause. They may have been fetal, or have followed a disease which had run its course long before. In 13 cases the adhesions were primary, from acute inflammation. Secondly, any inflammation of an organ covered with peritoneum, or even a slight hemorrhage in such an organ, may cause the formation of an adhesion later. Pain is noted, occasional, and well localized. Many cases follow appendicitis. Operation is the only successful treatment. Details of the 42 reported cases follow. [M. O.]

3.—Escher was able to find but 14 reported cases of **resection of the esophagus**. After reviewing the literature, he reports the case of a woman of 48, who had become syphilitic from her husband, 15 years before. She had had mixed treatment at that time. Examination showed a **stricture of the esophagus** just below the larynx. Symptoms had only existed for half a year. **Esophagostomy** was at once performed. But the stricture, which was about 1 cm. in thickness, situated at the level of the fourth tracheal ring, was impermeable to all sounds introduced from above or below. Resection of the esophagus with primary circular suture was then performed, a piece 1½ cm. long being extirpated. Six weeks later she was well, and has always been able to swallow perfectly since. Examination of the excised stricture showed thick, cicatricial tissue. Though she showed no other sign of syphilis, yet no other cause for the stricture could be found. It is therefore possible that ulceration had occurred in the esophagus, followed by a scar, which had gradually contracted until occlusion of the esophagus occurred. The operation was a success, in spite of slight suppuration in the periesophageal connective tissue. [M. O.]

4.—Trnka reports the case of a soldier, aged 22, in whom **colostomy** had been performed for inflammation of the appendix, cecum, etc., with perforation of the ascending colon and circumscribed peritonitis. By a subsequent operation, the bowel was made permeable so that the opening in the anterior abdominal wall was useless. Trnka made

a long bridge flap of the skin, muscle and fascia, which protected in silk, was isolated for two weeks. Then, after emptying the intestines, and disinfecting the bowel, a semicircular flap was cut outside and below the opening. The bowel was closed off by the outer, lower skin flap, and the bridge flap was brought over it. Healing by first intention followed. Plates accompany the article to explain the operation. Trnka believes the skin to be the best substitute for the mucous membrane of the intestinal wall. A bridge flap alone will be strong enough to withstand the intra-abdominal pressure. Trnka advises the plastic operation both for small and large defects of the bowel and abdominal wall. [M. O.]

5.—There seems no doubt that **extrauterine pregnancy**, like cancer, appears far more frequently now than formerly. Fabricius has seen 84 cases in the last 8 years. The history, the hemorrhage, the decidua-cells found, the pain, the growing tumor, and the hematocele, (peritubal retro-uterine, or antiuterine,) will make the diagnosis of extrauterine pregnancy. It is commonly tubal, but may be tubo-ovarian, abdominal, or tubo-uterine, rarely. The uterus enlarges as the fetus grows. Vaginal examination will reveal a large retrouterine hematocele very much like a retroflected gravid uterus at three months; like a cyst in Douglas' pouch with hematometra and amenorrhea; like a soft myoma in Douglas' pouch; like an extrauterine pregnancy which has again begun to grow; or like parametritis or perimetritis exudate. In all, the uterus will be found below the symphysis pubis. The differential diagnosis becomes more difficult as the tumor grows larger. Small tumors of the adnexa, especially pyosalpinx, may easily be taken for extrauterine pregnancy. Or a tubal pregnancy may lie before or behind the uterus so that a normal pregnancy is suspected. Or, in a patient once operated upon for tubal pregnancy, the hematocele may appear upon the opposite side, (the side from which the tube had been removed), to that on which the second tubal pregnancy had occurred. Occasionally intrauterine pregnancy may be mistaken for extrauterine pregnancy. For the uterine muscle may become so atonic as to draw out of the neck of the uterus, so that the body of the uterus is supposed to be the extrauterine pregnancy. This also is the case when the neck of the uterus has hypertrophied. Pregnancy in one horn of a uterus bicornis will be mistaken for a tumor. Finally an extrauterine and an intrauterine pregnancy may co-exist. The ages of the patients seen by Fabricius varied from 23 to 44 years, but the great majority of extrauterine pregnancies occurred before the age of 20. 63 of the 84 patients had borne children; in four of them extrauterine pregnancy had already occurred. Detailed histories of many of his cases, with diagrams, are given to illustrate the conditions mentioned. Extrauterine pregnancy was found upon the left side 51 times, and 31 times on the right. The causes are as yet not exactly known. Gonorrhea, puerperal disease, tubal inflammation, bands in the tube, etc., have been noted. The uterine sound should be but little used, (only just before celiotomy) as it may cause perforation or abortion. Fabricius has reviewed the literature thoroughly, and states his facts in detail. [M. O.]

MÜNCHENER MEDICINISCHE WOCHENSCHRIFT.

Mun., 1901. (No. 20).

1. Ether-Chloroform Mixed Narcosis. H. BRAUN.
2. Contribution to the Knowledge of Acute Yellow Atrophy of the Liver, Especially the Evidences of Degeneration Observed. ALY BEY IBRAHIM.
3. Case of Noma with Extensive Mucor Formation in Advanced Life. O. ZUSCH.
4. The Results of Diphtheria Antitoxin in 1894 to 1900, Tracheotomy and Intubation. F. CUNO.
5. Fracture of the Pelvis Produced by Contusion. F. BAEHR.
6. A Contribution to the Etiology of Inguinal Ovarian Hernia. QUADFLIEG.

7. Contribution to the Virulence and Contagiousness of Scarlet Fever. F. SCHMIDT.
8. How is the Fragment of Gland to be Determined, Which Must be Left in Position After an Operation upon Goutre? E. MEUSEL.
9. The Action of the Kissingen Carbonic Acid Mud Baths on Heart Disease. LEUSSER.
10. Walter v. Heineke. KIECKE.

1.—(See editorial).

2.—Ibrahim calls attention to the fact that **acute yellow atrophy of the liver** is a condition that in all probability can be caused by a number of infectious agents. The fat in these cases is apparently derived from the degeneration of the liver parenchyma, and varies in quantity according to the duration of the process. He has interested himself particularly in the forms of degeneration that occur, and after a study of the reports in the literature, reaches the conclusion that there may be proliferation of the liver cells that have remained normal, or of the epithelium of the interlobular biliary vessels, or of the interstitial connective tissue. The last form is really reparation rather than regeneration.

The paper is still unfinished. [J. S.]

3.—The patient, a man of 66 with senile dementia and progressive cachexia, developed swelling of the right cheek and the tongue. This continued to extend, necrosis appeared, and a fungous growth developed on the inner side of the mouth. The cheek was perforated, the perforation extended and the patient finally died with symptoms of sepsis. At the autopsy atheroma of the carotids was found; fibrous degeneration of the heart muscle; and two saccular aneurysms of the abdominal aorta. In addition, the fungous growth had extended to the pharynx, esophagus, larynx and trachea, and had caused extensive ulceration. Cultures gave an unmixd growth of *saccharomyces*, although numerous cocci were found in the smear preparations. There were two causes for the development of noma. First, the mycotic stomatitis, and second, the pressure of the molar teeth upon the cheek. In addition the arterio sclerosis should be regarded as a predisposing cause. A full literature is appended. [J. S.]

4.—Cuno, after considerable experience with diphtheria antitoxic serum has reached the conclusion that it is useless to await the results of bacteriological investigations before injecting the serum. When intubation is necessary it is his custom to leave the tube in position for 100 hours, and then if it cannot be removed without the development of symptoms of stenosis tracheotomy is performed. He reports the statistics of 31 children on whom he used intubation, although there were indications for tracheotomy. Twenty-one of these were cured, 8 died, and 2 are still in the hospital under treatment. Of these 31 cases, however, 21 subsequently required tracheotomy. In 4 cases the results were unfavorable, that is to say, the children were left with more or less narrowing of the larynx. Two of these cases were readily relieved by sounds; the third, subsequently required laryngotomy and the fourth died at its home from gradually progressive stenosis. [J. S.]

5.—Bähr calls attention to the great caution which should be exercised in giving certificates of injury in cases of **fracture of the pelvis**, and mentions some of the serious results which may ensue, although objectively there may be little disturbance. [J. S.]

6.—Quadflieg reports 3 cases of **ovarian hernia**. The first, a child of 2 months, well developed, had a hard, painful tumor in the left inguinal region. At the autopsy a cystic degenerated ovary was found in the hernial sac. The second case, a child of 3½ months had a similar condition, and at the operation a gangrenous ovary was found in the sac. Both of these cases were evidently congenital. The 3rd case, a woman of 40 years, pregnant for the 9th time, came to the hospital complaining of a painful lump in the right inguinal region, which has existed for 9 years. Through all this time she had suffered from gastric disturbances and constipation. At the operation the sac was found to contain the right tube and ovary. It is interesting that in all these cases percussion over the tumor gave flatness. [J. S.]

7.—Schmidt states that the virulence of the contagion of scarlet fever may endure for a very long time. He mentions one case in which infection occurred 8 weeks after the symptoms had subsided. He reports a case of his own occurring in a woman 24 years of age, whose husband 11

weeks previously had had a slight attack of scarlet fever, after which he had not bathed. She was delivered of a healthy child and afterward placed in the bed that had been occupied by her husband. The next day but one she had a slight chill followed by a suspicious eruption and a high fever. The following day the disease was developed in typical form. The husband was then examined and intense desquamation was found on his skin. The interesting features are the long period during which the husband remained capable of conveying the infection, and the very brief prodromal period in the patient. [J. S.]

8.—Meussel suggests that in operations for goitre it is desirable to split the gland horizontally, and to leave the lower portion *in situ*. He has employed this method for 7 years and has had no bad results. [J. S.]

9.—Leusser in conclusion of his article, reports 5 additional cases, in all of which considerable improvement occurred. Treatment consisted of the application of various forms of baths, the maximum temperature being 27° or 28°, gradually reduced to 21° R. In some cases massage, active movements, and respiratory gymnastics were of value. Usually the duration of the treatment lasted from 4 to 6 weeks, and required from 25 to 30 baths. The cases that may be treated with advantage are: Valvular lesions, asthenic hearts, toxic hearts, cases of cardiac dilatation resulting from various forms of anemia, arterial sclerosis, and occasionally fatty degeneration of the heart. Cases that are not suitable are all in which there is an acute febrile disease of the heart, cardiac or vascular aneurysms, and heart failure with edema. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

April 4, 1901. (XIV Jahrgang, No. 14.)

1. Bacteriology in Making an Etiological Diagnosis. ED-MUND NEUSSER.
2. The Causes of Human Botryomycosis. R. von BAR-ACZ.
3. Intestinal Hemorrhage after Replacing Incarcerated Hernia. JOSEF PREINDLSBERGER.

1.—While bacteriology has shown the causes of certain diseases, it has not by any means differentiated the existing varieties of micro-organisms from one another. But it has shown different localized processes to be the same disease. Nowadays the physician must not only consider a disease clinically, but bacteriologically also, especially as regards the cause. Yet bacteria are often found in perfectly healthy individuals. When the bacteria are seen in the blood, however, no doubt can exist; for then the bacteria must be the cause of the existing condition. But nearly all bacteria have their "doubles" to mislead the physician. Excellent as have been the results of the serum reaction, the possibility of some people being naturally immune, from idiosyncrasy, must not be overlooked. Nor does every case of tetanus, which has been cured by the use of antitoxin, show traces of the antitoxin in the blood serum. The changes found in the blood are not typical of any one special kind of bacteria. Leukopenia, with a diminution of the fibrin coagulation and a positive Widal reaction, would almost lead to the diagnosis of typhoid fever, yet the same condition can be brought about by the colon bacillus, or in psittacosis. Besides, a positive diazo-reaction in lung diseases shows mixed infection, being negative when phthisis exists. Bacteriology has shown that diphtheria is a purely local process. It has been of great value in Vienna, recently, as finding the pest-bacilli prevented the occurrence of an epidemic of pest. By aiding in the diagnosis, it has assisted the prognosis and indicated the treatment. Neusser reports the case of a woman of 50, with acute jaundice. Suddenly, three days later, she had a chill, her blood showed increased fibrin coagulation, polynuclear leukocytes, and diminution of the urinary chlorides. There were no signs of pneumonia. Two days later a diastolic murmur was audible over the aorta. Unconsciousness followed, with meningitis and death. Neusser had diagnosed cholelithiasis, endocarditis and meningitis pneumococci. The autopsy confirmed the diagnosis. To show the danger of this sort of diagnosis, Neusser reports another case typical of miliary tuberculosis, which proved to be actinomycosis of the appendix, liver and lungs. Pigment, which had not been noted, was present about the nodules in the choroid, which proved the diagnosis of tuberculosis wrong. There is no doubt that bacteriologists, with all their care, have already been

deceived in the results obtained. Yet the fact remains that bacteriology, hand in hand with pathological anatomy, is becoming more and more an aid to exact diagnosis. [M. O.]

2.—Botryomycosis and staphylococci have been found in the small pedunculated growths rarely found upon the hands or fingers. Von Baracz reports the case of a girl of 12, upon whose thumb a small tumor grew. This was extirpated with cocaine anesthesia. From the tumor streptococci and staphylococci grew in pure cultures. The tumor was a polyp-like myxomatoid fibroma. Von Baracz concludes that not only the botryomyces, but the staphylococcus and streptococcus may produce these tumors. [M. O.]

3.—Hemorrhage after an incarcerated hernia has been replaced in the abdomen seldom occurs. Preindlsberger reports two uncertain cases, and two certain cases, out of six years experience. One of the two cases recovered, the other died six days after operation, with hemorrhage. A thorough review of the literature is given. The prognosis in such cases is unfavorable. The treatment consists in the application of an ice-bag, and opium internally. The hemorrhage aggravates the low state of the general health, but is not itself the cause of death. [M. O.]

May 2, 1901. (XIV Jahrgang, No. 18.)

1. Lacerations of the Vaginal Vault During Labor. H. LUDWIG.
2. Syphilitic Dactylitis. FRANZ MRACEK.
3. The Question of Leukemia. WILHELM TUEBK.

1.—Will be abstracted when concluded.

2.—In syphilitic dactylitis the bone is affected primarily, the lesion then spreading to the soft parts of the finger. But as syphilis seldom affects the small bones, dactylitis is rare. Out of 50,000 syphilitics, Mracek has seen but 5 cases affecting the phalanges, and three of these were in children. In infants with hereditary syphilis, however, the condition is more common. Mracek reports a case of syphilitic dactylitis in a man of 30, in whom both fingers and toes were diseased. The affection first appeared six years ago in the left thumb. Three years later the third left toe, and a year ago both index fingers became affected. Now, besides, the right thumb, the right third and little toes are also thickened. Mercurial inunctions are given, alternating with potassium iodide. A Röntgen photograph had been taken, which showed the phalanges very pale, rarified, with distinct vacuoles in the bones. This appeared three years after the patient had acquired syphilis. There was an osteitis of several phalanges, the lime salts were withdrawn, and carious cavities formed. Then an inflammation occurred around the bones, with infiltration and edema of the soft parts. Mracek believes that potassium iodide alone is the best treatment. [M. O.]

3.—Tuerk reports more of his experiments to show that the ameboid parasite which Loewit claims to have discovered as the cause of leukemia is but a mass of remains of broken down lymphocyte nuclei. Tuerk proves plainly that the so-called parasites are not ameboid, not living, and not the cause of leukemia. [M. O.]

JOURNAL DES PRATICIENS.

May 11, 1901. (XVme, Année, No. 19.)

1. The Compression of the Fetal Head by Forceps. L. DEMELIN.
2. Mitral Obstruction from the Pressure of an Aneurysm of the Descending Aorta. S. E. HENSCHEN.
3. The Therapeutics of Hydrastis. E. TOURNIER.

1.—The amount of pressure borne by the fetal head may be immense. It may be due to the forceps, the pelvis, or both together. The pressure of the forceps is generally exerted in the diameter between its blades; the pressure of the pelvis is perpendicular to that. The latter occurs frequently, even in a normal pelvis. Demelin believes that care must be taken to prevent compression of the fetal head; that the forceps, applied obliquely, nearer the transverse than the perpendicular diameter, will be best; that a forceps must be used that will not slip; and that a Sims speculum may be used to protect the perineum during traction with the forceps. Finally, Demelin advises his modification of the Tarnier forceps, which will be serviceable in many ways. [M. O.]

2.—Henschen reports a most interesting case, a man of 18,

who had been under treatment for three years, with the diagnosis of **mitral obstruction** and subacute nephritis, with hydrothorax, ascites, and anasarca. He had had two attacks of erysipelas. The apex was in the sixth interspace, outside the midclavicular line. There was no thrill. Dulness extended to the right nipple, beginning above, 3 cm. below the suprasternal fossa. A prolonged presystolic murmur was audible, loudest over the pulmonary area. The right radial pulse was dirotic; the left small and tense. They were synchronous. Albumin, hyaline and granular casts were seen in the urine. There was dulness posteriorly on both sides, below the scapula, with rales. There was some purpura, with a few pustules. But no fever appeared until a few days before death. At the autopsy, liquid was found in the peritoneal, pericardial, and pleural cavities, (more in the right pleura than in the left.) The heart, hypertrophied and dilated, when raised, disclosed a tumor just above the diaphragm. There were no valvular lesions, but some myocarditis. The lungs were congested; an infarct was seen in the spleen; and the kidneys showed sclerosis. Theorta was somewhat dilated. Beginning 2 cm. below the subclavian, the aorta showed many plates of endarteritis, with a collection of **aneurysmal sacs**, all upon the anterior wall. Externally they looked like a thyroid gland, with its two large lobes. It exerted pressure only upon the left auricle and ventricle. It is difficult to decide whether the aneurysm caused the murmur. There seemed no cause for aneurysm, and there were no symptoms, from its position. The left auricle could not dilate on account of the aneurysm. The prominence of the precordia may have been due to the pressure of the aneurysm behind the heart. But an **aneurysm** in a laborer of 18 is rare; rarer still is **compression of the heart by an aneurysm of the descending aorta**. [M. O.]

3.—After reviewing the preparations of **hydrastis**, Tournier says that it is the main drug used to control hemorrhage. It is excellent in hemoptysis, epistaxis, purpura, hematemesis, enterorrhagia, and hematuria, but it is mostly employed in **metrorrhagia**. These uterine hemorrhages are divided into three classes, those of puberty, in which hydrastis is exceptionally effective; those of adult age, in which hydrastis, supplemented by local applications, works well; and those of the menopause or of old age, in which hydrastis may be of benefit. But it has no therapeutic effect in uterine cancer. Tournier advises but two preparations of hydrastis, the fluid extract, which is the best and most widely used, and hydrastinin hydrochlorate. They have also been used in bronchitis, endocarditis, nephritis, the vomiting of pregnancy, the neuroses, etc. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

April 14, 1901. (31me. Année, No. 15.)

1. Perilungual Eczema. W. DUBREUILH and D. FRECHE.
2. A Foreign Body in the Trachea. BRINDEL.

1.—**Eczema** occurs commonly about the finger nails. The matrix or the bed of the nail may be affected, primarily, or by contiguity from eczema on the back of the finger. The first sign is the redness of the supraungual tissue, which becomes painful to pressure. Rarely so much serum may exude that the nail is lifted up, and finally falls off. Striations will be noted in the nails, with punctiform depressions. But hemorrhage in the nail, or fissures may also appear. The whole nail may be raised from its bed, or a depression may appear in the median line. In chronic eczema the nails will be deformed. Eczema must be differentiated from psoriasis and thina. Three cases are reported, a supraungual eczema with punctiform depressions; an acute perilungual eczema of the matrix; and a chronic eczema of the matrix and bed of the nail. The treatment of **perilungual eczema** consists of boric acid or salicylic acid washes, and a dusting powder. In chronic inflammation, resorcin may give good results. [M. O.]

2.—Brindel reports the case of a child aged 7 years, who became suffocated after having eaten fried eggs. As the

dyspnea continued, with cough and vomiting, a physician was called in haste. Her breathing calmed down, and nothing was done. The next day the cough and dyspnea persisted, with bronchitis. Laryngoscopic examination was impossible as the child could not be held quiet. The muffled cough with rumbling respiration, most marked during expiration, suggested the presence of a **foreign body in the trachea**. A Roentgen photograph was taken, which showed a mass about half the size of a thumb, just below the glottis. It threw too deep a shadow for bread, yet too light a shadow for any metallic body. It was immobile. **Tracheotomy** was performed, and the foreign body removed with a curette. It was a bit of the hard edge of the eggs. The tracheotomy opening was sutured, no canula being left in, and the child quickly recovered. The voice always remains normal in these cases. The diagnosis is made from the muffled cough, dyspnea, and sudden onset. The foreign body could never have been coughed up in this case. A good light and a frontal mirror are needed for operation. Tracheotomy will be necessary in most of these cases, and rarely, as in this case, it will not be obligatory to leave a canula in the tracheotomy wound. [M. O.]

May 5, 1901. (31me. Année, No. 18).

1. Iodide of Arsenic in the Emphysematous Bronchitis of Children. R. SAINT-PHILIPPE.
2. A New Operative Procedure for Strabismus. CAMILLE FROMAGET.
3. The Study of the Portal Circulation in the Liver. SEREGE.

1.—In treating the diseases of the respiratory tract in children, Saint-Philippe has made the observations, first, that true asthma is very rare, and second, that chronic bronchitis does not occur. **Bronchitis** often recurs, or may be prolonged, but never becomes chronic. He considers emphysematous bronchitis the form most common among children. With this there is always some dyspnea, yet never marked asthmatic paroxysms. Some emphysema appears, but disappears again when the bronchitis is cured. When a child has many attacks, his bronchi become distended from loss of elasticity. In the chronic bronchitis of adults, on the contrary, bronchiectasis is due to rupture or atrophy of the elastic fibers. This bronchitis is commonly observed with the infectious diseases, especially in rachitic, lithemic, or tubercular children. As treatment Saint-Philippe has used from 5 to 15 drops of 1% solution of **iodide of arsenic** three daily, with meals, with much success. [M. O.]

2.—Fromaget describes the technique of his **modification of the operation of advancement of the eye-muscles, with tenotomy, for strabismus**. His article is illustrated to make the details of the procedure clear. He has had excellent results from it. [M. O.]

3.—From a dozen experiments upon animals and man, Sérége believes that the classic idea of but a single blood current in the portal vein from the intestines to the liver is erroneous; that in reality two currents exist, one from the mesentery to the right lobe of the liver, the other from the spleen to the left lobe; that these two currents do not mix; and that the liver is formed of two well differentiated lobes. After quoting 25 clinical observations from literature, and analyzing 188 livers from diabetic subjects, Sérége concludes that clinical observation, anatomy, comparative anatomy, physiology, pathological anatomy, and experiments all prove that a direct relation exists between each of the branches of the portal vein of the lobes of the liver; and that this relation of one branch to one lobe of the liver remains constant. [M. O.]

Disarticulation of the Knee.—Disarticulation of the knee presents many advantages over amputation of the femur above the knee. Dr. G. Chavannaz reports two cases in the (*Journal de Médecine de Bordeaux*, 1901, No. 21). One was a man of 63, in whom epithelioma developed at the site of an old fracture. The knee was disarticulated, and the patient recovered. The other was a man of 34, with tuberculous osteitis and osteo-arthritis. He also recovered after disarticulation of the knee. Both patients walk without a cane, using a simple wooden leg from the knee. Elliptical flaps were made. [M. O.]

Original Articles.

SPASTIC ILEUS.

By EDWARD QUINTARD, M. D.,

of New York.

Every day we are getting to recognize more fully the profound effect which the nervous system exerts on the various organs and elements composing the human body. In spite, however, of all that has been said, or that at present can be said, we are woefully at loss to interpret correctly countless clinical facts coming daily under our notice, yet which, unfortunately, many of us seem quite content to pronounce "nervous phenomena," a phrase which seems to be so seductive a morsel of ignorance and bliss, that folly frequently feasts where wisdom starves.

To the gastro enterologist, and especially to one who endeavors to unravel some of the mysteries of the intestinal neuroses, the fact that he finds himself constantly gazing into "the dark, unbottomed, infinite abyss" is only too evident, for the more he endeavors to untie this particular Gordian knot, the more intricate does it seem to get, until the investigator, unless he has the true spirit and a grim earnestness of purpose, finds that the term "nervous phenomena" has a particularly soothing sound.

There are many reasons why our knowledge as to the influence which the disordered or diseased nervous system exerts over the various organs of digestion has not grown apace. The following may be considered some of the chief of these:

First:—It is only in rare instances, and especially is this the case with the so-called "functional neuroses," that there can be a demonstrable pathology, because the patients either recover completely, or, if not, they die of some intercurrent disease, the symptoms of which entirely mask those of the functional neurosis, and if then it should come to an autopsy, it would be, in most cases, an absolute impossibility for the pathologist to say, if lesions were found in the nervous system, whether these changes in the nerves were the cause of the former supposed functional disorder, or whether these nervous lesions themselves had not arisen in the course of the last acute or super-imposed disease.

Second:—To the physiologist the problems which face him in the course of his investigations are particularly vexatious and trying. To begin with, in the case of "test animals" it is extremely difficult to obtain exact physiological conditions. The manipulation of the nerves must, in certain instances, be exquisitely delicate, and the dissection of the nervous system, especially of its minute ramifications, is a task that can be accomplished only by the most skillful and experienced—a keen eye, a steady hand and a cool head is the rare combination necessary.

Third:—I think this fact is too frequently lost sight of,—we should never forget that a well dog is not a sick man, and that although many sound and enlightening facts can be obtained, and many

helpful theories deduced from experiments on healthy animals, nevertheless, we must be extremely careful how we draw conclusions from such experiments, otherwise we may find ourselves repeating, like the good Master, Ludwig Traube, in that delightful anecdote as related of him by one of his greatest pupils, our own true and sterling Osler, "Wir haben nicht richtig gedacht."

As the object of this paper is purely clinical, I shall confine myself to a description of a few of the more interesting cases of "Spastic Ileus," that have already been reported from time to time, in, for the most part, foreign journals, adding two cases of my own. The names of the authors and their articles, together with the titles of articles dealing with experiments on peristalsis, are given in full at the end of this paper.

(1) **Jaccoud, 1867**, mentions the case of a young hysterical girl who had fecal vomiting for eight days, three or more such attacks occurring during each day. At the end of the eighth day they stopped. Ten days later patient contracted typhoid and died at end of third week. Autopsy—absolutely negative. In 1892 he saw another hysterical woman who had fecal vomiting and surgical interference was being discussed when it yielded to anti-spasmodics such as bella-donna, camphor, etc.

(2) **Voisin** reports a case of a young hysterical woman who sickened three times with symptoms of intestinal occlusion. Twice a cure followed through anti-spasmodics and purges, but in the third attack she died. The autopsy showed a purely spasmodic contraction of the intestines, nothing more.

(3) **Cherchewsky's Case**. "M. M., lawyer, aet. 42. Up to his entrance into the university, in 1860, perfectly well. The political troubles of that time made a deep impression on him and he became exceedingly nervous. He never had syphilis, but had had malaria, from which he recovered, but the malaria increased all his nervous symptoms and left him subject to constipation and dyspeptic symptoms, such as loss of appetite, belching and pain in the stomach, which latter, even at that time, had a predilection for the right side. These troubles gradually increased in intensity and frequency until, having reached a certain degree, they remained stationary 20 years, alternating with periods of brief yet perfect health. The symptoms were as follows: Coated tongue, noisy belching, loss of appetite, constant oppression in epigastric region, the abdomen was markedly distended, especially on right side, where the patient complained of a hollow and constricted pain. There existed obstinate constipation—intervals passing as long as 8-10 days without a stool, and when stools came they were in the form of isolated little balls or the fusiform masses 8-10 cm. long; when this was the case great effort had to be made at evacuation, manual aid being frequently necessary. In the intervals of well being which were quite frequent, the stools came suddenly and with ease, and were of larger volume both as to thickness and length. Believing that his trouble all came from his food, the patient began to refuse to eat, now this thing, and again that, and in general ate very little. As a consequence he became feeble, emaciated rapidly, and was subject to frequent attacks of vertigo. At the same time his work increasing, his responsibilities as a lawyer became very great. One day, after being constipated for 10 days, he felt a desire to go to the stool; the prodigious efforts which he had to make had no results—save that he expelled from his mouth a piece of excrement as thick as the finger and 8 cm. long, of a yellow color and characteristic odor. A fainting spell of very short duration followed this accident, but he recovered shortly and went to work. One hour and a half after this there was a copious and easy stool. When the patient came to us he presented a pale and exceedingly delicate appearance. There was nothing abnormal about the abdominal organs except that the abdomen itself was moderately distended, especially toward the right side. There was no pain on pressure over the epigastrium. Just below the umbilicus and a little to the right the patient experienced on hard pressure a dull pain which was propagated towards the region of the stomach and produced a slight nausea, as well as

*Read before the American Gastro-Enterological Association, Washington, D. C., May 1, 1901.

some belching the latter without odor or taste. The nervous system presented nothing abnormal.

Treatment. Belladonna $\frac{1}{2}$ t. i. d. Almost immediately produced normal stools. Codeine produced the same effect. The general treatment consisted in cold douches of 15° taken daily. In seven months the patient was cured.

This case was in all probability one dependent upon neurasthenia with its consequent disturbance in metabolism.

(1) **Rosenstein's Case.** "J. von der Moesel, a nine year old boy of blooming appearance, came to the clinic March 8th, 1882. His mother states that up to February 1st, 1882, he was absolutely well. Since that time off and on, he has had peculiar attacks. At first only once a week; later on several times a week. Up to the moment of the attacks the boy seemed well and happy; all at once he apparently would become unconscious for a moment or so, have convulsive twitchings and then under great terror void spherical fecal masses from his mouth. The closest inspection of the little patient revealed nothing abnormal physically; all his organs were seemingly sound. During the night from 9-10 P. M. he had, according to the nurse, slight twitchings of the face, arms and legs, during sleep, and on awakening, vomited a few scybala. During the following days, from the 12th to the 25th, the boy had so many attacks that both my assistants as well as myself had ample opportunity to observe the same."

"In the midst of happy play, just as if he felt an aura, he would run suddenly to his bed; or, being in bed and in the midst of a conversation with his neighbor, he would become suddenly quiet, next alternately bend and stretch his fingers a few times, until violent tetanic extension of both arms followed; then presently the two legs and feet would become involved, and trismus occurred, clonic convulsions of the masseter and marked grinding of the teeth having preceded these symptoms—finally, violent opisthotonus took place. After this had lasted for a space of time, the boy would awake, and under a feeling of great terror, would put his finger in his mouth, and take out 2 or 3 formed scybala and at the same time have stool, the scybala of which were of exactly the same appearance as those voided by the mouth. The individual scybalum had a length of 1.7-3 cm. and a circumference of 4.5-7.8 cm. At one time even he voided per os. a sausage formed mass 18 cm. long. One day a clyster of alenna was given him with the result, that, the masses voided per os., which as a rule were of yellowish brown, were colored dark blue. During the attack of opisthotonus his state of unconsciousness was such, that loud calling evoked no response."

"Artificial opening of the eyelids, however, was always sufficient to awaken consciousness and at times to stop the entire convulsive attack. The complete train of symptoms as given above did not always take place. Repeatedly there were seizures in which the tetanic extension of the arms alone took place. The attacks could not be produced by pressure on the nerves or arteries of the extremities. The fecal vomiting occurred for the most part after a severe attack, but at times this was not the case. Stool also occurred almost invariably simultaneous with the fecal vomiting, but not always. There was no visible peristalsis. It must also be mentioned that the boy was well nourished and that the abdominal covering was by no means thin. Following stool and vomiting the patient complained of pain in the abdomen, but at no particular point was there aught discernible at fault with the abdominal organs."

"The treatment consisted in large doses of bromide of potassium and clysters. By this means the attacks of convulsions which at first lasted two hours gradually became shorter and less severe. But up to the 28th of March they occurred together with fecal vomiting, the latter whether there had been stool or not. The last attack was on March 30th, after which the boy was with us four weeks without any attacks, and then only once after he returned home did he have a seizure."

(5).—**Dr. Paul Sandoz.** On October 3rd, Sandoz was called to see a strong, well-built man aet. 55 years, who up to date had been perfectly well. He was suffering from frightful pain in the abdomen, which had already lasted an hour. He was lying in bed and screaming with pain, covered with clammy sweat, the extremities were cold, the face anxious."

October 3d.—"The pains extend over the entire abdomen and radiate towards the back. There is nausea and uninter-

rupted vomiting. He at first vomited food, but later a bile colored fluid. There is also some tenesmus. Patient every minute demanded the bed-pan without being able to have a stool. Pulse weak, 60. No fever. Abdomen is soft—not painful; nothing abnormal can be detected. No hernia. Nothing in liver, kidneys, lungs and heart abnormal. Close questioning showed the patient to be suffering from tabes, although he never had syphilitic symptoms, nor was he alcoholic. Was given morphine hypodermically, and ether sulphuric, 3.0 Syp. Gummos, 20.0 Aq. Destill, 130.0 q. i. d."

October 4. "Next day patient was easier. Pains less severe, but the bilious vomiting continues. Pulse 65. T. 37°C. No stool. Very weak, but extremities no longer cold. Abdomen not tender, but more distended than in previous period."

October 5.—"No better. Abdomen more distended, but not tender and tympanitic all over. No stool. A Senna infusion is vomited. Clysters bring away only small hard fecal balls. Everything eaten immediately vomited. P. 46. No fever."

October 6.—"Meteorismus increases constantly, vomiting continues, bilious in character. Since the evening a continuous singultus. High lavage; no effect."

October 7.—"Since this morning fecal vomiting. The vomit consists of a yellow brown fluid in which are solid masses of the same color, and the whole has a characteristic fecal odor. The singultus permits of no rest. The abdomen is distended and is hard. At 9 A. M. gastric lavage; result, a large quantity of fecal fluid. Lavage until fluid returns clear. Singultus and vomiting stop after lavage. No stool. In the course of the afternoon the singultus and vomiting return, but lavage again checks it. No stool."

"This same condition lasts up until October 16th, the fecal vomiting lasting up to this date. It was always arrested for a time by washing out the stomach, which was done twice daily. The meteorismus was by that time enormous. Patient complained of very severe cramp-like abdominal pains. The prostration was great, voice broken. The patient was cyanotic and complained of a horrible taste in the throat and mouth. Since the 13th faradization of the throat has been tried."

"The condition of the patient was extremely precarious when, on the evening of October 16th, one-half hour after gastric lavage, he passed gas and shortly after expelled large quantities of fluid and semi-solid masses. Immediately the singultus and vomiting ceased."

October 17.—"During the night several more stools. Patient very weak but a great deal easier; the cyanosis and meteorismus rapidly disappeared and he made a rapid recovery."

(6). **Hoorweg.** A 26-year-old woman, since 12 years of age nervous, and for 15 years has had hysterical attacks. Grew worse at commencement of menstruation: then paraplegia; at 19 years of age anuria and vomited matter which had urine-like odor. After this fecal vomiting, and 6 years later mental disturbances. On admission, stupor, sensory and sensible anesthesia, analgesia, reflexes increased, pelvic organs sound, bladder and rectum empty.

Course: Morning stomach washings always contained remnants of evening meal, evening gastric washings often contained fecal masses. Injections of 1½ litres are often completely absorbed, 4 or 5 hours later vomit contains much fecal matter. Bladder proven by catheter to be empty, or else contains only strong concentrated urine. Faradization of rectum and bladder brings about undoubted betterment.

(7).—**J. Grundzach's Case.** In May, 1894, Grundzach was called to see a gentleman with whom he was personally acquainted, and whose age was something over 30. The patient complained of violent pains over the entire abdomen, complete stoppage of stool and wind, and loss of appetite. This condition, which had lasted for 24 hours, began after eating a hearty supper, and amongst other things the patient remembered swallowing a fish bone. He had taken calomel and castor oil without effect. There had been no stool and no gas passed, but there was an undefined pressure about the anal orifice. Examination of the patient revealed a distended stomach which was tympanitic on percussion; the abdomen was tender on pressure, but outside of a marked symmetrical distension of the intestinal tract, re-

vealed nothing abnormal. The face was anxious. Remembering the fish-bone, Dr. Grundzach inserted his finger with some difficulty in the rectum, and 8 cm. from the anal orifice detected a hard, beam like, transverse lying body, both ends resting against the intestinal wall, and so grasped by the latter, that it could not be moved without great pain. Finally he succeeded in getting hold of one end of the offending body, not without, however, a momentary violent pain to the patient, and gradually worked it downward, until, grasping it with 2 fingers, he withdrew a discolored fish-bone, 5-6 cm. long. Immediately upon the removal of the fish-bone the abdominal pains vanished, the abdomen became softer and there was scarcely any pain on pressure. Shortly after this the patient passed wind and several semi-fluid stools.

Grundzach remarks that it is very interesting to think that so sharp and large a body as this fish-bone could be swallowed without discomfort and pass the entire intestinal tract without hindrance until it reached the rectum where it caused an intestinal spasm at the point of lodgement. Furthermore, Grundzach contends it is strange that the pain was not localized in the lower part of the abdomen or in the anus, but over the entire abdomen, and that it should disappear on the instant that the fish-bone was removed.

(8) **Treeves Case.** A 24-year-old woman was admitted to the hospital because of fecal vomiting. Since 4 weeks stoppage of stools is supposed to have existed. At the beginning the symptoms bettered themselves, only to return in a few weeks more markedly. Patient now vomited the nutrient and oil clysters. Experimented by injecting methyl blue per rectum. Found that such injections, as was the case with the oil, were voided every time by the mouth, in less than ten minutes and in full quantity. Treeves diagnosed a gastro-colonic fistula and performed laparotomy. Found, however, absolutely normal conditions. After the operation the patient simulated the death agony, as usually conceived by the laity. All symptoms vanished on isolating the patient, i. e., when she had no public to play to. She was discharged cured.

Several months before this the patient had been twice operated upon for the same symptoms and diagnosis in the London Hospital. There also the symptoms disappeared after the operation, only to return in a few weeks. It is to be further noted that the patient was operated upon in Poland, and that she could in some unknown way raise her temperature to 50° C. Treeves prognosticated a still further operative career.

(9) **Tansini** reports a case of ileus spasticus following the operation for movable kidney. The case was that of a woman who two days after the operation was seized with severe abdominal pains, complete suppression of stool and flatus, a distended abdomen and great weakness. On the fourth day there appeared distinct and strong visible peristaltic actions; on the fifth vomiting; on the 6th, the condition was such a bad one that laparotomy suggested itself, in that all therapeutic measures had failed. On the 7th day the patient began to pass gas, then feces and recovered.

After being completely well for 3 months she complained of the same ailments as before operation, the consequence of which was that the other kidney was fixed in place. Directly after this there again appeared the symptoms of occlusion which lasted seven days, the vomiting, the visible peristalsis, the complete suppression of feces and gas appearing and disappearing at the end of the 7th day as suddenly as they had appeared.

(10) **Slajmer Case.** "It deals with a severe case of hysteria, as observed in a Sister of Charity, 26 years old, weak, anemic. Ever since October, 1887, she has been ill. She felt at that time, after a work of great exertion, pain in the left abdominal side, palpitation and pressure, and since has suffered from loss of appetite, flatulency and obstipation; for $\frac{3}{4}$ of a year anemia is supposed to have been present. In the summer of '89, according to account, there has existed inflammation of the kidneys with retention of urine and swelling of the feet. In the year of 1890, frequent vomiting, great faintness, pain after eating, and belching. Even at that time one physician was said to have diagnosed intestinal stenosis. These conditions grew better and worse several different times. The symptoms were especially severe in June, 1892, at which time, according to account, there were for 14 days severe pain, nausea, vom-

iting and tenesmus with retention of stool and wind. The patient described the pains as follows: 'In my left side it seemed as if something was torn; when I wished to make a step, there was always something like a thumb which came forth and pressed against the peritoneum.'

"This is supposed to have continued until August. There occurred also backache, headache, and fear lest she should become insane.

"In 1893 all the troubles returned, but as the patient was known to be hysterical not much attention was paid to her. Not until February, when there was an increase in the symptoms, did she come to the Surgical Department of the General Hospital at Lalsbach, February 26, 1893.

"She was at that time anemic to a high degree, but only slightly collapsed. The abdomen was very markedly distended, especially towards the left of the navel, where the examination revealed a greatly distended intestinal loop. According to accounts after the passage of both stool and wind had been absolutely arrested, for 8 days there occurred after the second days' sojourn in the hospital, vomiting of distinct fecal smelling matter. For this reason Dr. Slajmer undertook laparotomy on February 28th, 1893. His report was as follows: 'On opening the abdomen distended intestinal coils welled forward. The search for the obstruction was made principally towards the left, because the patient always complained of pain there; here there was found a part of the small intestine 20-25 cm. in length (which incidentally lies 2 m. beneath the flexura duodeno-jejunalis) band-like in form, and contracted to the size of a little finger. This part of the gut looked like the part of the intestine leading away from an obstruction. Nevertheless, as it was drawn forward, which was easily accomplished, it was shown that no obstruction existed. The intestine above the contracted point was distended to more than three times the normal size, the part below the contraction was of normal dimensions. The contracted part was brought out. Gradually it filled, and became similar in dimensions to the adjoining parts. But for a long time the boundaries of the formerly contracted intestine could be determined by its difference in color.

"No other cause for the fecal vomiting could be found. There was absolutely no sign of peritonitis."

"The course after the operation was a smooth one, and on the next day stool occurred."

"Several months later there were again hysterical ailments (Globus, etc.), and recently intestinal symptoms. Then followed undoubted symptoms of enteroptosis. At the end of October on account of especial sinking of the left kidney, nephrorrhaphy was done on this side with lasting results. The repetition of the former intestinal symptoms was, however, by no means affected by this. But after this there was a disinclination to undertake any hysterical methods of treatment the complaints were bettered or ceased."

"The conception that in this case the symptoms of ileus might be caused, by the movable kidney which existed at that time, although unrecognized, is excluded by the discovery made at operation. Because so even a contraction of the intestine involving so great a length could not result from such a cause, again, the conception that the nephroptosis caused the ileus is yet further weakened when one thinks that after the fixation of the kidney the intestinal symptoms reappeared as formerly. There rests, therefore, no doubt, that we have to deal with a purely functional disturbance of the intestinal tract."

Schloffer Case. (10) "Mrs. Marie Sellner, 28 years old, married, of Prag, had already on account of a severe hysteria been to many different clinics, and to many doctors in Prag for treatment. Dr. Funke, assistant in the Medical Clinic of Hofrath Pribran, had for many years on account of the peculiar symptoms which this patient presented, owing to her hysteria, taken an especial interest in the case, and observed her closely. I have to thank him for the information that during the course of the time in which he observed her, the patient showed the following hysterical symptoms: Concentric contraction of the field of vision, hyperesthesia in geometric arrangement, very variable paresthesia of the upper and lower extremities, distinctly painful pressure points beneath the mammae, distinctly painful ovarian pressure points, and painfulness on pressure along the spine. Stomach symptoms which for the time being led one to think of ulcer, which, however, passed very quickly over, and at times pronounced hys-

terical convulsions. Along with this it is to be observed that on account of a chronic endometritis of the body and neck of the uterus, Prof. Rosenstein had to remove the vaginal part of that organ. She was at the German University Polyclinic in May and June, 1897, on account of a hysterical and bloody cough (no evidence of phthisis). This lasted 6 weeks.

"At the same time there appeared bloody urine. The first assistant of the polyclinic, Dr. Kraal, drew off bloody urine by means of the catheter. On the 21st of June, 1898, the patient came with the assertion that for 5 days she had had no stool. She was given aloes and injections, and on the next day as these remained without effect she was given a lavage ofenna infusion and drastic purges. As these measures were absolutely futile, they were increased during the next few days. The general condition in the meantime was good, the cheeks were bright red, and there existed no especial distension of the lower abdomen; but presently nausea and finally vomiting set in. On May 26th, the patient vomited feces. Dr. Kral visited the patient just at this time at her house and was shown a great deal of feces in pieces and fragments, which in quantity would correspond to a good stool, and which according to the statement of the patient's husband, who in this case is to be absolutely relied upon, had just been vomited by the patient."

Dr. Kral had the opportunity to observe the patient vomit a small amount of formed feces in his own presence, and eventually introducing the stomach tube, he could for a long time draw off, through this, yellowish and fecal smelling water, together with solid pieces of feces. At this time the patient asserted that several years previously she had suffered from peritonitis, and her husband substantiated this information by reason of the opinion expressed by the physician who attended the woman at that time. This induced Dr. Kral, in consideration of the immediate symptoms to send the patient at once to our Clinic. She presented at her admission (June 26th, 1898) the following condition:

"The patient was somewhat collapsed, and appeared to be quite excited. Pulse 110, fairly strong, cheeks flushed, temperature 38°. Tongue moist. Singultus was present; facial expression anxious. The abdomen appeared to be slightly distended, and in the right lower abdominal region there was slight pain on pressure. But neither through percussion nor through palpation were there any definite signs by which to locate an obstruction. The same can be said of the rectum, which was empty. According to the patient, wind had not been passed for a long time."

The question was, should I operate or not? That this patient was a marked hysteric, I had already been informed; that therefore the fecal vomiting might be a hysterical symptoms only, I also knew. But on the other hand a mechanical obstruction could not be excluded. I thought at the time of a peritoneal band, and in that case the postponement of the operation could be of fatal significance. So I finally concluded to operate."

"Under morphine and chloroform narcosis an incision was made which extended from a point of 3 fingers breadth above the navel and reached to the symphysis. After opening the peritoneum intestinal coils of normal dimensions presented themselves. As no abnormal or mechanical obstruction was immediately evident, gradually and under the greatest caution a complete eversion of the intestines was made. Despite this fact there was, however, not the slightest sign of inflammation nor of mechanical obstruction revealed, nothing, in fact, which explained why fecal vomiting had occurred. Even a widening of the intestine at any point could not be detected. On the contrary, the small intestines, at several parts, which belonged to the lower part of the ileum, were found to be in stretches of 10 cm., narrowly contracted and hard to the feel. At several points little scybala, which were closely grasped by the intestines and were bounded above and below by contracted intestines, could be moved by pressure. At no place during the operation was one able to see the slightest suggestion of peristalsis. Mechanical irritation only produced a slow local contraction. At no place were there solid fecal masses nor any accumulation of such. The colon was everywhere soft, and its lumen distended to its normal dimensions.

"After the exploration, the abdomen was closed with exact reference to its layers."

"As soon as the patient was roused from her narcosis, I sought her out and showed myself very much satisfied over the operation just accomplished and told her that the obstruction was found and successfully removed, and that now she would be forever freed from her intestinal symptoms. The course of the wound after the operation was a good one. But the symptoms on the part of the intestinal glands gave us some further trouble; namely during the first ten days from time to time there was obstinate and colicky vomiting (not of a fecal nature), which was finally quieted by morphine. On the second day wind was expelled, but not until after the fifth day of the operation could she obtain stool by means of clysters; from that time forward, however, normal stools occurred."

"Frequently after this I saw the patient, and ½ a year later she reported that she had been several months pregnant, but that despite of this she was quite capable to work and attend to her household duties without experiencing the slightest inconvenience. Furthermore, that she had normal stools and was perfectly well in every other respect."

Wölfer's Case.—Some years ago Prof. Wölfer observed a similar case at the Grazer Clinic. In this case also on account of the symptoms of intestinal occlusion and because of the assertion that there was fecal vomiting, laparotomy was performed and a condition similar to that found in the case just reported revealed, and again in this case, although the results of positive examinations are not on hand, yet certain symptoms point conclusively to the fact that this case also was one of hysteria.

"Fanny Rotter, 31 years old, of Radkersburg in Steiermark, who was sent to the Grazer Clinic by Dr. Einfeldt; had been under medical treatment for a long time, in part, because of symptoms of peritonitis; in part, because of an anuria, occurring several times and lasting several days, and at that time made one think of hydro-nephrosis. Since then there have been frequent attacks of constipation lasting 11 days. When the patient came to our clinic in fact, just 14 days had gone by without the occurrence of stool. Recently the patient had suffered from vomiting and belching and finally fecal vomiting was supposed to have occurred. Severe pains in the abdomen which were localized near the middle of the central part of that region accompanied as a matter of fact by a not very marked meteoric distention; this together with the assertion that absolutely no wind had passed per rectum within the past few days, although during this period there was frequent belching, completed the picture of chronic intestinal occlusion."

"However, in the operation performed by Prof. Wölfer, November 10, 1888, no peritonitis nor obstruction was found, which would have prevented the evacuation of stool. The intestine was nowhere strikingly distended, only in certain places somewhat widened. The colon was everywhere filled with hard scybala and at several different parts the small intestine was contracted between two points, which latter corresponded to parts of the intestine whose lumen was filled with a scybala mass."

The course after the operation was a smooth one, and after a few days normal stools occurred. The patient went home after having been under observation clinically for five months. The stools were always sluggish and she frequently had to resort to laxatives. Something more than half a year after the operation the patient first observed a painful swelling of the abdomen in the region of the old operation. The pains became constantly worse; the swelling grew more prominent, it reddened and became inflamed, and one night, according to the patient, there was suddenly severe tenesmus, which only ameliorated towards morning when the inflamed swelling broke and a great evacuation of feces took place at that point. During the following days many hard fecal nodes came through this opening. From now on nearly all the stool evacuations took place at the artificial anus. In the summer of 1889 the patient again returned to the Clinic and at that time she had an intestinal prolapsus 15 to 20 cm. long, through the artificial anus, which was slightly incarcerated and which could only be replaced by the greatest of difficulty, after ice applications. On January 23d, 1893, Prof. Wölfer operated and closed the artificial anus. At that time an intestinal resection and suturing was done, and the patient made a good recovery. A few days after the operation the assistants attending the patient were frightened because she was found with a high degree of meteorism,

although her general condition was good. This meteorismus again disappeared and on the 4th of April the patient was discharged with a slight ligature-fistula in the scar, but having normal stools. According to the patient this fistula healed at home after which she was well for several months. Then, however, another little fistula formed which day by day secreted a little; then again under symptoms of fever, swelling occurred at the scar which after a time opened, and again there developed an artificial anus through which all stools emptied themselves. Since then nothing has changed in the patient's condition. She did not wish her artificial anus closed through which she had regular stools, but recently she has again manifested all manner of hysterical symptoms. I saw her again in the summer of 1898. Finally, it must be further mentioned that at one time the patient had a paralysis of one arm and a simultaneous circumscribed anesthesia of the thigh on the same side."

(11) **S. Talma's Case.** "K, 20 years old, belonging to the better class; hereditary nervousness; suffered repeatedly from severe attacks of colic, which weakened him very much. Of these attacks the following peculiarities may be reported:"

"The uncomfortable feeling in the abdomen, which he constantly suffered, gradually increased for a few days; the stool became very sluggish. The uncomfortable feeling increased until it became a pain; stool then became altogether inhibited. There arose a very uncomfortable feeling of cramp in the bladder and in the testes, and without ones being able to constitute any change in the position of these organs; the patient felt as if these organs were being drawn violently upwards."

"The abdomen in general was, without any contraction of the abdominal muscles themselves, very sunken. Towards the left side of the linea alba, however, in the hypogastrium the abdominal wall was in several places pressed upwards by two tumors, one of which was sausage-shaped, the other being in the shape of a ball. These tumors constantly changed their resistance without becoming altogether soft. They gave a tympanitic and fairly deep percussion note which during the greatest increase of resistance became less loud, higher and no longer tympanitic. Through the sausage shaped tumors there proceeded constant peristaltic movements. In short, they were intestinal coils (of the small intestine) whose contents were for the most part gaseous and which did not permit of either an upward or downward displacement. Intestinal colic could therefore be diagnosed with absolute certainty. That the contents were not displaced by the violent cramps of the intestinal wall, is proven, because at the end of the distended coil the intestinal lumen was closed by the cramps. That the cramps were the immediate cause of the pain was proven in that the latter increased or diminished according as to whether the former grew more or less severe. Under the feeling of a violent distension of the bladder there was frequently passed a small quantity of urine, which was rich in urates and free from albumen."

"Gastric cramps did not occur at this time."

"Pressure on the abdominal aorta above the navel caused violent pains; pressure on the ganglion beneath the navel was rendered impossible owing to the distended intestinal coils."

"In spite of the use of purges there was no stool. Fairly large doses of morphine injected subcutaneously did not dispel the pain. The stomach only tolerated small quantities of fluid nourishment."

"Through a large dose of antipyrine the intestinal colic as well as the colic of the bladder, and the feeling in the testes disappeared. Stool followed. Larger quantities of fluid nourishment could be taken. The patient's strength, which had greatly suffered, gradually increased; even after several weeks, however, he still felt very weak."

"Seven days after my first examination I was able to examine the patient again. He then was complaining of the same feeling in the abdomen and testes. I again found beneath the sunken abdominal wall a pair of distended fairly hard intestinal coils, which the patient said was the region of the pains. Besides this the parts in front of the abdominal aorta are very sensitive. The stool was again interrupted for two whole days."

"A large dose of antipyrine dispelled the pain at once. Quinine had, in the course of the following days when the symptoms of milder cramps presented themselves, an equally beneficial influence. Under the use of these reme-

dies and of easily digested food, at the same time keeping the abdomen well covered with thick woolen coverings, the intestinal cramps disappeared altogether, and gradually also, even if later, the uncomfortable feeling in the testes."

"During the months which followed under a similar treatment, the conditions became much better; at times antipyrine had to be given for the intestinal cramps, but frequently quinine was sufficient."

During the course of these months an attack of gastric cramp developed, which was accompanied by vomiting, etc. (I regard this fact as worthy of note in that it proves the cause of the gastric cramp and intestinal colic was one and the same.)"

"During this entire time the sympathetic remained, even if to a lesser degree, very tender to pressure, and upon pressure on the abdominal sympathetic the old and very uncomfortable feelings were manifested although less severely. Finally the neurosis of the sympathetic was so far cured that I could advise the patient to return to Dr. Metzger, who had already greatly benefited the ailment through abdominal massage."

(To be Continued.)

A NEW METHOD OF MAKING TANNIN AVAILABLE AS AN INTESTINAL ASTRINGENT.

By ALBERT C. BARNES, A.M., M.D., and H. HILLE, Ph.D.
of Philadelphia.

The great disadvantage attendant upon these remedies employed for astringent action upon the intestinal canal is that they are not only astringent to the stomach, but also undergo certain chemical changes in the gastric and intestinal juices whereby they are deprived of their astringent properties.

Pharmacologists well know that an agent designed for local action upon the intestines must be unaffected by the gastric juice, must be free from action upon the gastric mucous membrane, pass into the intestines chemically unchanged and must not be absorbed. It can be safely stated that not a single one of the intestinal astringents employed to-day possesses these desiderata.

The salts of the metals—silver, lead, copper—have so many objections that their application is exceedingly limited, and, in fact, meet few, if any, of the indications. Tannic acid is acknowledged to be the ideal astringent for mucous membranes if it can be brought chemically unchanged, in contact with them. This astringent action is due to the fact that tannin causes structural changes in the mucous membrane, whereby the albuminoid bodies are precipitated. There ensues, consequently, shrinking of the parts, constriction of the capillaries, and diminution of secretions. Heinz observed also that tannin causes a cessation of the movements of the leucocytes at the point of application and prevents their escape from the blood vessels, thus removing an important factor in the pathological condition of catarrhal inflammations and ulcerations. However, when tannic acid is administered internally, but a very small quantity reaches the intestines, because it is decomposed by the gastric juice into gallic and pyrogallie acids, which are non-astringent. Furthermore, the principal effects of the tannic acid consist of undesirable and deleterious actions upon the stomach, i. e., it coagulates the entire superficial layers of the gastric mucous membrane, thus practically abolishing the functions of secretion and digestion, and leads to grave functional and organic disturbances of the stomach. Because of the chemical changes which it undergoes in the presence of

the gastric juice, and because of its deleterious effects upon the stomach, the almost ideal astringent properties of tannic acid cannot be made available for the intestines.

Schmiedeberg, the highest authority on pharmacology, recommends that tannin-bearing plants (kino, catechu, krameria, etc.) be employed instead of tannic acid, because in these plants the tannin exists in combination with various gummy colloid materials, which, on account of their insolubility, prevent the rapid elimination of the tannin and thus, to a certain extent, diminish the local astringent action on the stomach. However, as is well known, even the tannin-bearing plants disturb the stomach, and, moreover, form an uncertain method of medication, inasmuch as the tannin exists in them in unknown and varying quantities.

Gottlieb, of Heidelberg, found that by precipitating albumin with tannic acid and then heating the resulting tannin albuminate for five or six hours at a temperature of 110°C ., this body could be made to a certain extent resistant to the action of gastric juice. Extensive reports particularly from the European clinics, prove that this tannin albuminate is a decided improvement in the previous methods of administering tannic acid. However, as is conceded, this tannin albuminate does not possess the properties of an ideal intestinal astringent. It was supposed by Gottlieb that this body being heated to the high temperature above noted, would render the albuminate digestible with difficulty and consequently the tannin would be first freed from its combination with the albumin when the compound reached the intestines. The following experiment shows that this is not the case: Two grammes of tannin albuminate were mixed with 100 cc. of water to which 0.2 gm. absolute hydrochloric acid and 0.2 gm. pepsin were added. This, as will be noted, corresponds exactly to the composition of the gastric juice. Digestion was then allowed to proceed for six hours at 40°C .—the temperature of the human body. The mixture was then filtered, dried and weighed, when it was found that 1.19 grammes, corresponding to sixty per cent. of the tannin albuminate had been digested and dissolved. This experiment was repeated four times always with the same results. It is therefore evident that a tannin containing body which dissolves to the extent of sixty per cent. in an artificial juice under exactly the same conditions as prevail in the human system cannot be considered free from astringent action upon the stomach.

Incidental to some pharmacological and chemical work upon the nucleo-proteid class of bodies the writers undertook to produce a tannin compound that would be even more resistant to digestion, consequently present more astringent tannic acid to the intestines, and what is even more desirable, but very gradually evolve free tannin from the compound when the body is acted upon by the alkaline intestinal juices. The object of the latter attribute is, in as much as in most cases of catarrh and ulceration of the intestines, the lesions are present also in the lower portions of the intestines, the astringent action of tannin upon these parts of the canal is very desirable. The writers found that by the synthesis of nucleinic acid and albumin there results an entire-

ly new body which chemical analysis shows belongs to the nucleo-proteid class of bodies. Under certain chemical and physical conditions this body enters into combination with tannin and forms a yellowish-brown, tasteless powder containing fifty per cent. of tannic acid. This tannic nucleo-proteid is insoluble, does not precipitate albumin, pepsin or peptones. We instituted the same experiments as made with tannin albuminate and secured the following results: Two grammes of tannin nucleo-proteid, 100 cc. of water, 0.2 grms. absolute hydrochloric acid, 0.2 grms. pepsin were digested for six hours at a temperature of 40°C . It yielded but 0.5 grms. in solution; that is seventy-five per cent. of the body retained its original form. Even forty-eight hours' digestion under the same conditions failed to further digest the body; it is therefore evident that seventy-five per cent. of the tannin nucleo-proteid passes through the pylorus chemically unchanged and the body must be therefore practically free from astringent action upon the stomach. The following experiments show the behavior of the tannin nucleo-proteid toward the alkaline intestinal juices. Two grammes of tannin nucleo-proteid were digested 6 hours at 40°C . in an artificial pancreatic juice consisting of 0.1 gm. pancreatin and 0.33 grms. sodium carbonate. There went into solution 0.56 grammes (twenty-eight per cent.) of the body; 1.44 grammes remained unchanged. Further experiments showed that it required additional alkali to dissolve more of the tannin nucleo-proteid. These experiments demonstrate that this tannin nucleo-proteid *but very gradually evolves tannin from its combination*.

The advantage of this gradual elimination of tannin from tannin nucleo-proteid can be readily understood. As the remedy passes downward through the intestines and meets fresh portions of the alkaline juices, more and more tannin is gradually released. Thus is the astringent brought into contact with the entire intestinal canal, even to the lowermost portions of the colon, as is evidenced by the fact that small quantities of tannin nucleo-proteid and tannic acid may be detected in the feces.

Another advantage of this gradual elimination of tannic acid from tannin nucleo-proteid is that the astringent action of tannin is more complete when but small quantities come in contact with any one portion of the intestinal mucous membrane, while large quantities produce local irritation and defeat the objects of treatment. (Schmiedeberg).

In order to determine the effect of the tannin nucleo-proteid on animals it was tried on fifty calves which had been fed exclusively on milk and were suffering from profuse diarrhea. As every veterinarian knows this form of diarrhea is one of the most intractable. Four grammes of tannin nucleo-proteid were administered at intervals of from two to three hours. In most cases the diarrhea ceased at the end of forty-eight hours; at the end of four days the epidemic was completely controlled. Clinical trials on human beings in two Philadelphia hospitals and in one New York hospital, now being conducted, indicate that tannin nucleo-proteid will be a valuable adjunct in the treatment of various diseases of the intestines associated with diarrhea.

SOME OBSERVATIONS RESPECTING THE VALUE OF THE PRESENT METHODS OF MEDICAL EDUCATION.*

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The changes introduced during the past few years into the system of medical education have been most marked and have become themes for important discussion. The old method of the students having the instruction or direction of a preceptor, has been largely displaced by more extended college courses. This has been rendered necessary by the large numbers of students who have of late years entered upon the study of medicine and presumably for the reason that there has arisen a greater difficulty than there was formerly in securing outside instructors who are inclined to take students, owing to the sharpness of competition and to the manufacturer's ability to present for general use numberless varieties of remedial agents. The régime to which the medical student was subjected was undoubtedly a great help and the experience of that service tended to make him familiar with the uses and advantages of most of the medicines on which the physician could place his main reliance and upon which the success of his practice generally largely depended. The multiplicity of courses and the division of labor on the part of the teaching force have not unfrequently served through the disposition of a professor to emphasize his own individual department and to change the whole aspect of affairs. The average student realizing the impossibility of thoroughly mastering within the short period of four years all the various subjects that are continually being placed before him finds that he must sharpen his wit and must resort to many expedients. The materia medica which by some state boards receive but small attention is passed over with as little consideration as is possible by the graduating student. The real lack of understanding of this portion of medical science has been the cause why numerous proprietary articles have been substituted for those which should have been studied and prescribed with greater care. If the student has a fair or practical acquaintance with the English or with the language in which he is to be examined, he soon learns the art of speaking or writing in platitudes and of arranging indefinite statements as a substitute for exact and perfect answers. The hobbies and pet theories of individual professors or instructors have to be studied or more or less considered; a partial comprehension of these may serve as a substitute for the real marks of scholarship. The sharpening of the wit and the calling out of latent talents or the devising of expedients may be regarded by some as the result of educating influences, and perhaps to a certain extent such attainment may be most helpful in the subsequent management of trying cases, but the value of such methods of doing falls far short of the object to which the student at first intended to direct his energies. It must be admitted, nevertheless, that there has been upon the whole within the past few years a great advance made over the older methods of medical training. One of the chief drawbacks

which still exists to the higher attainments lies in the need of the right kind of preliminary education. The student coming from what is often termed a first-class college from which he has obtained the A. B. or the B. S., or other equivalent degree, is often in reality no better suited to enter and to follow out the exactions of the medical profession than are those who have spent much less time in preliminary acquirements. Take into consideration, for example, the ordeal through which in this vicinity the student has to pass before attaining his first degree. Three years in the primary school, six years in the grammar school, and five years in the Latin school and then four years in the college, thus making eighteen years spent, and for what? why, simply, it may be, to become prepared to enter upon the study of the mere rudiments of medical science. I shall never forget the remark once made to me by my friend, the late Dr. Samuel Nelson, who said that after having successfully passed through a similar ordeal subsequently graduated at the Harvard Medical School and then spent two years in Germany; that in endeavoring to fit himself for doing good work he had seriously impaired his health in consequence of the prolonged period of overwork, and that on the completion of his preparation, the woods he found were full of competitors. Thus twenty-four years had been spent before he was regarded as ever competent to commence his life service at the foot of the ladder. What would seem now to be imperatively demanded would be the establishing of proper courses for medical students, courses that while duly fitting the student to enter upon the successful study of medicine, would admit of more expedition, would be more conservative of his energies, courses that would have an alluring influence, that would lead him along, and that would beget in him the true spirit of scientific investigation and, above all, afford the opportunity of allowing him to engage earlier in the more direct work to be carried on during his life, and one that would be so complete and conservative as to offer no temptation to be indulged in whereby his ardor and assiduity in the pursuit of the more strictly professional part of his curriculum would be lessened. In such a course a considerable portion of time should be given to the acquirement of French, German, or other modern languages. Half of the delights of professional training are not realized, owing, as it is too often the case, by the failure to be acquainted with those languages. Too much time is often worse than wasted by the student's endeavor to gain a mastery (but only of the rudiments) of ancient tongues. Such a study is better adapted (if one wishes to have only ancient ideas of philosophy) for theologians, antiquarians, or men of leisure. Some academic colleges, notably Harvard, have recently allowed the first successful year in its Medical School to count as the final year toward the A. B. degree; but this, it is plain, is only a temporary expedient to be employed until a more specific and conservative course can be adopted. I think the time has fully come when no allowance for any of the four years' course should be made on account of the students' possession of the A. B. or B. S. degree. If the student is unwilling to devote the full four years to the study of medicine before receiving the medical degree, he had better take up some other

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calling. It would be preferable to have the time extended to five or six years instead of its being lessened on account of the possession of any attainment whatever. As regards the question of the success of coeducational institutions in medicine, there can be but one opinion; such schools should be encouraged. They have a reforming and an educating influence on the men and even on the professors; they tend to improve their manners, fit them for society, and to keep down their conceit. The women often show the men that they are able to become competitors who may outdo them in the race. Much of late has been said of the great advantages of the laboratory and of the case system over those of the purely didactic method of teaching. Any and all of the different methods have their operation of usefulness. The time is far distant when didactic courses can safely be dispensed with. The teacher "flaming with enthusiasm," bringing all the years of his ripe experience into culling from the heterogeneous mass the real or vital facts to be remembered will always be held in high favor. No dissecting room, no laboratory, and no case system, can be wholly substituted for the inimitable descriptions that were sometimes given in lectures by Oliver Wendell Holmes, for the bold spirit that was so often displayed by Henry Jacob Bigelow, for the enthusiasm shown in recounting the original investigations made by Virchow or for the eloquence and beauty of statement presented by Lannelongue. When making a demonstration before a class or delivering a lecture, I have always insisted upon the compliance with the rule that the members should take notes so that they could afterwards read up and be able to recall in detail what had been brought before them. In speaking of the value of didactic lectures to students and of the importance of their learning the contents of text-books, it deserves to be remarked that time employed in that direction is always exceedingly useful. The advantages thus accruing may be aptly compared to the careful preparation that should be made by the tourist or traveller before taking his departure for a foreign country. Those who usually have made the best attempts to learn the language of the country to be visited and to inform themselves upon the nature and character of the scenes and objects to be met with, have profited most by taking such a journey. All experience in such travels proves the truth of this statement. The same obtains with the student before as well as during his entrance upon his laboratory work, upon the courses of his dissections, and upon those at the bedside. One great fault in the text-books which are prescribed is that they are often ill-adapted for the student's need; such books are all too often compiled and put forward more for the interest of the publisher and for the advancement of the author than for meeting the real needs of the students. Hence, the greater value of a lecture course given by an experienced teacher. Free drawing and illustration upon the blackboard become a more or less important means of enhancing the value of a lecture. Such illustrations not infrequently prove to be much better than are printed charts hung up before the class. The professor's diagrams tend to excite interest and to stimulate the members at trials of their own skill in this direction. No one can doubt the advantages to be

derived from devotion to laboratory courses; here it should be remarked that a large part of the whole four years' course should be employed in the laboratory, in the dissection, and the autopsy rooms, at the bedside of the hospital or in the dispensary under the supervision of competent instructors. No student should receive the degree of doctor of medicine until he has attended at least six successful cases of obstetrics and has been made to feel that he has had to share with his instructor a part of the responsibility of the work. The course in gynecology and abdominal surgery should be well illustrated; its lessons should serve to impress upon the student the dangers resulting from the neglect to take proper precautions against sepsis and the dangers of allowing any accidents occurring through traumatism of parturition to go unattended to. Careful drilling and frequent examination upon all important subjects should be insisted upon. The student should be required to do much original work in the way of examination and in the diagnosis of disease. He should be able to present a good paper, exemplifying a genuine scientific mode of observing facts and a ready yet rational method of making a deduction. Such a paper should be expected at intervals until the time for the preparation of his final thesis; the appearance of the latter should be judged as to the student's full ability to recognize and to interpret many of the more obscure and varying phases of diseases. The standing of every student should be known to the professor not only by record, but also by being reinforced by much personal observation as to his habits and manner of pursuing his work. I believe that the custom obtained of passing judgment upon answers to written questions without knowing anything personally as to who the candidate may be, is an unwise measure of proceeding. The practice savors too much of the expedients of the politician, who, for the most part, is anxious to offend no one if he can merely gain his ends. If the student is unsuccessful in examination, I believe that it is far better to tell him plainly in what his deficiency consists, that he may profit in due time by the lessons of such bitter experience. Before closing, allow me to say that a medical school should not assume so much of the task of completely fitting the student before graduating to become a specialist in all of the various branches of medical science as it should be to urge upon him the necessity of becoming well grounded in all of the essential principles underlying the healing art. The accomplishment of the specialist can only be gained by much post graduate work and by frequent contact with experts of the individual line to be pursued.

A Case of Poisoning from Russet Shoe Polish.—In the *Journal des Sciences Médicales de Lille*, 1901, No. 29) Adrien Besson reports a case of poisoning, in a child of 6 years, from russet shoe polish containing anilin. At noon, after having played upon the sea shore all morning, she came in pale, though with a good appetite. Cyanosis and torpor gradually came on. Her mother quickly put her to bed, noticing how blue and cold her extremities were. By three o'clock she was quite blue and cyanosed. Heat and stimulants cured her in a day. She had, however, worn new shoes, polished with russet shoe polish. They had a distinctly nauseating odor. Since that time she has kept well. The shoes were never worn again. Analysis of the shoe polish showed 91% pure anilin. [M. O.]

A FEW INTERESTING OBSTETRICAL EXPERIENCES.*

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of Philadelphia

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Mr. President and Gentlemen:

The title of this brief communication may be poorly chosen, as it possibly is presumptive on my part to style the following cases interesting, but such they have been to me as well as instructive, and it is with the hope they will prove equally so to you that I now ask your kind indulgence for a short time.

The first three cases resemble each other in many ways and seem to me to teach several important lessons. They are as follows:

CASE I.—Mrs. F., white, aged 33, married 12 years, had one child at full term during the second year of her married life, a miscarriage at 6 months 2 years after the birth of this child, and another miscarriage 2 and a half years later. Her menstrual history is as follows: puberty at 12 years, always regular and painless at intervals of 28 days and with normal flow lasting from 4 to 5 days. For the 2 years preceding the history of her present trouble she complained of backache, more or less severe, some leucorrhea and pain in the lower part of the abdomen, especially in the left iliac region. Menstruation became more profuse, with considerable pain, on the first day but not enough to require medication.

Her present trouble dates from November, 1898, when she had her last regular period. The December period failed to come on and at that time she became nauseated with some vomiting in the morning. Frequent urination and feeling of weight and gradual enlargement of the abdomen were noticed. The nausea gradually diminished and disappeared about February 1st. On the 28th of March, 1899, she felt what she believed to be fetal movements, which persisted constantly and distinctly until she fell in labor, August 13th, 1899. Up to this time she was in the hands of a neighboring physician, who was called to deliver her. After laboring 18 hours she became exhausted and discouraged and, discharging her physician, called in another, who sent her to the Samaritan Hospital, where, in the absence of Dr. Haehnlen, through whose courtesy I report this case, I was called to deliver her. On questioning her at this time a part of the above history was elicited and, in addition, she informed me that a large quantity of water had come from her about 10 hours after she noticed her first pain. On examination I found a stout, well built woman, weighing about 190 pounds, with a tremendously enlarged abdomen, striae and linea niger very faintly shown, the breasts contained colostrum and the primary and secondary areola were present.

Bi-manual examination elicited a soft, club shaped cervix, lacerated bilaterally and patulous to the internal os, which was tightly closed. No distinct uterine enlargement could be made out on account of the thick abdominal walls nor could any fetal movement be felt or fetal heart sounds or uterine souffle be heard. On examination under ether, the uterus was felt enlarged to about the size of a 2 months pregnancy. In a normal position, the left ovary was enlarged and the whole left broad ligament, including the tube, was thickened. There was a muco-purulent discharge from the uterus and a curettage was done, with no other results than the removal of some shreds of endometrium, and a diagnosis of complete pseudocyesis was made, with ovarian disease as a positive cause. Subsequent history: Patient was discharged 12 days later from the Hospital with abdomen as large as on admission. Periods have been regular ever since with some pain on first and second day, backache and a soreness or tenderness in the left iliac region; otherwise her condition is normal.

The lessons that are taught by these cases are: (1) that

pseudocyesis, or any of the so-called phantom tumors of the abdomen, can only be diagnosed correctly by a careful examination under an anesthetic, and; (2) that the ovarian disease present in these cases had in all probability a casual relation to the symptoms related. The literature on the subject, however, is very barren, and I could find no reference to any relation between pelvic diseases and pseudocyesis, which I am inclined to think my three cases seem at least to suggest.

CASE II.—Mrs. H., a markedly neurotic patient, aged 33, married 11 years, had two children, followed 3 years ago by a miscarriage. Puberty occurred at about 13 years and has since been irregular but not painful. On October 1st, 1899, I was requested by her physician, Dr. W. H. Hornby, to meet him in consultation to assist in making a diagnosis. The history is briefly as follows: Had amenorrhea extending over January, February and March, with nausea and some vomiting in the morning. The abdomen during these three months was noticed to be steadily enlarging. She was examined at this time by another physician who pronounced her 4 months pregnant, and he was engaged to deliver her, the nurse being also engaged at this time. In April she began to menstruate again and had what was apparently normal periods in May and June. The abdomen, notwithstanding the menstruation, seemed to be getting steadily larger, and in July nausea reappeared but menstruation failed to come on at this time. Dr. Hornby was called and expressed doubts as to her being pregnant. The breasts at this time were enlarged, veins were markedly distended and colostrum in abundance was present, with a distinct primary and secondary areola. In August and September she had metrorrhagia and menorrhagia. When I saw her on October 1st, 1899, the abdomen was enlarged to about the size of a full term pregnancy but no fetal heart sounds or uterine souffle could be heard. I suggested an examination under ether with the following results: The uterus was slightly enlarged and retro-displaced, both ovaries prolapsed, tubes apparently normal as to size and the right ovary quite considerably enlarged. A curettage was done and the patient made a good recovery. Subsequent history, which was kindly furnished by Dr. Hornby, is as follows: Since the recovery from the curettage Mrs. H. has been under my care at different times for her general nervous condition and she had some nausea and backache. Her abdominal enlargement disappeared, her breasts regained their normal size, and she lost considerably in weight. At this time she has missed two periods and has had morning sickness and frequent micturition with slight enlargement of the abdomen.

CASE III.—Mrs. D., age 30, married 3 years, had a miscarriage during the first year of her married life, had not been pregnant since and was very anxious to become a mother. Puberty occurred at 14 years, and was regular and painful. If compelled to be on her feet a great deal, the pain with the next period would be considerably increased. Had always had leucorrhea and backache as long as she could remember. Periods were regular after her miscarriage until November 10th, 1899, and from that time she had amenorrhea extending over December, January, and February. About the middle of February she thought she felt life, which was noticed until March 10th, 1900, when she started to menstruate again. At that time I was invited by Dr. Kline Baker, her physician, to see her, and advised an examination under ether, with the following results: The uterus was normal as to size but slightly drawn to the right side, the left ovary and tube were markedly enlarged and the right ovary was apparently normal, with a slight muco-purulent discharge from the uterus.

Subsequent history: Menstruated normally each month for 5 months and then missed one period with some morning nausea, but from her previous experience did not think she was pregnant and reported to her physician, who finding evidence of some congestion of kidneys prescribed a diuretic, three days after which menstruation came on and it has been regular ever since up to the present time.

CASE IV.—The following case is reported because it illustrates so well one of the causes of the mal-presentation of the head. I was engaged to deliver Mrs. H., a primipara, aged 26, and, following my usual custom, made a careful

*Read before the North-West Medical Society, November, 1900.

examination, including pelvic measurements. The examination revealed a small woman, with slight scoliosis, pelvic measurement between the anterior superior spines, 25 cm., crests 27 cm. and of Baudelocques', 19 cm. Vaginal examination: head presenting at superior, straight and very high up, and back of fetus to the right and the posterior fetal heart sounds were most distinctly heard to right and posterior part of the abdomen. No abnormality of pelvis could be made out. I calculated her time to be about May 25th, and did not see her again until she fell in labor, June 2nd, 1898. Vaginal examination at this time revealed the head high up and floating at the brim, the cervix was tightly closed and the pains irregular and not severe. I instructed her to send for me when the pains increased in force and frequency, and two days later I received a message to call. On reaching the patient I found the cervix dilated to the size of a silver dollar, and the bag of water bulging well into the vagina, the presenting part still in the same position as previously mentioned. On careful examination I was able to make out the features, with the chin pointing posteriorly, and I then did a podalic version. The patient was delivered safely and made an uninterrupted recovery. I was engaged again later to deliver her of a second child which was due about December 25th, 1899, and when I made the usual examination I found the same condition as existed in the previous pregnancy, viz: a right mento-posterior position. I left instructions that I should be sent for as soon as labor started, but this was not done and she suffered 24 hours before I was called, as she wished to avoid the etherization. On examination I found the face presenting and still high up at the brim, the os dilated, the bag of water unruptured and, under ether, I did podalic version and delivered without any trouble. After the child was delivered and while the patient was still under the anesthetic, I made a careful examination and found what I consider to be the cause of her two mal-presentations, viz, a quite well-marked bony obstruction at the right posterior portion of the superior straight. The head probably presented as an ordinary L. O. A. in the beginning but the bony obstruction brought about an extension instead of a flexion.

CASE V.—This is the last and briefest case that I have to report. Mrs. E. B., age 41 years, has had 7 children, the first 20 years ago and the last one October, 1900. All her labors were normal. During the fourth pregnancy her face and arms became covered with the so-called chloasma uterinum, of a marked character, which has persisted, as

is also shown in photograph (Fig 1b). I have made a brief mention of this case because the chloasma is so well marked and has persisted so long, the usual rule being to disappear shortly after delivery. In addition to this, the location of this pigmentation will disprove the state-

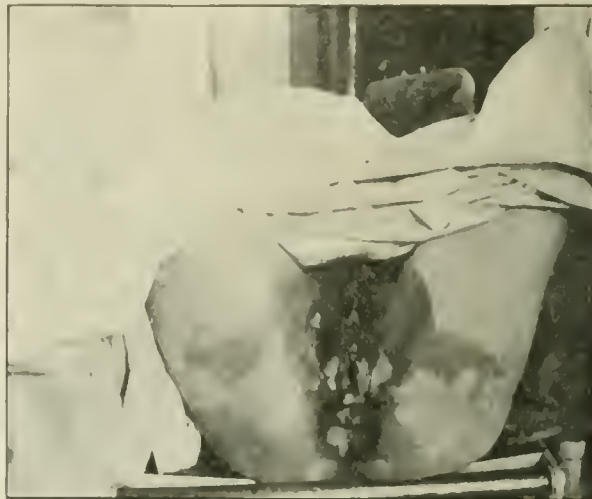


Figure 1 (b) Chloasma uterinum on the buttocks and thighs.

ment made by Joul that chloasma uterinum only appears on portions of the body exposed to the sun, principally the face. I wish to thank Dr. Haehnlen for permission to report this case, and Dr. Brinkerhoff, Resident Physician at the Samaritan, for notes of the same.

PHOTO-MECHANICAL REPRODUCTION.

By B. H. BUXTON, M. D.,

of New York.

Instructor in Bacteriology, Cornell Medical College, New York.

(Continued from Page 80.)

THEORY

Of Collotype, or Alberttype or Heliotype.

Gelatine, which is soluble in hot water, absorbs cold water and swells up, retaining the moisture for a considerable period of time. Bichromatized gelatine acted upon by light becomes insoluble in hot water and no longer absorbs cold water. If a bichromatized gelatine surface is partly acted upon by light and partly not, the excess of bichromates washed out and the surface dried, it is no longer sensitive to light. On damping the surface, the unaffected parts will absorb moisture and swell up, whilst the affected parts will not, so can be easily dried out, and will take a fatty ink, whilst this will be repelled by the moist parts.

This is the theory on which the practice of collotype is based, but where homogeneous half tones are to be reproduced these must be broken up into minute dots or lines, or their modulations will be lost. Unless this is done the surface will either take ink or will not take it, and the resulting print will appear simply black and white. A grain, therefore, must be produced on the surface, and this might be done by using a negative taken through a screen, as for printing in relief, but there would be no advantage in this, since relief printing is much cheaper than surface printing, and with the coarse grain of the screen the latter would yield no better results than the former. A method, however, is known by



Figure 1 (a) Chloasma uterinum on the face.

is shown in photograph (Fig 1a), up to the present time. During her last pregnancy, which has just been completed, she noticed that a new area of chloasma appeared, which

which an exceedingly fine grain can be obtained on the gelatine surface itself; a natural grain, as opposed to the much coarser mechanical grain afforded by the screen. In order to produce this grain it is necessary for the gelatine to rest upon a surface to which it will adhere very closely, and for this purpose a ground glass plate with a thin covering of potassium silicate and albumen is used. Over this the bichromatised gelatine is poured and allowed to dry. Now if the gelatine is dried at ordinary temperatures it will set and then gradually dry out evenly all over, so that no grain will be produced. If, however, it is dried at a temperature of 130° F. to 140° F., at which it remains fluid in the presence of water, the upper layers will shrink in drying whilst the lowest layer will be prevented from doing so by the substratum to which it adheres. Diagrammatically the process may be thus represented::

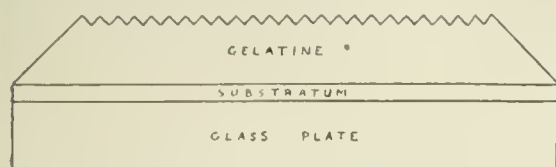


Diagram VIII.

This uneven drying causes the surface of the gelatine to wrinkle up, and after drying it will present a matt surface. In other words, the surface is grained, consisting of innumerable minute points which are acted upon by the light during exposure. When the surface is damped after exposure the unaltered gelatine swells, pushing up the points and separating them more or less according as the action of the light has been less or more intense. These points take the ink, the moist gelatine between them repelling it. The points being exceedingly minute the half tones in the print appear as homogeneous to the unaided eye as those in a silver print, but a pocket lens resolves the grain, very fine in the high lights, but becoming coarser and coarser through the half tones towards the shadows.

PRACTICE

of Collotype.

The glass must be of patent plate, $\frac{3}{8}$ inch thick, so that it will stand the considerable pressure of the printing frame and press. The surface is ground with fine emery powder passed through a sieve of 130 to 150 lines to the inch.

The substratum is then flowed over and the plate allowed to dry, set up on edge in a rack. A formula for the substratum is:

Beer	10 oz.
Potassium silicate	1 oz.
Tannin	$\frac{1}{2}$ grain.

The potassium silicate and albumen of the beer cause the lower layers of the gelatine to adhere closely, whilst the tannin exerts a slight hardening influence, but not enough to affect the upper layers on which the light is to act.

A plate thus prepared will keep indefinitely, but just before using—or storing—must be washed for a few seconds to get rid of silicate crystals which may have formed on the surface. It is air dried, then placed in a drying box, levelled and warmed

to about 120° F. Of the drying box it is sufficient to say that it must be light-tight, and capable of being kept at an even temperature by a gas or other burner underneath. Inside the box bars with levelling screws are laid across and the plate rests on the screws.

Coating with Gelatine.

A formula for this is:

Hard gelatine	100 grains.
Soft gelatine	100 grains.
Water	$2\frac{1}{2}$ oz.
Potassium bichromate	50 grains.

Dissolve the gelatine and bichromate in hot water and filter, keeping the solution at about 120° F. Take the warm plate out of the drying box, place on a suitable leveller, and pour the solution carefully all over it, allowing 4 minims to the square inch of surface. If a plate 10 in. by 12 in. = 120 square inches is used, it requires 480 minims, or one ounce of the solution. If there is too much gelatine on the plate the grain will be too coarse, and if too little the grain will be too fine.

After coating, the plate is kept on the leveller in the drying box at 130° F. for about two hours and can then be taken out and stored in a light-tight box at ordinary temperature. Plates so prepared will keep for about a week, but it is best to use them as soon as possible.

Exposure.

For printing on the gelatine surface any negative may be used, a soft rather than a brilliant one being preferred, but it is not safe to use a negative on ordinary glass, as this is liable to break under pressure in the printing frame. Such negatives should be stripped and transferred to celluloid films or thick plate glass. Exposure is conducted in the shade, time usually about an hour, or in sunlight, in frames so constructed that the progress of the printing can be observed from the back: the shadows and deeper half tones of the picture gradually assuming a rich brown hue, due to chromic and chromous oxides.

On taking the plate from the printing frame, it is laid face downwards on a sheet of white paper, and the experienced eye can now tell if the exposure has been correct or not: the shadows showing as a dark brown. The unaltered bichromates and other soluble substances are now washed out in several changes of water until the brown color has completely disappeared. The plate is then insensitive to light and when dry is ready for etching.

Etching.—The plate is damped in order to cause the unaltered gelatine to swell. This is called etching, although, of course, it has nothing in common with true etching or biting in. The plate is levelled and flooded with water, which is left on for 5 to 10 minutes, then poured off and a mixture of two parts glycerine to one part water, called the weak etch, poured over and allowed to act for about 15 minutes: the glycerine preventing the gelatine from drying out whilst the printing is going on. The etch is then wiped off with a sponge and the surface of the plate dabbed over with a soft linen cloth, after which it is ready for the printing press. If the plate is over exposed it may be treated with a strong etch: the usual etch with a little ammonia added, which helps to soften the film.

In both of the preceding processes it is evident

that the final print will be reversed from the original, as its position in the cycle corresponds to that of a negative, and this must be overcome, if necessary, by reversing the negative. There are many ways of doing this, but as in ninety-nine times out of a hundred it is a matter of indifference to the photomicrographer if his pictures are reversed or not, the methods need not be considered here.

III.—Deep or Intaglio Printing. Photogravure. Theory.

In this process bichromatised gelatine is used on a copper plate to which, by means of powdered asphaltum, a very fine grain is given, and which is then exposed under a transparency and etched with ferric chloride. On account of the fineness of the grain, printing cannot be done in relief, as the ink would smear all over the surface of the impression. Recourse must, therefore, be had to deep printing: the ink is dabbed all over, filling up the hollows, and is then wiped off the surface of the grain points, so that these appear white, whilst the paper takes up the ink from the hollows. A fine grain is necessary for deep printing, or, on wiping over the surface, the ink would be taken up from the shallower hollows, and these would appear white on the print, although they ought to represent the lighter half-tones of the picture. With a fine grain, however, the ink simply wipes off from the points, and the modulations from shadows to high lights depend more upon the number and fineness of these points than upon the actual depth of the hollows. As the printing is effected by taking up the ink from the hollows, it is evident that the etched out part will represent the shadows, and the gelatine in these parts must be unaltered during exposure, so that it can be washed away. Exposure is, therefore, to be conducted under a transparency instead of the negative, which is used for relief or surface printing.

Practice.

The final print will be reversed so a reversed transparency may be needed. The negative can be reversed, and from this a transparency made on a gelatine emulsion plate in the camera, or the transparency may be made direct from the negative by the carbon process, by which method, since development proceeds from the back, reversion is accomplished.

As few amateur photographers are familiar with the carbon process, it will be well to describe it so far as it applies to making transparencies, especially as development on the copper plate is done in the same way, so that one description will do for both. Stuff paper is coated with gelatine mixed with some colored permanent pigment and dried. This is called carbon tissue, and may be sensitized by immersion in a solution of potassium or ammonium bichromate and then drying in the dark room.

The tissue is exposed under the negative in an ordinary printing frame, and since the progress of printing cannot be watched as with a silver print, the brown tints observable in the collotype process being obscured by the pigment, it is customary to use an actinometer to assist one's judgment as to the proper length of exposure. The tissue prints

in about one-third of the time required for a silver print.

A glass plate somewhat larger than the piece of tissue is laid in a dish of cold water, into which also the tissue is plunged immediately after exposure. At first the tissue curls up, but flattens out as soon as it is moistened throughout, and must then at once be laid on the glass plate face downwards, and withdrawn from the water. Under a rubber cloth it is squeegeed tight to the plate, considerable pressure being used, and then kept for 20 minutes under pressure between sheets of blotting paper. It is then transferred to a dish of hot water at about 110° F. to dissolve out the unaltered gelatine. In two or three minutes the gelatine is sufficiently softened to enable the paper backing to be stripped off and development is proceeded with by washing off the soluble gelatine, whilst the parts rendered insoluble by the action of the light, together with their contained pigment, by means of which the picture is rendered visible, remain adhering to the glass plate, which is washed in cold water and allowed to dry.

From the transparency a negative is then taken on what is called the resist. The resist is also a carbon tissue prepared and sensitized practically in the same way as the ordinary tissue, except that the presence in it of so much pigment is not essential. Enough of this to enable the progress of development to be seen is all that is necessary.

The procedures of exposure and development are the same as in the case of the transparency, except that a copper instead of a glass plate is used, on which to squeegee the tissue.

The copper plate, however, must be previously grained, and for this purpose some powdered asphaltum is placed in a revolving box mounted on trunnions. The box is rapidly revolved to fill the interior with a cloud of dust. The plate is then inserted quickly and the dust allowed to settle on it. On removing the plate it is heated over a Bunsen burner until the fawn-colored deposit of asphaltum changes to a slaty gray. On cooling the resist can be squeegeed on.

Etching.—For this solutions of ferric chloride of varying strengths are used: the weaker the solution within certain limits, the greater its power of penetrating the film and attacking the copper beneath. Etching is, therefore, begun with a strong solution to penetrate the thinner parts of the film first, and is gradually weakened as etching proceeds, so that the thicker parts of the film may be attacked in regular gradation. By this means the shadows and deeper half tones get comparatively more etching than they would if a single solution were used, and stronger contrasts are obtained in the final prints.

Printing can only be done in a hand press, and not more than about 50 impressions can be turned out in a day, so that the use of this process is usually confined to reproductions of works of art for framing or for illustrating "éditions de luxe," but for general illustrative purposes the expense is too great, although the results are certainly superior to those arrived at by either the collotype or half-tone screen processes.

A photogravure can be distinguished by its plate mark. The paper is damped and printed under

great pressure, so that the bevelled edge of the copper plate leaves a distinct impression just beyond the margin of the picture. Here, however, a little knowledge is a dangerous thing, since a plate mark is often intentionally added to a collotype print in order to deceive the unwary and induce him to buy for ten dollars what is in reality only worth one or two.

Tri-Chromatic Photography.

A susceptible artist on seeing a tri-chromatic photograph is apt to shudder and refuse nourishment for some hours afterwards, but although we must agree with him that the results are crude and startling rather than artistic, and conclude that the photomicrographer is not likely to mar his work by this method of reproduction, still the theory on which the process is based is correct and of so much interest to the scientific mind, that a short account of it may, perhaps, be permitted.

The three primary colors of the spectrum, red, green and violet, when combined, excite three dis-

paper, for in this case all three sets of nerves have been rendered inert. This may seem to be a digression, but it is necessary to have a clear idea of the theory of complementary colors in order to appreciate the principles of tri-chromatic photography.

In the reproduction of colors, three negatives of the subject are taken: one through a red, another through a green, and the third through a violet-colored glass screen. In each case the color must be spectrum pure.

In the first case only red rays can pass through to the sensitive plate, so that on development silver will only be deposited where there are red rays, either pure or mixed with other colors emanating from the subject. With the green or violet screens, the green or violet rays would alone affect the plate; all others being cut off by the screen. The three negatives, from each one of which a metal plate is etched, may be represented spectroscopically by the following diagram, the printing being done from each plate in the complementary color:

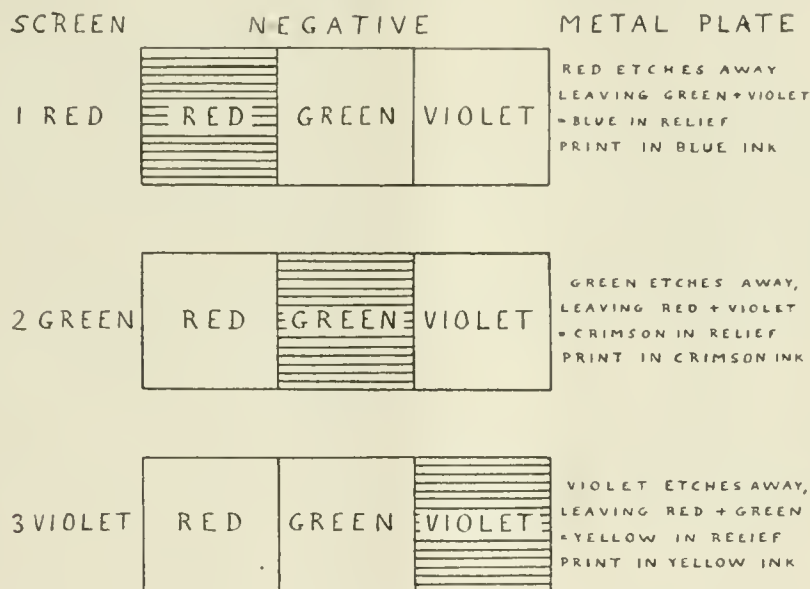


Diagram IX.

tinet sets of nerves of the eye and give the impression of a white light of extreme brightness. Any two of these combined excite two sets of nerves and appear brighter than any one of them which only excites one set of nerves. These double colors are:

Blue or Violet + Green — Red.
Crimson or Red + Violet — Green.
Yellow or Green + Red — Violet.

and each of these colors is complimentary to the primary color which is missing in it, whilst the missing color is complimentary to it. This may be readily appreciated by staring at a colored disc for some moments and then looking at a sheet of white paper, when the complementary color will be seen. If, for instance, this disc be crimson, a green disc will be seen on the paper. The reason for this is that the two sets of nerves for red and violet have been excited to their limits, and are for the moment inert; the set of nerves for green being alone able to register any sensation of light. If the disc be white on a black ground, it will appear black on the white

The impressions are taken first with yellow ink from Plate 3, next with crimson ink from Plate 2 and finally with blue ink from Plate 1: exact superposition of red on yellow and blue on the first two being necessary. This order is always followed for reasons which need not be entered into here.

Now let us suppose green to be the color in a certain part of the picture, the rays from which would only impress upon the negative taken through the green screen, so that on the plate taken from this negative they would be etched deeply and would take no crimson, so that none would appear on the final impression. On the other two plates, however, they would stand out in relief, and the impression would take yellow, and over this blue. Now a yellow surface absorbs violet and reflects red and green, whilst blue absorbs red and reflects green and violet. Consequently, with blue + yellow, both red and violet are absorbed and green alone is reflected. The green of the original appears, therefore, as green in the print.

To take a double color, let us suppose crimson is to be reproduced, or red and violet. Crimson, therefore, will act on the negatives taken through red and violet screens, but not on the one taken through green. Crimson then remains in relief on the plate etched from negative No. 2 taken through the green screen, and is etched away in the other two. But Plate 2 is used with a crimson ink, and therefore crimson in the original appears as crimson in the print.

The rationale for the reproduction of any color can be worked out in a similar manner, but of course with the more complex colors, like pinks, purples, and lavenders, is not by any means so easy, though they can all be produced by varying proportions of the three printing colors. The theory certainly is beautiful, but the results are vile, partly owing to the difficulty of getting perfect colors for printing. It is impossible, for instance, to get a blue ink which will reflect *all* the violet and green rays and absorb *all* the red, but any deviation from this ideal will result in more or less imperfect rendering of the original colors, and the same applies to the crimson and yellow inks.

Another reason is that, in order to preserve the half tones of the original, they must be grained by the screen or collotype process, and where a pale color is to be reproduced, the loss of homogeneity spoils the effect. A homogeneous wash of pale blue, for instance, may artistically represent the sky, but where this wash is translated into a multitude of dark blue spots, giving a general impression of paleness on account of the white spaces between them, the effect is apt to be harsh and crude rather than artistic.

Besides this, there is the difficulty of getting each layer of ink of exactly the right density. If the yellow is printed a little too deep, for example, even though the crimson and blue may be just right, the mixed colors containing yellow will not be faithfully reproduced, and the general effect will be spoilt.

If these stumbling blocks and certain others not mentioned here can be overcome, no doubt trichromatic photography has a great future before it, since there is not even an indication at present of any method by means of which true color photography can be attained.

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

April 25, 1901.

1. The Object of Functional Diagnosis and Some Remarks Concerning the Blood as an Organ, and the Regulatory Function of the Kidneys. O. ROSENBACH.
 2. The Technique and Value of Subcutaneous Injections of Quinine. BLUENCHEN.
 3. Further Facts Concerning My Method for Demonstrating the Presence of Human Blood. UHLENHARTH.
 4. Concerning Dr. M. Funck's Vaccine Germ. W. PODWYSSOZKI and A. MANOWSKI.
 5. Incomplete Oxidation of Sugar in the Human Organism. (Conclusion). P. MAYER.
- 1.—To be concluded.

2.—Bluenchen found that the muriate of quinine would dissolve readily in boiling water in the proportion of 1 gr. to 1 c.cm. and that it did not crystallize out of this water

when then cooled to body temperature. He therefore dissolves the muriate of quinine in boiling water in the strength mentioned, allows the solution to cool to a comfortable temperature and injects subcutaneously. It is important to pass the needle beneath and not merely into the skin. The solution may be thoroughly boiled to insure asepsis. The injections, when properly made cause no pain, indurations or other unpleasant results. The solution can be readily made, is cheap and acts well. [D. L. E.]

3.—Uhlenharth has found that injection of blood of one species into an animal of another species caused the production of some substance in the blood serum of the second animal which reacts with the first species of blood. A similar reaction is obtained by injecting a definite species of albumen into an animal of another species, but while the blood reaction seems to be practically wholly specific, reaction may be obtained with various closely related forms of albumen after injections of albumen. For instance, after injecting the albumen of hen's eggs, reaction may be obtained with the albumen of pigeon's eggs. He has previously shown that the reaction for human and other forms of blood is still specific even when the blood has been dried for months, and the most important part of this article is the report that blood that has been allowed to decompose for several months, or that had been kept for weeks, as well, as urine and menstrual fluid containing blood, gave the reaction perfectly and always a specific reaction only. The reaction was not interfered with by heating for an hour at 60° C., or by a number of preservatives, such as carbolic acid (0.5% solution). These facts are of great importance in relation to the medico-legal determination that blood is of human origin. [D. L. E.]

4.—The authors have found in vaccine pustules the objects described by Funck. (*Deutsch. Med. Woch.*, Feb. 28, 1901). They look upon them, however, from a wholly different point of view, considering them nothing but fatty epithelial cells and believing that they have no relation to the etiology of vaccine or variola. [D. L. E.]

5.—Mayer has found glycuronic acid in many affections that are often accompanied by slight glycosuria as well as in diabetes, and also in acute febrile diseases in which sugar is to be seen, not frequently found, but in which incomplete reactions for sugar are often observed. He has also found it in many instances of severe dyspnea and circulatory failure. In experiments on animals the latter conditions have repeatedly been found to be associated with glycosuria, but this is uncommon in human subjects. Mayer thinks that his results explain this difference between experimental and clinical results; the human organism like that of animals shows lessened oxidation under these circumstances, but in the former case the disturbance is less marked and shows itself only in a large output of glycuronic acid. He found in a dog that decreasing the oxygen intake caused a decided excretion of glucose but also a much more marked excretion of glycuronic acid. Further, after administering glycuronic acid to animals in large doses, he noticed signs of poisoning and found that their urine contained large amounts of oxalic acid, an evidence to his mind that glycuronic acid, like glucose may at times be incompletely oxidized in the organism, and that it is then excreted as oxalic acid. He also believes that this shows that during its oxidation sugar passes through the stage of oxalic acid. This was indicated too, by the fact that oxalic acid appeared in the urine in large amounts when animals were given very excessive quantities of sugar. This, Mayer thinks, settles positively the much discussed question as to whether oxalic acid is an oxidation product of sugar in the human organism. Mayer also found large amounts of glycuronic acid in 11 of 30 cases of diabetes, both when sugar was present, and when it was not, and he believes that this explains occurrence of incomplete reactions in diabetes when the actual glycosuria has disappeared and that examination for glycuronic acid may be of prognostic importance under such circumstances and may often be an indication that sugar is not wholly well borne when other methods of examination seem to show that it is. He also believes that the increase of unfermented carbohydrates in diabetes reported by Rosin and v. Valfthan (*Deutsch. Med. Woch.*, 1900, No. 31) was really an excessive glycuronic acid excretion. [D. L. E.]

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The Surgical Treatment of Goitre.—The *Edinburgh Medical Journal* for July contains a very interesting and instructive article on this subject from the pen of Marmaduke Sheild, of St. George's Hospital, London. Mr. Sheild has had what may be considered a large experience for an English or American surgeon, having operated 42 times for this condition. His cases show very excellent results. But one died, hemorrhage being the cause of death. It is shown that many cases may be greatly benefited by the iodide treatment. When medical treatment fails the author believes in doing something surgical to relieve the patient. It is shown very clearly that the delayed operations are the ones giving the poorest results, and on this account it is urged that cases be submitted to operation as soon as it is found that medication is of no avail. When one considers the work and results of some of the continental surgeons, particularly Kocher, one notices particularly that Sheild has not followed the practice of these men. He has always used a general anesthetic, and he reports many cases in which he has simply opened the sac and applied carbolic acid. It is also his custom to enucleate the growth when possible. In all of these points he differs from Kocher, who at the 30th Session of the German Surgical Society reported his second thousand cases of extirpation of goitre, from Kraske, who at the same meeting reported 420 cases, and from Riedel, of Jena, who reported 500 cases. These surgeons, as a general rule, all employ local anesthesia and they all advocate extirpation when possible, instead of enucleation. Kocher has abandoned the thyroid extract treatment and Kraske condemns it quite heartily. They both recommend the iodide treatment. Kocher shows a wonderful mortality of 4% for all of his operations. Kraske asserts that greater hemorrhage will follow enucleation than extirpation. Regarding the anesthetics one can hardly but agree with those advocating local anesthesia. The immediate dangers of a general anesthetic are thus avoided, and the subsequent vomiting, which is so productive of hemorrhage. During the operation any interference with the recurrent laryngeal nerves can readily be avoided. Sheild's recommendation and habit, in very

large and adherent cystic goitres, of drainage, seems to us good. It is free from danger, and he has shown that although such cysts may drain for a long time, yet they ultimately close. Probably in no branch of surgery has so great advance been made as in the operative treatment of diseases of the thyroid gland, and much of the credit must be given to Kocher, of Bern.

Operations for Gall Stones.—The question of mortality after surgical operations is one that has always been of the greatest interest to the profession and to the laity. For in proposing any operation the first question asked by the victim is always: "What chance have I of dying or recovering?" In certain respects it is a needless question, because experience shows that although it appears to be the case that of a certain number of patients submitted to some particular operation, about the same number will always die in every hundred, nevertheless, a careful analysis usually shows also that a more thorough knowledge of the fatal cases would have shown that the outcome was not entirely unexpected. Perhaps no man in the whole world is more intimately associated with certain limited but definite lines of surgery than Kehr. In the past 10 years he has done more to determine the indications, and to improve the technique of operations upon the biliary system than any other man—we might almost say, than any other half dozen men. Therefore, when he discusses the mortality of operations for gall stones his opinion must be treated with the profoundest respect. Quoting his own statistics, (*Muenchener Medicinische Woch.*, June 4th,) he divides the cases into the following groups, for each of which he gives the percentage of mortality. First, 210 conservative operations, that is to say, cysticotomy and cystostomy, with 4 deaths: a mortality of 1.9%. Second, 113 cystectomies with 4 deaths: a mortality of 3%. Third, 106 choledochotomies, or drainage of the hepatic duct, with 8 deaths: a mortality of 7.5%; and fourth, 156 complicated operations, involving operations upon the stomach, intestine, and the pancreas, or in cases in which there was carcinoma, sepsis, or peritonitis, with 69 deaths: a mortality of 44%. Kehr has

grouped these cases chronologically, and it is remarkable how, in almost all the forms, the mortality has been greatly reduced. Thus, in the last 100 cases, there have been no deaths either in the group of cystostomies or in that of cystectomies, so that the mortality from a simple operation for the removal of a gall stone can be looked upon as practically null. Certain interesting features may be discovered from the statistics. First, that the mortality is much greater among men than among women; the proportion in the last 100 cases being 40% and 8%. This, Kehr attributes in part to the weaker resisting powers of the men, as the result of persistent abuse of nicotine and alcohol, although it is possible that the greater frequency of carcinoma of the pancreas in the male sex contributes to the result. Certain cases may be regarded as invariably fatal: those of diffuse purulent cholangitis, and those of carcinoma of the head of the pancreas. He gives a brief summary of the 16 cases that died in his last group of 100, and calls attention to the fact that 12 of them could not have been cured by any operation or by internal medication. When, however, it is impossible to determine before operation just what the condition is, it is advisable to operate in all very desperate cases, that is, to give the patient the benefit of even a remote chance, when the outlook is otherwise hopeless. It is interesting to note that Kehr, of all men, advises conservative treatment in the majority of cases, and is in the habit of sending at least one-half of his patients to Carlsbad. He admits that the disease is not cured, but merely rendered latent by these methods, but is rather inclined to be satisfied with latency if an operation can thus be avoided. Some of our enthusiasts for operations might possibly take a hint from this.

The Pathogenesis of Cancer.—Dr. John Marnoch has contributed a valuable article (*Lancet*, July 6th, 1901) to medical literature, in which he gives the results of a number of important experiments on the effects produced by transplanting healthy epidermis into deeper tissues, and he also discusses the work of other investigators in this field. It has never been satisfactorily explained why epithelium tends to spread over the surface of the body, or why epithelium tends to cover an indolent ulcer.

Kaufmann, in 1884, claimed to have successfully implanted skin into deeper tissues with the result that the submerged epidermis did not die, and that a cyst developed. D'Arcy Power, acting upon the supposition that chronic irritation is a factor in the etiology of cancer, induced chronic irritation of the mucous membrane of the vagina of guinea pigs, rabbits, and rats. He was able to produce new

growths resembling in some respects cancerous tumors. Beatson inoculated animals with cancerous tissue from the human subject, and also transplanted the ovary and testicle of the rabbit into animals, without positive results. In every instance the transplanted tissue was completely absorbed. Ljunggren succeeded in preserving sterilized patches of skin in ascitic fluid for a period of three months. This observer also transplanted pieces of skin preserved in this manner, upon a granulating surface with the result that they became firmly adherent and incorporated with the granulating tissue.

Dr. Marnoch tried a number of methods for transplanting epidermis into deeper tissue. In one of these experiments a small island of epidermis, not deprived of its blood supply, was covered with a flap of tissue from each side. In another experiment a piece of epidermis was excised and buried in muscular tissue. In still another experiment a piece of skin was anchored to the peritoneum. In every instance the results were practically the same, for invariably the epidermis died within a few days. This author emphasizes the fact that we are almost forced to conclude that the main reason which determines whether the transplanted healthy epidermis will live, is the fact that it has been placed upon an exposed surface.

The experiments of Marnoch show definitely that the mere transplantation of healthy skin into deeper tissues is not sufficient to cause multiplication of cells and a tumor, even under the most favorable circumstances. At the present time the important researches of Sanfelice, Gaylord, and others, although not conclusive, lend strong support to the view that the irritant which determines the multiplication of tumor-cells is of a parasitic nature.

Tropical Dysentery.—That increase in territory is not an unmixed blessing is very evident from the second circular on tropical diseases issued from the Headquarters of the Division of the Philippines. It is a careful study of tropical dysentery, by Lieutenant Richard T. Strong, U. S. A.

Lieutenant Strong recognizes two essentially different forms: acute specific dysentery, and amoebic dysentery. The latter appears, fortunately, to be the more common. The former may appear also in a sub-acute, and in a chronic form. The extreme seriousness of dysentery is shown by the fact that of 1830 men admitted to one hospital in a period of 16 months suffering from it, only 621 have been able to return to duty. Acute specific dysentery, that is, a form produced by the bacillus of Shiga, is easily recognized by the fact that it gives a specific agglutinative reaction with this bacillus. Strong has studied it very carefully, and his results agree essentially with those of other bacteriologists. He

gives a clinical description of the disease, which may be repeated briefly as follows: The incubation is probably not more than 48 hours. The onset is sudden and severe. There is high fever, occasionally moderate leukocytosis, and rapid pulse. Very rarely there is broncho-pneumonia, or bronchitis, or pleurisy. The patients complain of headache; the urine occasionally contains a small amount of albumin, but nephritis is a rare complication. Secondary changes in the liver are also uncommon. Recovery is exceedingly rare in the most severe cases, and unfortunately one attack does not protect against others. Malaria is a very rare complication. Post-mortem, the most characteristic changes are found in the large intestine, the mucous membrane of which is swollen and covered with a superficial necrotic layer of blood corpuscles, epithelial cells, granular cells, and bacteria. If this is removed the intestinal wall is seen to be intensely congested. The spleen and liver are not enlarged, and the other organs show changes so infrequently that they cannot be regarded as significant. Microscopically, extensive coagulation necrosis of the mucous membrane of the intestine is usually found. The serum reaction appears to be quite constant. In 246 cases of diarrhea and dysentery the blood was examined, and it was positive in 71. In 21 of these it was possible to examine the stools, and in all, the bacillus dysenteriae was obtained. In 3 cases the reaction was positive and amoebae were found, and in 5 cases the reaction was positive although amoebae or other animal parasites were not found in the stools. It is very likely that all these cases were instances of double infection. With regard to amœbic dysentery the most interesting point is the statement that 2 forms of this organism are found in the Philippines: amœba dysenteriae and amœba coli. The former is somewhat rarer than the latter; it frequently contains red blood corpuscles, and is associated with chronic manifestations of the disease, and is pathogenic. The latter may occur in the feces of patients perfectly healthy, and has no effect whatever upon cats. There are certain features in this report that are worthy of very careful consideration. In the first place, the extremely serious nature and the great frequency of dysentery in the Philippines; second, our present inability to cope with the disease, and third, the fact that one attack appears to afford no protection whatever. It is therefore urgently necessary that very thorough and careful studies should be made, in order to discover, if possible, some method of preventing infection, and possibly some serum that will effect a cure.

Hospital Appropriations.—There is reason to fear that some of the legislation in this State appropri-

ating money to hospitals is a very great abuse. Our sympathies are naturally with all laudable hospital enterprises, but we cannot shut our eyes to the fact that of all forms of "hospital abuse" the one which seeks public money for the furthering of private schemes is probably the most pernicious. The subject has too many phases to admit of full discussion here and now, but there is one aspect of it that can be referred to briefly, and will be easily understood by all. This is the fact that the legitimate and necessary hospital work of the State is in danger of suffering because of the indiscriminate demand from all sorts of small local institutions for public aid. We suppose it will be generally acknowledged that the care of the indigent insane is one of the first duties of the State. In fact there are few other classes of invalids (unless it be the epileptics) that should be charges upon the bounty of the State. Public polity, as a rule, does not regard it as a duty of the State to care for the sick, but a noble and necessary exception is made in favor of the insane. We hold that nothing should be permitted to interfere with this bounden duty, and that the various State Asylums should not be made to suffer in the general demand for largesse from other hospitals all over Pennsylvania. We feel impelled to make this statement because of the recent altogether reasonable complaints from the Norristown Asylum that it was to be made to suffer because of the economy forced upon the Governor by the great number of appropriations to hospitals which are not truly public or state institutions. There is no more important hospital in Pennsylvania than the Norristown Asylum. With an authorized capacity of 1710 patients, it is accommodating 2138 insane men and women. This should not be so. One of the first duties of the State is to its own, and we trust sincerely that this and other hospitals for the insane will not be allowed to go begging.

Smallpox in Pennsylvania.—Dr. Benjamin Lee, Secretary of the Pennsylvania State Board of Health, sends us the following statement about the prevalence of smallpox in this state. The 2000 cases referred to recently in some of the daily newspapers were the total number of cases that have appeared since the beginning of the epidemic in December, 1898—about two and a half years ago. This epidemic ended in November, 1900. The total number of cases for that period was about 1200 with 11 deaths. A second epidemic began in February of the present year, and continues up to the present time. There have been thus far 800 cases with 5 deaths. It is thus seen that the condition is not so alarming as might be inferred from some of the published statements. The mortality, moreover, has been astonishingly low, just as has been the

case all over the United States, except possibly in Louisiana. This mortality in Pennsylvania is less than 1%. This gratifying fact should be emphasized in all the newspapers which comment on these figures. The mild type of the prevalent smallpox in this country has caused much discussion. In what, if any, way it can be associated with increase of vaccination, does not very plainly appear. It is a blessing which we must accept in an unquestioning mood, unless the anti-vaccinationists can make it appear as an argument in their favor. But even this would be hard to do—except by an anti-vaccinationist.

The Statistics of Medical Education in the United States.—Despite prolongation of the term of study, of preliminary entrance examinations, and of other requisites for eligibility, as well as of State examinations for the license to practise their chosen profession, not to speak of the increasing difficulty in securing a remunerative clientele, the number of medical students continues to increase. Thus, according to the Report of the Commissioner of Education for the year 1898-99, it appears that there were enrolled in 150 schools during this period 23,778 medical students, an increase of 345 over the previous year. These schools owned ground and buildings valued at \$13,121,529, and had endowments valued at \$1,422,373, while their libraries contained 130,922 volumes. One hundred and twenty-two of the schools were regular, 21 homeopathic, 6 eclectic, and 2 physiomedical. There were engaged in teaching in the regular schools 3562 instructors, in homeopathic schools 636, in eclectic schools 131, and in physiomedical schools 60. Of the whole number of students there were enrolled in regular schools 20,338 men and 1,063 women, in homeopathic schools 1,487 men and 315 women, in eclectic schools 452 men and 48 women, and in physiomedical schools 65 men and 10 women. There were, in 1899, 4,314 graduates from regular schools, 433 from homeopathic schools, 152 from eclectic schools, and 12 from physiomedical schools. Of the graduates, 1,879 from regular schools, 103 from homeopathic schools, 57 from eclectic schools, and 14 from physiomedical schools possessed the degree of A. B. or B. S. All but 15 of the medical schools giving full courses of instruction, reported having a course of four years, and some of the remainder were preparing to enter upon such a course. In 43 schools the annual session continued eight months or longer, and in 12 of these the session continued for 9 months. It is pointed out that in several medical schools the time of attendance now required in one year is equal to the whole time of attendance required for a degree 20 years ago.

The Unreliability of Public Statistics.—We have on previous occasions called attention to the comparative valuelessness of the vital statistics as published by some Boards of Health on account of the want of uniformity, and lack of precision in nomenclature. Of this a cogent instance will be found in the figures published by the Philadelphia Bureau of Health for the week ended June 20th, and there is no reason to believe that the statement for this period differs in character materially from that of other periods. Taking the report seriatim, we find, for instance, that 18 deaths are ascribed to apoplexy. Now apoplexy is merely a symptomatic designation, and it may result from several causes, the principal of which are cerebral hemorrhage, embolism, and thrombosis, but there are other causes, such as uræmia, that may be attended with sudden loss of consciousness, with muscular relaxation or convulsions. Further, paralysis is made responsible for 8 additional deaths, softening of the brain for 4, and disease of the brain for 1. One death is attributed to atheroma, a disease of the blood vessels that may result in rupture or thrombosis and local necrosis, but per se it is scarcely a cause of death. One death is, in fact, charged to gangrene, and three more to arterial sclerosis. Four deaths are attributed to Bright's disease, 21 to convulsions, 3 to dropsy, 27 to inflammation of the kidneys, 1 to edema of the lungs, 12 to uræmia. Bright's disease must be considered synonymous with nephritis, of which both dropsy and uræmia, possibly with convulsions, are common manifestations, and to which, or to disease of the heart, edema of the lungs may be due. One death is charged to cholera and 20 to cholera infantum. Probably cholera nostras is meant by the former, as we have no knowledge of the existence at present of Asiatic cholera in this part of the world. "Disease of the heart" is responsible for 26 deaths, fatty degeneration of the heart for 3 besides, and inflammation of the heart for an additional 1. "Inanition" is charged with 17 deaths and "marasmus" with 10. We appreciate the difficulties of establishing a nosology that will at once meet all of the requirements, but we think we have clearly shown the need for a revision of the method of classification at present followed by the Philadelphia Bureau of Health.

Medical Advertisements in the Newspapers.—The times must be changing indeed. A Philadelphia newspaper, which has recently changed owners, advertises in the street cars in this city that it will print no advertisements of secret medicines. This is a sign of the times. Let us watch and see how carefully this straight and narrow path will be followed. When a newspaper is shrewd enough

to see that it is making a good bid for popular favor by turning down all quack advertisements, the medical profession can begin to feel that it has not bided its time in vain. There must, also, be some symptoms of popular regeneration (which have escaped us, but which our keener contemporary has detected) to induce it to enter upon such a delicate enterprise. The movement is auspicious. Heretofore the newspapers have been the great purveyors to the patent medicine consumers, but with this shining example before them they will no longer be able to plead business policy. The same journal announces that it will display no red ink. For this, too, we are grateful. There have been some distressing indications that red ink would yet disfigure medical journalism. This will help to save us from the polychromatic craze. Tempora mutantur!

Reviews.

Experimental Researches on the Central Localization of the Sympathetic, with a Critical Review of its Anatomy and Physiology, by B. Onuf, M. D. and Joseph Collins, M. D. Issued from the State Hospital Press at Utica, N. Y., June, 1901. Published Quarterly. Price, \$3.00 a Volume.

This fine monograph is issued under the auspices of the New York Pathological Institute, and is another of its publications that fully justify the high reputation of that much discussed institution. We cannot allow this opportunity to pass without calling the attention of the scientific world once more to the high character of the work that has been done in this Pathological Institute under the direction of Dr. Ira Van Gieson. Now that he has retired from the position of director it is all the more appropriate that we should speak in the highest terms of appreciation of the work which he did himself and which he fostered and encouraged in that laboratory.

The authors of this particular monograph are already well known in neurological circles, and their reputation will be distinctly enhanced by this present treatise. It is a thoroughly scientific work in a rather obscure domain of neuro-pathology, and is consequently not an easy one to review in a brief space. It is a work, moreover, which is very much needed and which should be in the hands of all working neuro-pathologists and clinicians. We think we are not saying too much when we characterize it as a thorough exposition of the subject of which it treats, while at the same time it is an adequate, although not completely exhaustive bibliographical guide. The prime object of the authors has been not so much to describe the minute histology of the sympathetic nervous system (a task, however, which they have performed very well), as it is to determine the manner in which the sympathetic is connected with or localized in the spinal cord and brain. It will be seen at once that this is the most obscure phase of this whole subject; the one about which light is most needed. The sympathetic nervous system has been too much kept out of count by neurologists. It is looked upon too much as a side issue; it is a dark corner into which they need not pry too closely or with which they are not especially concerned. Its connection with the central nervous system is too often ignored: its rôle in the causation of disease as well as in the production of symptoms has also been too glaringly slighted. It is to fill this gap in our knowledge that Dr. Onuf and Dr. Collins have composed this useful treatise. The essential part, then, we consider, is that which is devoted to the physiology of the sympathetic especially in its relation to the central nervous system. Upon this subject the authors have done a great deal

of praiseworthy original and experimental work, and it is sufficient here to call attention to that fact and to recommend the book as a trustworthy exposition of this department of neurology. The work, in fact, may be described as essentially an elaborate treatise on the physiology of the sympathetic nervous system, based upon a careful study of its anatomy and histology, and applied to the domain of pathology and clinical medicine. Among the subjects elucidated are the physiology of the lachrymal secretion, the secretion of sweat, the influence of the sympathetic on the pupil, and upon the various viscera, together with a study of the changes in the central nervous system caused by lesions in the sympathetic. The pathology of the sympathetic constitutes the fourth and last part of the book. It is a difficult subject to illumine, and we cannot say that the authors have drawn as extensively from neurological literature for the purpose of obtaining clinical illustrations as they might have done. We know from experience, however, that well reported cases are not numerous or easy to find. Drs. Onuf and Collins have discussed the relation of organic diseases of the brain and spinal cord, as well as the relation of functional diseases to this great auxiliary nervous system. Tabes dorsalis and syringomyelia are especially the two central diseases which are discussed in this relation. We should like to call the attention of the authors to the fact that some interesting cases of central nervous diseases, especially associated with hemiplegia, have been observed, in which affections of the sympathetic have occurred. Thus, one case in this city, recently reported, was in a man with hemiplegia who had hyperidrosis sharply limited to one side of the face and neck, with slight protrusion of the eyeball and dilatation of the pupil, a complexus of symptoms which evidently indicated an irritation of the sympathetic fibers within the central nervous system.

The illustrations in this work are particularly fine, and quite numerous. In conclusion we congratulate the authors upon the completion of a book which must have entailed very arduous labors, and we recommend the treatise to specialists in anatomy, physiology and neuro-pathology in the conviction that they will find it a valuable guide.

[J. H. L.]

Crazes, Credulities, and Christian Science, by Charles M. Oughton, M. D., Chicago. E. H. Colegrove. 1901.

Our first thought on reading this very excellent little book was one of regret that there could be any necessity in this country for the composition of such a work; our second thought was that the book would probably do little good where it is most needed. These reflections, however, were not inspired by any defects in the book itself, for it is an admirable and trenchant essay in criticism, but by the inherent hopelessness of the subject. We write deliberately when we write that there is an inherent hopelessness in this whole subject. The history of mankind proves conclusively that such crazes and crimes of credulity and superstition as Dr. Oughton seeks to expose, are the natural outgrowth of a rich but rank civilization. They are like the ill weeds that flourish in a rich soil which is not thoroughly tilled. The history of the Roman Empire during the earlier centuries of the Christian Era, is so illustrative of this fact, and so suggestive of some phases of our present condition, that we often wonder that the lesson from that source is not more fully recognized and more widely taught. Buckle pointed out most accurately that a people's literature does not advance before, but follows after their mental development. The stream will not rise above its source. Hence, in this country, our boasted popular education and our popular literature, being not above the level of the popular intelligence, furnish no adequate equipment for criticising and combating such rank impositions as Christian Science. A large number of people, in spite of a common school education and a reading acquaintance with the newspapers, will follow such a leader as Mrs. Eddy, and when her time is up they will follow some one else. The bellwether can always be found for a flock of human sheep. Such is the teaching of history. The only hope of civilization is in a higher, and still higher, education among the few who are capable of receiving it, and then a controlling influence exerted by the educated minority in state, in

church, in science and in society. The whole tribe of Eddyolators is not capable of being convinced; it must simply be controlled. [I. H. L.]

Eleventh Report of the State Board of Health of the State of Maine for the Two Years Ending December 31st, 1899. 8vo., pp. XII, 219. Augusta: Kennebec Journal Print, 1900.

In addition to the usual official matters, this report contains interesting papers on "Experiments With Disinfectants," by Dr. F. N. Whittier, of Bowdoin College; "Vaccination and Vaccine Lymph," by Dr. C. D. Smith, president of the Board; "Tuberculosis," by Dr. A. G. Young, secretary of the Board, and "Formaldehyd as a Milk Preservative," also by the secretary. Half of the volume is taken up by the essay on Tuberculosis, which is an especially praiseworthy and comprehensive article, and deals consecutively with the questions of infectivity, heredity, prevention, hygienic treatment and sanatoria. It seems a pity that the publication of this report should have been so long delayed. [A. A. E.]

Correspondence.

EYE AND EAR EXAMINATIONS OF RAILROAD EMPLOYEES.

By FRANK ALLPORT, M. D., of Chicago.

To the Editor of the Philadelphia Medical Journal.
Dear Sir:—

In your issue of July 6th, 1901, you print an article from my friend, Dr. Wm. Thomson, on "The Eye and Ear Examinations of Railroad Employees," which he calls "An Echo from the St. Paul Meeting of the American Medical Association."

My esteem for Dr. Thomson is so high that I hesitate to reply to his communication almost preferring to let it go unnoticed, but some impressions conveyed in his article are so unconsciously misleading, that I feel they should be corrected. In order that the matter may be fully understood, I beg leave to go back three years, when a Committee was appointed by the Ophthalmological Section of the American Medical Association to investigate the visual and aural qualifications of railway employees. I had the honor to be Chairman of this Committee. For various reasons unnecessary to explain, this Committee did not make a complete report to the Ophthalmological Section until the present year at St. Paul. In the meantime Dr. Thomson, of Philadelphia, had been selected to take the place of Dr. C. H. Williams, of Boston, who had resigned. In order to arrive at conclusions based upon facts, I communicated with every railroad in the United States, Canada and Mexico, operating over four hundred miles of road. Two hundred and forty-four railroads were thus addressed, covering two hundred and five thousand, six hundred and thirty-eight miles of road. I have received replies concerning methods of operation, etc., from almost every large railroad artery thus addressed, or in other words have heard from one hundred and twelve roads covering one hundred and forty-seven thousand, eight hundred and thirty-eight miles of road. The results of these inquiries, including statistics, etc., may be found in the Journal of the American Medical Association, October 13th, 1900, and in some subsequent issue of the Journal during the coming year, when the Journal takes up the work of the Ophthalmological Section in St. Paul. The major portion of this report with deductions was read at the meeting of the Association held in Atlantic City, in 1900. I may say without egotism that the paper was received with considerable favor by the Section, so much so that Dr. Thomson, himself, stated that he had been so much pleased with the paper, that he would like to make a motion to extend a vote of thanks to the writer, which motion was unanimously adopted. In the discussion which followed the paper, and which may be found upon page 126, of the issue of October 13th, 1900, of the Journal of the American Medical Association, Dr. Thomson distinctly states that the excellent method proposed by himself to

the Philadelphia Railroad System, was proposed by him as a "pioneer move, intending to take the place of nothing, and I hope it has been somewhat effective in protecting the public and the employees from the disasters of accident until the present time, when this advancement, that Dr. Allport has taken such a good part in bringing about, may be followed by something better. I agree with Dr. Allport that the examinations should be in the hands of oculists, wherever possible, and I shall be glad to call the attention of our railroad officials to these points."

It would, therefore, seem that Dr. Thomson was well pleased with the idea at the time of the Atlantic City meeting, and I cannot understand why he, at the present time, discourages a decided step in advance.

Several weeks before the St. Paul meeting I communicated with the different members of the Committee by letter, as it would have been impossible to get them all together, for they live in various portions of the country. I outlined a set of resolutions conveying the ideas we wished to express. With the exception of Dr. Thomson, the members of the Committee promptly replied to my communication. By dint of much corresponding, changing and remodelling, we finally formed a set of resolutions agreeable to all members of the Committee, except Dr. Thomson, who tardily (unless my memory fails me) wrote one short letter, after repeated solicitations, just before the St. Paul meeting and after the report, by much labor and many concessions had been unanimously approved by the other members of the Committee.

It seems that Dr. Thomson feels a duty pressing upon him to voice his views concerning the report of the Committee, which was presented before the Ophthalmological Section in St. Paul, and with the exception of one dissenting vote, unanimously adopted by the Section. It is to be regretted that Dr. Thomson did not consider it better wisdom to act with the other members of the Committee. Had he desired to freely express his views, as did the other gentlemen, and as he was repeatedly requested to do, it would doubtless have been possible to have harmonized matters, so that the report of the Committee might have been of a unanimous character. Dr. Thomson, however, waited until it was too late to harmonize matters, and then (failing to attend the meeting) sent his minority report, as he chooses to call it, to the Secretary of the Section, instead of to the Chairman of the Committee, as he should, in such a manner that it failed to reach its destination until the Chairman of the Section returned to his home in Memphis. In the meantime, those of the Committee, who were present at the St. Paul meeting, unanimously adopted the report, which was subsequently as it has been said before, almost unanimously adopted by the Section. The Committee was then discharged, having fulfilled the purpose which gave it birth. I cannot see that Dr. Thomson should complain. If he had anything to say, he might have come to St. Paul and said it, or, if this was impossible, he had ample time and was repeatedly solicited to put his views in writing and present them to the proper person, where I can assure him they would have received the respectful attention demanded by Dr. Thomson's high professional and personal position. He did not see fit to do this, however, and now that the matter has been closed, the report adopted, the Committee discharged, and the meeting adjourned, requests that his report be published in the Journal of the American Medical Association. The editor of that publication, after giving the matter due consideration, felt that, inasmuch as Dr. Thomson's report had not been presented at the St. Paul meeting, and inasmuch as the incident had been closed, deemed it best and wisest under all circumstances, to refrain from its publication.

A certain paragraph in Dr. Thomson's paper is most misleading, because he has chosen to quote a few words in the report, without reporting the preceding matter. I beg to quote Dr. Thomson's paragraph: "Dr. Allport's report must now be read, and will be found in the Journal for June 22d, 1901, page 1795. He demands that the work of testing the sight and hearing of railroad employees 'must be superintended by this Section,' and must be made by Eye and Ear Surgeons, etc., and in his pamphlet expresses the opinion that it were better if 'such examinations were never made by non-professional men.'" I now beg to quote the words of the Committee bearing on Dr. Thomson's remarks.

"Your committee, therefore, begs leave to submit to the

Section the following resolutions, which it is hoped will later be adopted by the American Medical Association, and then correctly placed before the proper railroad authorities of North America. This work should be superintended by this Section." It will be seen that the words "this work should be superintended by this Section" refer simply to bringing the matter before the general assembly of the American Medical Association, and then seeing that the necessary literature, etc., is placed before the proper railroad authorities of North America. Such an idea as the Ophthalmological Section of the American Medical Association superintending the examination of the eyes and ears of the railroad employees in this country is too ridiculous and preposterous for even a passing thought. In the same paragraph Dr. Thomson says that the report states that "such examinations must be made by Eye and Ear Surgeons." Dr. Thomson has evidently misread section two of the report, which says as follows: "Such Primary examination should, whenever possible, be made by regularly appointed Eye and Ear Surgeons, and this point is emphatically urged, especially as the expense of a first examination must always be borne by the applicant, but if such a course is not deemed expedient, the Company's Surgeon, aided by his medical assistants, may conduct them, with the understanding that all doubtful cases shall be sent to a regularly appointed Eye and Ear Surgeon." The words, "such examinations must be made by Eye and Ear Surgeons," were stricken out of the report at the request of one or two members of the Committee. Dr. Thomson states that in my article on the subject, presented last year at Atlantic City, I advised that such examinations should never be made by non-professional men. This is perfectly correct. It is my own individual opinion that the eyes and ears of those men directly engaged in running trains, should be examined by physicians (preferably ophthalmologists and otologists) and not by railroad employees. This, however, is simply my individual opinion, which I claim the right to maintain and retain, but this idea was not incorporated in the report of the Committee. I gave up my views upon this point, in order to harmonize and unify the report. In another section of Dr. Thomson's article, in speaking of the difference of opinion upon this subject, he says that, "even Mr. Nettleship, famous as a surgeon and writer, had failed to detect a color blind man by wool tests." It would seem as if this were an argument in favor of the examination of railroad men by physicians, and especially ophthalmologists: for if even as eminent a man as Mr. Nettleship is liable to err, certainly a non-professional employee could not in any sense be considered sufficiently expert for such examinations. But my object in this communication is not to criticize Dr. Thomson's personal views. These he has a perfect right to hold. I simply desire to place before those gentlemen in the profession, who are interested in the subject, this matter in its true light, and then they in their turn may form an opinion as to the actions of all those who have taken part in the proceedings.

I regret to be compelled to say anything on the subject for publication, but inasmuch as Dr. Thomson has taken the initiative, and inasmuch as it appears to me that several people will be misjudged if Dr. Thomson's article is not answered, I feel it my duty as Chairman of the Committee and Chairman of the Ophthalmological Section for the coming year, to endeavor to place the matter in what seems to me its proper light. My respect and admiration for Dr. Thomson are of such a high character, that this controversy is exceedingly distasteful to me, and I trust that the matter may be now terminated.

INFORMATION WANTED.

By JAMES M ANDERS, M. D., of Philadelphia.
To the Editor of the Philadelphia Medical Journal.
I should be excessively obliged to the subscribers of our valuable journal for answers to the following queries:
(1) In what percentage of the cases of chronic valvular disease affecting the mitral and aortic segments has pulmonary tuberculosis developed as a secondary event?
(2) If notes have been kept, kindly give the total number of cases, both of valvular disease and pulmonary tuberculosis, as well as the percentage.
(3) If no records have been kept, kindly state opinion as to the frequency of the occurrence of pulmonary tuberculosis secondary to chronic valvular disease at the orifices mentioned above.

- (4) What is the effect of valvular disease, mitral and aortic, upon the course of chronic pulmonary tuberculosis?
- (5) Have lesions of the pulmonary artery valves seemed to predispose to pulmonary tuberculosis? (Statistics on this head are also desired).
- (6) If chronic valvulitis affecting the mitral and aortic cusps exercises a preventive effect, what is the explanation?
- (7) If disease of the pulmonary valves (I refer especially to stenosis) predisposes to phthisis, how is the effect accounted for?

THE ANTI-CANTEEN RESOLUTIONS.

By W. B. GRAY, M. D., of Altona, Illinois.

To the Editor of the Philadelphia Medical Journal.
A prominent officer of the American Medical Temperance Society (of which the veteran, N. S. Davis, is president) makes the statement that the infamous anti-canteen resolutions of the American Medical Association were passed by a very small number of the doctors visiting in St. Paul. The matter was brought up before the Association, and the sentiment of the meeting was that the effects of the law should not be judged for two or three years, when results will be more apparent. The resolutions were laid upon the table by an enormous majority. However, the matter was referred to a committee, who met and reported to the few who were expecting it, during the meeting of the various sections, and the delegates supposing the affair disposed of for the year were attending to scientific matters, and so the resolutions were "carried unanimously" by about 25 men. It was not considered necessary to put the negative of the question. The result defines the position of the American Medical Association and all that is represented thereby. The people take many things for granted when they are published in the newspapers. So do Congressmen, and even medical editors, and so we next read the editorial of June 15th upon the subject. Those who agree with that article will admit that possibly some "men of sense" might be on the other side of the fence. Many good people are mistaken upon this subject because they have not tried to study the other side. They read what the newspapers serve to them, and this is influenced by those who desire to manufacture public opinion against this law. The distortions of fact, and the fabrications which have been used for this purpose and exposed by the prohibition press, and proved to be false largely by the affidavits of their opponents, are enough to make any lover of truth indignant. I hope it will not be repeated that "this act deserves to fail," for it is an effort of good people to do good. Let us not disagree over methods to the extent of helping the enemy instead of our allies. If saloons outside any army post are an evil, and produce disorder and crime, surely saloons plus the canteen will not be much different, surely not better. The canteen inside is of the same nature as the resort on the outside with the additional inducements towards drink of profits for the mess and hospital. Uncle Sam should not furnish the means to debauch his own soldier boys. If they have evil inclinations and we have no help to offer them, at least let them go astray through their own efforts, and not with our assistance. Let the abode of the soldiers be free from a persistent temptation thrust under their noses, and let the nation provide more elevating diversions than beer drinking for those young men who left good homes from a desire to serve their country. May we not rather take a patriotic pride that a virtuous public opinion can speak forth in such a manner that Congress is compelled to attend its behests. On a recent pay day at Fort Sheridan, 1300 men received \$15 each, and only 12% of them cared to invest in liquor at all. There was no disorder, and the 8 saloons outside do less business than in canteen days. Twenty-two railroads in America enforce total abstinence among their employees. Will any one dare to say that it is not a good thing for both travelers and for the men and their families? Let us not pronounce hasty condemnation upon the legislation of the grandmothers. There are many questions upon which their judgment would be more correct than that of certain smart Alexes whose talk we have heard. It would be unjust to allow two or three dozen men to wield the political influence of all the doctors in America as represented in the American Medical Association.

American News and Notes.

PENNSYLVANIA AND PHILADELPHIA NEWS.

Free Hospital for Poor Consumptives.—Dr. Lawrence F. Mick, president of the Free Hospital for Poor Consumptives, announces that a camp for male patients will be opened within a few days in White Haven, where the erection of buildings will be begun in the fall.

Hospital Work in Philadelphia During June.—Following is the work of some of the hospitals of Philadelphia during the month of June: The Charity Hospital, 1731 Vine street—Total number of patients treated, 919, of which 133 were medical, 193 surgical, 314 women and children; 8 were diseases of the nose, 56 of the throat, 21 of the ear and 112 of the eye; prescriptions dispensed, 1035.

Germantown Dispensary and Hospital.—Patients remaining June 1, 26 males and 28 females; admitted during the month, 56 males and 31 females, remaining July, 35 males and 23 females; treated in the dispensary 1164; medicines dispensed, 904; ambulance calls answered, 44; patrol visits made, 14.

Methodist Episcopal.—Patients admitted, 63; patients treated in the dispensary, medical, 29; surgical, 324; gynecological, 9; eye, 67; ear, 12; nose and throat, 32; skin, 6; total, 479; total visits to the dispensary, 1157; recent accidents, 320; patrol cases, 10.

Polyclinic.—New cases treated in the dispensaries, 1587; return visits, 5433; total, 7020; treated in the receiving ward, 572; admitted to wards, 87; discharged, 99; operations performed under ether, 63.

Presbyterian.—Patients remaining May 31, 221; patients admitted during June, 210; total number treated, 431, discharged, 233; remaining, 198, as follows: Men's medical, 30; men's surgical, 26; women's surgical, 22; children's ward, 2; private rooms, 26; Cathcart Home for Incurables, 27; Richardson Home for Convalescents, 17; treated in dispensary, 2364.

St. Agnes.—Medical cases admitted, 90; surgical, 77; gynecological, 6; total, 173; remaining in wards from May, 112; discharged during June, 134; total in hospital, 151; ambulance calls, 20; patrol cases, 64. Out-patient department: New cases, 456; old cases, 1651; total cases, 2507.

St. Luke's Homeopathic.—New patients admitted, 35, including 5 medical, 25 surgical, 5 gynecological; old and new cases treated, 55; remaining at end of month, 24; prescriptions to in-patients, 30. Out-patient department: New cases, 167; number of visits of old and new cases to dispensary, 865; prescriptions furnished to out-patients, 516.

Hospital and Dispensary of the Alumnae of the Woman's Medical College of Pennsylvania.—New patients registered, 330; surgical cases treated, 311; medical, 167; gynecological, 205; nose and throat, 221; eye, 901; children, 120; dental clinic, 65; skin, 32; treated by resident out of hours, 107; visits made by externe, 162; total, 1411, number of prescriptions, 775.

Hahnemann.—In-patient department: New patients admitted, 96; old and new patients treated, 181; pay patients, 80; free, 101; aggregate days patients in hospital, 1991; average days each patient, 11; prescriptions to in-patients, 1055. Out-patient department: New patients treated in emergency wards, 851; new patients registered, 1547; visits of all out-patients, 1765; treated at home, 21; visits to out-patients at home, 120; prescriptions, 3016.

Death of George E. Knode, M. D.—Dr. George E. Knode, aged 36 years, of Marklesburg, Huntingdon County, Pa., died at his home July 18th of tetanus resulting from an injury sustained by being thrown from a frightened colt. He graduated from the University of Pennsylvania in 1893. After graduation, Dr. Knode began the practice of medicine at Marklesburg, succeeding Dr. J. H. Wintrobe. He was a member of the Huntingdon County Medical Society, and took quite an active part in its transactions. At a special meeting of the Huntingdon County Medical Society, held July 18th, resolutions of condolence were adopted.

Vital Statistics of Philadelphia for the week ending July 20, 1901:

Total mortality	443	Cases.	Deaths.
Inflammation of the appendix 5,			
bladder 1, brain 11, bronchi 2,			
heart 1, kidneys 15, lungs 19, pericardium 1, peritoneum 1, pleura 1,			
stomach and bowels 25, spine 1..			83
Marasmus 20, inanition 23, debility 2			45
Tuberculosis of the lungs			61
Apoplexy 9, paralysis 6			15
Heart-disease of 27, fatty degeneration of 2			29
Uremia 3, Bright's disease 8, diabetes 3			14
Carcinoma of the breast 2, stomach 7, uterus 3, jaw 1, liver 2			15
Convulsions 20, puerperal 1			21
Diphtheria	28		5
Brain-softening of 1, tumor of 1			2
Typhoid fever	78		10
Old age			10
Scarlet fever	36		3
Abscess of liver 2, alcoholism 4,			
asthma 1, anemia 1, casualties 8,			
child birth 1, cholera infantum 58,			
cholera morbus 1, cirrhosis of the liver 2,			
cyanosis 1, diarrhea 5, drowned 1,			
dysentery 4, jaundice 1, locomotor ataxia 3, obstruction of the bowels 4,			
edema of the lungs 1, rheumatism 1, sclerosis, arterial 1, shock, surgical 2,			
septicemia 2, smallpox 1, sore mouth 2,			
sarcoma 1, sarcoma, breast 2, suicide 2, sunstroke 10, syphilis 1,			
tetanus 1, whooping cough 6			130

NEW YORK.

Examinations for Bacteriologists in New York City.—An examination for the position of Assistant Bacteriologist, Class I, salary \$800, will be held by the Municipal Civil Service Commission on July 29, 1901, at 10 A. M., and an examination for the position of Assistant Bacteriologist, Class II, salary \$1200, will be held on July 31, at the same place and hour. Candidates for Class II must be able to carry on original investigations. Subjects of the examinations are: Technical knowledge, experience, mathematics, writing a report on an assumed state of facts. Applicants should address Lee Phillips, Secretary, Municipal Civil Service Commission, 346 Broadway, New York City. For particulars as to the examination, application should be made to F. G. Ireland, Chief Examiner.

Long Island College Hospital Appointments.—Dr. Ralph H. Pomeroy has been appointed lecturer on obstetrics, Dr. John O. Polak, lecturer on gynecology and obstetrics, Dr. William F. Campbell, professor of anatomy, to take the place of Dr. W. W. Browning, deceased, Dr. Warren S. Simmons, adjunct professor of Anatomy.

NEW ENGLAND.

Hartford Abolishing Mosquitoes.—The Hartford Board of Health is abolishing the mosquito from nearby marshes by means of crude petroleum.

WESTERN STATES.

New Cases of Plague in San Francisco.—The *Journal of the American Medical Association* states in its issue of July 20th that bubonic plague has again broken out in San Francisco, four cases having already been reported. The first case was that of a Chinaman who died July 6th. He arrived in San Francisco a few days before from one of the lower islands on the Sacramento River, and was ill when he reached the city. An autopsy was performed, and the diagnosis of bubonic plague was verified by bacteriological examination. Since then three more deaths have been reported. These were Japanese women who were living in a brothel on Stockton street in the Chinese section of the city. In two of these the diagnosis was confirmed by bacteriological examinations. The result of the third is

not yet known. Two of these cases were ill with the disease a week before the Chinaman landed in San Francisco, so they have no relation to that case. Another case, which is not yet confirmed, is reported among the Japanese women. These are the first cases reported for three months, the last case reported by the Marine Hospital Service being April 4th. The local and State Boards of Health are now working more in harmony, and in unison with the Marine Hospital Service. The cleaning of Chinatown was completed June 22nd, but inspection and post-mortem examinations of Chinese have been continued under the direction of the Marine Hospital Service.

Northwestern University Medical School.—Owing to the illness of Dr. Frank S. Johnson, a change in the faculty of the Northwestern University Medical School in Chicago has been effected. Dr. Johnson retires as dean, and is succeeded by Dr. N. S. Davis, Jr., former secretary. Dr. Davis' position is filled by the election to the secretaryship of Dr. Arthur R. Edwards.

Hospital for Los Angeles.—A new emergency hospital is to be erected in Los Angeles, California, which will accommodate about 350 patients.

Dr. Christian Fenger, of Chicago, has been made an honorary member of the Association of Military Surgeons of the United States.

Dr. Alston Ellis, of Hamilton, O., has been elected president of the Ohio University at Athens, O.

St. Peter's Hospital, Helena, Mont.—It is stated that the trustees of St. Peter's Hospital, of Helena, Mont., have decided to erect a new building at a cost of over \$50,000. Over half this amount is now available, and the new work can be carried forth without the burden of debt.

The California Medical Law.—The following is an extract from the statute regulating the practice of medicine in California: Licenses are to be issued by a board consisting of five members elected by the Medical Society of the State of California, two members by the California State Homeopathic Medical Society, and two members by the Eclectic Medical Society of the State of California. Every person before practicing medicine or surgery, or any of the departments of medicine or surgery, in this State, must have the certificate provided for. In order to procure such certificate he must produce satisfactory testimonials of good moral character, and a diploma issued by some legally chartered medical school, the requirements of which medical school shall have been at the time of granting such diploma, in no particular less than those prescribed by the Association of Medical Colleges for that year or he must produce satisfactory evidence of having possessed such diploma, or a license from some legally constituted institution which grants medical and surgical license only upon actual examination, of satisfactory evidence of having possessed such license; and he must accompany said diploma or license with an affidavit stating that he is the lawful possessor of the same, that he is the person therein (named), and that the diploma or license was procured in the regular course, either of instruction or examination, without fraud or misrepresentation of any kind.

Licenses may be revoked by the Board on trial and conviction of unprofessional conduct, which is defined to consist in:

First.—The procuring or aiding or abetting in procuring a criminal abortion. Second.—The obtaining of any fee on the assurance that a manifestly incurable disease can be permanently cured. Third.—The willfully betraying a professional secret. Fourth.—All advertising of medical business in which grossly improbable statements are made. Fifth.—All advertising of any medicines, or of any means, whereby the monthly periods of women can be regulated, or the menses re-established if suppressed. Sixth.—Conviction of any offense involving moral turpitude. Seventh.—Habitual intemperance. The following persons shall be deemed as practicing medicine or surgery within the meaning of this act: 1. Those who profess to be or hold themselves out as being engaged as doctors, physicians or surgeons in the treatment of disease, injury, or deformity of human beings. 2. Those who, for pecuniary or valuable consideration, shall prescribe medicine, magnetism, or electricity, in the treatment of disease, injury or deformity of human beings. 3. Those who, for pecuniary or valuable consideration, shall employ surgical

or medical means or appliances for the treatment of disease, injury or deformity of human beings, except dealers in surgical, dental and optical appliances.—*E. S.*

SOUTHERN STATES.

The Mullet Key Quarantine Station, Florida, will be purchased by the Federal Government and managed by the Marine Hospital Service.

The West End Maternity Hospital, at Baltimore, was incorporated July 18th by Drs. Bernard P. Muse, Joseph H. Branham, John B. Schwatka, John William Funck, Frederick Caruthers, G. Milton Linthicum, W. Wayland France, C. Erban Smith, William S. Smith and William H. Peace, who are trustees for the first year.

The Wilmington Board of Health has ordered the executive officers to make an inspection of houses, with the view of a general cleansing of the city.

Dr. William H. Gobrecht, an eminent anatomist, and the author of a number of works on surgery and obstetrics, was found dead in bed at his residence in Washington, D. C., July 20. Dr. Gobrecht was 72 years of age, and a native of Pennsylvania. For several years he was Demonstrator of Anatomy at the University of Pennsylvania, from which he was graduated. At the time of his death Dr. Gobrecht was a medical expert in the Pension Office.

CANADA.

Meeting of the Ontario Medical Association, held at Toronto, June 19 and 20, 1901, (Continued). First Day, Evening Session. **Open-Air Treatment of Disease.** By Dr. George H. Carveth, Toronto, who described his method of treating different forms of disease, first, in the house with wide-open windows; second, in beds on the veranda; third, in beds under tents on the lawn. At first he experienced some difficulty in getting his patients to consent to be treated in this manner, but after they had become habituated to life in the open air, they returned indoors reluctantly. Some of the cases that he has treated in this way are iritis, cases of fracture, cases of the radical cure of hernia, rheumatoid arthritis, tubercular disease of the spine, typhoid fever, and a case of hysterectomy. His address was illustrated by lantern slide projections on the canvas, which proved very interesting to the members of the Association.

Dr. P. H. Bryce spoke of the value of treating smallpox patients in tents. The tents should be double roofed, and double floored, and double walled, and each tent provided with a stove. The patients lived in these when the thermometer was 20 degrees below zero, being quite comfortable. Nobody died, although many were seriously sick.

Dr. Freil, Stouffville, recited the history of the case of a clergyman, the victim of tuberculosis, who lived in his tent all winter when the thermometer was 20 degrees below zero, and the wind blowing a perfect gale, and he was very comfortable. In a few months' time he ceased sweating, and gained very rapidly in weight, to such an extent that delivering a sermon would not throw him into a perspiration as it always did before he took up tent-life on his lawn.

Dr. J. H. Elliott, Gravenhurst, saw no reason why outdoor life should not be employed in the treatment of other diseases as well as tuberculosis. It is not specific, and the only reason it is used is to strengthen the organism to resist disease. It is practically returning to primitive life, and it is so comfortable and pleasant that you find it very difficult to get patients to return to the house.

Dr. John Hunter referred to the Orphans' Home, Toronto, where they keep about two hundred children. These are admitted at about four years of age and they are kept there until they are about fourteen. Their mortality in that institution is about three in one thousand. They are practically kept out of doors all the time, and comparisons between the children of the Orphans' Home and the children of the well-to-do people of the city are greatly in the formers' favor.

Dr. Webster—The trouble is not so much to get the patients to sleep out of doors as it is to get them to return to the house when they have once been out of doors.

Dr. G. S. Ryerson, speaking of his visit to South Africa, said that at Bloemfontein the typhoid fever patients did particularly well in tents. The mortality was much larger in buildings improvised and used as hospitals. He con-

sidered that it was well to have the roof of the tent of material of some dark color, such as green or brown, because the patient, lying on his back, begins to complain of the color of the roof.

On the Use of Nitrous Oxide and Ether as an Anesthetic.

This paper was prepared and read by Dr. L. Coyteux Prevost, of Ottawa, and it proved to be highly interesting, carefully prepared, and ably delivered. He considers that a good and satisfactory anesthetic must possess the following qualities: First, offer the least possible harm to the patient; second, be rapid; third complete; fourth, permanent; fifth, followed by as few disagreeable post-operative effects as possible. He then proceeded to relate the results of his personal experience during the last two years at the hospital in Ottawa, as well as in his private practice. Dr. Carroll of Ottawa, was his assistant in this work. The agent they employ is ether, with which they lately have associated nitrous oxide, which is given at the beginning of anesthesia by the means of Clover's Inhaler. He considers this method as absolutely ideal, as much for the rapidity with which the patient becomes anesthetized as for the freedom from all unpleasant sensations during the process of anesthetization and the diminution of after-symptoms so frequent after operations. The apparatus which they have been using for the nitrous oxide and ether is Hewitt's Inhaler, which is a modification of a Clover Inhaler, with a rubber bag replaced by a large bag with valvular attachments. Within the last two years they have used this method almost exclusively, and the results are as follows: Anesthesia in one minute, twenty-four times out of three hundred and seven cases recorded in one and a half minutes, fifty-five times; in two minutes, ninety-four times; in two and a half minutes, forty-seven times; in three minutes, forty-four times; in three and a half minutes, nine times; in four minutes, nineteen times; in five minutes, fourteen times. Dr. Prevost then entered into his observations with regard to the effect of the anesthetics upon the kidneys, and stated out of 434 observations albumen was found twenty-six times. He drew attention to the fact that post operative vomiting was very rare. Dr. Prevost was the first surgeon in Canada to employ intraspinal cocainization. He believes that so long as the old and well-tried anesthetic agents, handled by competent men, continue to give good satisfaction that it will not be wise to abandon them until medullary narcosis has been clearly demonstrated.

The Complications and Degenerations of Fibroid Tumors of the Uterus, with Reference to the Treatment of These Growths.

Dr. Chas. T. Noble, Philadelphia, delivered an able and exhaustive paper under the above heading, an abstract of which will be published in a subsequent issue.

Drs. J. F. W. Ross, N. A. Powell, McKinnon, and Clouse discussed the paper, to which Dr. Noble replied.

SECOND DAY—MORNING SESSION.

The Relations of Nasal Obstructions to Obscure Cases of Asthma.—This paper was read by title by Dr. Arthur W. Mayberry, of Toronto. Patients suffering from nasal obstruction are frequently coming before the notice of the busy practitioner. Asthma has a complex etiology, and the close association of this disease with nasal trouble is sometimes very remarkable. Adenoid growths in the thorax frequently cause asthma, and in recent years much stress has been laid on the nasal origin of this disease. The author quoted Hosworth, who goes so far as to assert that asthma, in a large proportion of cases, is attributed to some form of nasal obstruction, the bronchial spasm being caused through reflex sympathy conducted along the fifth nerve.

On the Importance of an Early Recognition of Locomotor

Ataxia—Do the Eye Symptoms Assist Us?

Dr. J. T. Duncan, of Toronto read a paper, and emphasized the importance of being able to diagnose this disease in order that prompt treatment might be applied. To do this we must be able to recognize the pre-ataxic stage. What are these symptoms? Professor Osler gives them as pains, ocular symptoms, and loss of the knee jerk. What are the ocular symptoms? Strabismus or squint; ptosis or drooping of the eye lid; the fixed pupil (the Argyll-Robertson pupil); inequality of the pupils and optic atrophy.

Notes on the Use of Adranalin.—Dr. D. J. Gibb-Wishart, Toronto. This is the formula which Dr. Wishart has been using in his office practice, having made several hundred

applications, chiefly to the mucous membrane of the nose; one in one thousand, the chloride being dissolved in normal salt solution containing 0.5 per cent. chlorotone solution. A 10 per cent. dilution of the above solution, which dilution is equivalent to one in 10,000, has been sufficient to contract the blood vessels in the membranes in a few seconds, and a repetition of the same, or the use of a stronger dilution, will blanch these membranes; especially is this seen to be marked in the nose, where the membranes will become tightly drawn over the turbinated bones, which show up white through them. It has proven itself to be highly useful in rendering operations about the nose practically bloodless; it is not found to answer well in the removal of adenoids or enlarged tonsils. Dr. Wishart mentioned two cases in particular where it acted very promptly. The bottle in which it is kept must be tightly corked; and the properties of the substance are not destroyed by heat. Since he has added chlorotone he is perfectly satisfied as to the stability of the preparation for all practical purposes. In no instance has there been a tendency to increase in the amount of bleeding. Dr. Wishart comments that the drug is a valuable addition to our armamentarium.

Dr. Duncan's paper was discussed by Dr. Wishart, Dr. Crow, and Dr. Hunter; while Dr. Wishart's paper brought out a discussion from Dr. Trow, Dr. McPhedran and Dr. Graham Chambers. Dr. Wishart and Dr. Duncan replied respectively.

(To be Continued).

Obituary.—Dr. S. F. S. Wason, at Black River Falls, Wis., July 15, aged 73 years—Dr. Samuel Caley, at Mount Holly, N. J., July 16, aged 60 years—Dr. Sanford T. Riddell, at West Superior, Wis., July 16—Dr. George A. Blanchard, at Scranton, Pa., July 19—Dr. Wm. Henry Gobrecht, at Washington, D. C., July 19, aged 72 years—Dr. T. W. Leftwich, at Bedford County, Md., July 18, aged 70 years—Dr. Adolf Dunbar, at New York City, July 21—Dr. H. E. Raub, at Quarryville, Pa., July 20, aged 71 years.

Changes in the Medical Corps of the Navy, Week Ended July 20, 1901.

ASSISTANT SURGEON F. M. BOGAN, detached from the Scorpion, when put out of commission, and ordered to the Michias—July 17.
P. A. SURGEON C. P. BAGG, detached from the Culgoa and ordered to the Yorktown—July 17.
SURGEON C. J. DECKER, detached from the Newark, when put out of commission, and ordered home to wait orders.—July 18.
ASSISTANT SURGEON W. H. BUCHER, detached from the Naval Hospital, Norfolk, Va., and ordered to the Dixie, July 22—July 18.
ASSISTANT SURGEON P. E. McDONNOLD, ordered to duty at the Naval Museum of Hygiene, Washington, D. C., July 25—July 18.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended July 19, 1901.

SMALLPOX—UNITED STATES.

		Cases	Deaths
CALIFORNIA:	San Francisco,	June 30-July 7, 1	
DISTRICT OF COLUMBIA:	Washington,	July 6-13,	1
ILLINOIS:	Chicago,	July 6-13,	3
KANSAS:	Wichita,	July 6-13,	1
LOUISIANA:	New Orleans,	July 6-13,	1
MASSACHUSETTS:	Boston,	July 6-13,	1
	Holyoke,	July 6-13,	2
	New Bedford,	July 6-13,	1
MICHIGAN:	Detroit,	July 6-13,	1
MINNESOTA:	Minneapolis,	June 30-July 7,	2
NEBRASKA:	Nebraska City,	July 6-13,	66
NEW HAMPSHIRE:	Manchester,	July 6-13,	1
NEW JERSEY:	Newark,	July 6-13,	1
OHIO:	Cincinnati,	July 5-12,	3
	Cleveland,	July 6-13,	8
	Toledo,	July 6-13,	1
PENNSYLVANIA:	Lebanon,	July 6-13,	6
	Philadelphia,	July 6-13,	3
	Pittsburg,	July 6-13,	2
TENNESSEE:	Memphis,	July 6-13,	1
UTAH:	Salt Lake City,	June 30-July 6, 2	
WASHINGTON:	Tacoma,	June 30-July 7, 1	

SMALLPOX FOREIGN

AUSTRIA	Prague,	June 22-29,	2
HUNGARY	Antwerp,	June 15-29,	2
BELGIUM	British Columbia		
CANADA	Victoria,	June 15-30,	2
CHINA	Hongkong,	May 27-June 1,	1
COLOMBIA	Panama,	July 1-8,	1
EQUADOR	Guayaquil,	May 11-June 8,	1
EGYPT	Cairo,	June 18-21,	1
FRANCE	Paris,	June 22-29,	19
GREAT BRITAIN	Dundee,	June 22-29,	1
	Glasgow,	June 28-July 3,	9
	Liverpool,	June 15-29,	2
	London,	June 22-29,	5
INDIA	Bombay,	June 11-18,	6
	Calcutta,	June 1-3,	6
	Karachi,	June 2-9,	1
	Madras,	June 1-13,	9
ITALY	Messina,	June 22-29,	12
RUSSIA	Naples,	June 23-30,	170
	Moscow,	June 15-22,	3
	Odessa,	June 15-29,	3
	St. Petersburg,	June 15-22,	1
	Warsaw,	June 8-15,	3
SPAIN	Cornwall,	June 22-29,	3
	Valencia,	June 8-23,	1
SWITZERLAND	Geneva,	June 15-22,	1

YELLOW FEVER.

COSTA RICA	Port Limon,	July 4,	1
CUBA	Cienfuegos,	July 15,	1
MEXICO	Vera Cruz,	June 30-July 6,	4

CHOLERA.

INDIA	Bombay,	June 11-18,	3
	Calcutta,	June 8-15,	53
	Madras,	June 1-14,	1

PLAGUE.

AFRICA	Cape Town,	To June 22,	354
		June 15-22,	21
CHINA	Hongkong,	May 25-June 1,	207
INDIA	Bombay,	June 11-18,	54
	Calcutta,	June 8-15,	48
	Karachi,	June 29,	28
JAPAN	Formosa,	June 23, epidemic,	2
	Nagasaki,	June 1-10, 1 death on U. S. S. Kintuck,	1
MAURITIUS		June 13-20,	2

GREAT BRITAIN.

British Congress of Tuberculosis. The British Congress of Tuberculosis was opened on July 22 by the Duke of Cambridge, president of the congress. Lord Lansdowne, the Foreign Secretary, also welcomed the delegates, and in the name of the Government promised all the assistance the Government was able to afford the congress. Lord Lister conveyed the thanks of the Congress to Prof. Robert Koch, of Germany, and the other scientists present for their attendance. A telegram was read from King Edward to the Duke of Cambridge, expressing the hope that "the result of the deliberations of the congress will be to assist the world in mitigating this dire disease which has bailed the most distinguished physicians for so long." The Duke of Cambridge announced that a gift of £120,000 would be forthcoming for the purpose of establishing the first public tuberculosis sanitarium as soon as the recommendations of the congress concerning its establishment had been formulated. Four hundred foreign delegates attended the opening session; they included a number of Americans and Canadians, among whom was Joseph H. Choate, the American Ambassador.

Dr. Koch's Address at the British Congress of Tuberculosis.—The address of Prof. Robert Koch before the British Congress of Tuberculosis was a notable event. His address occupied almost an hour and a half, and was read in English. Among some of the conclusions deduced by Koch were that hereditary consumption was extremely rare, and that the chief source of infection was the sputum. Recent experiments in Berlin, according to Koch, have shown that human tuberculosis could not be transferred to animals. The opposite, that human beings were not susceptible to bovine tuberculosis as communicated through dairy products, is of especial interest in that this opinion is opposed by no less a savant than Lord Lister. The natural preventive measures, Koch believes, are the removal of tubercular individuals from overcrowded dwellings and erection of special hospitals for them. Compulsory notification is essential, as well as thorough and systematic disinfection of the sick room. In addition, sanatoria should be established. Koch believes that the ultimate eradication of tuberculosis is possible.

Typhoid Fever in South African Army.—In the British army in South Africa 19,000 cases of typhoid fever have occurred, and 5000 have proved fatal.

Machines for Cleaning Pavements.—The convenor of the Sanitary Committee of Dundee Town Council and the Inspector of Cleansing have at present under consideration the subject for cleaning public pavements.

London Board of Health.—The new Medical Officer of Health in the City of London has just issued his first report to the Corporation. It deals with the sanitary condition of the city during the six weeks ending June 22nd. The special point in it is the reference to tuberculosis which he strongly recommends shall be placed in the category of contagious diseases.

CONTINENTAL EUROPE.

Dr. Alexander Kolisko, Professor of Medical Jurisprudence at the University of Vienna, has been elected Dean of the Medical Faculty.

Dr. Ludwig Rydygier, Professor of Surgery at the University of Lemberg, has been elected Rector of the University.

Dr. Karl Klecki, extraordinary Professor, has been made ordinary Professor of Pathology at the University of Krakau.

Dr. Edouard van Beneden, of Liège, Belgium has been elected foreign correspondent of the French Academy of Sciences.

Dr. Max Neisser has been appointed Professor of Hygiene at the University of Breslau.

Dr. Sigalas has just been elected professor, to fill the recently created chair of pharmacophysics, at the University of Bordeaux.

Dr. Bureau has been made a member of the French Academy of Medicine. Six hundred and ninety-six theses passed the Paris Faculty of Medicine in the year 1900-1901.

Dr. Galtier, of Lyons, has been elected an associate member, while **Dr. Livon,** of Marseilles, and **Dr. Motais,** of Angers, were elected foreign correspondents.

Leprosy in France.—Leprosy, which was scarcely known in France twenty years ago, is now very prevalent in Brittany and Savoy, and according to a recent report by Dr. Besnier, of the *Académie de Médecine*, these localities are now recognized leprosy centers.

Plague at Oporto.—The *Madrid Correspondencia* of June 26th, states that 12 cases of plague and four deaths have occurred at Oporto.

The Bacillus Discovered by Danysz.—The assertions of Danysz in regard to the pathogenic power of his bacillus have been confirmed by the tests at the Hamburg Institute, reported in this communication. All rats fed with cultures of this bacillus died in five to seven days, and white mice still earlier. There is no danger of confounding this bacillus with that of the plague.

Gift from the Sultan of Turkey.—It is stated that the Sultan of Turkey intends to present to the Berlin Hospital a wing, the plans of which have been sent to Emperor William for approval.

International Leper Law.—According to the *Semaine Médicale*, Germany, Persia, Roumania, Russia and Turkey have conjointly adopted laws for the purpose of preventing lepers from going from one of these countries to another. Passports and naturalization papers are denied lepers by these governments.

A Hospital for Tuberculous Children in Italy.—Upon the occasion of the birth of the Princess Yolande, the King of Italy has given \$10,000 with which to found a Hospital for Tuberculous Children.

Spinal Cocainization for Sciatica.—It is stated that Manega and Pullé, in Italy, have claimed to have cured a case of intense pains in the lower members accompanying hemiplegia and one of rebellious sciatic neuralgia, by the subarachnoid injection of 15 mg. of cocain or .75 c.c. of a 2 per cent. solution of cocain. The pains were abolished with a single injection, and have not returned.

A New German Society.—A German society for the study of medicine and the natural sciences has recently been formed. The committee of organization consists of Prof. G. W. A. Kahlbaum, of Basel; Prof. J. Pagel, of Berlin; and Dr. Sudhoff, of Hochdahl. The society will hold its first annual meeting after the close of the meeting of the Association of German Scientists and Medical Practitioners.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

July 6th, 1901.

1. An Address on our Duty to the Consumptive Bread-Earner. SIR J. BURDON-SANDERSON.
2. A Clinical Lecture on the Arrest of Pulmonary Tuberculosis. C. THEODORE WILLIAMS.
3. A Clinical Lecture Introductory to the Use of Inspection of the Lung and Pleura. SIR JAMES SAWYER.
4. On the Diagnosis of Pleural Effusion by the Röntgen Rays. HUGH WALSHAM.
5. Four Cases of Primary Thrombosis of Cerebral Veins and Sinuses in Children. THEODORE FISHER.
6. Syphilitic Meningo-Myelitis; Erysipelas; Recovery. E. F. TREVELYAN.
7. Cerebral Tumor at the Parieto-occipital Fissure. R. T. WILLIAMSON.

1.—Sir J. Burdon-Sanderson, in an address on "Our Duty to the Consumptive Bread-Earner," discusses the general conditions of the problem, and especially the beneficial influence of residence in sanatoria. Speaking of Great Britain, he believes that the essential conditions relating to establishing suitable sanatoria depend upon the choice of suitable sites and the maintenance of suitable buildings as well as the selection of suitable cases and their prompt admission. He believes that the length of residence of each individual should be regulated by suitable medical supervision, and that there should be medical supervision of invalids after they are discharged from the hospital.

[T. L. C.]

2.—C. Theodore Williams in a clinical lecture on "The Arrest of Pulmonary Tuberculosis," discusses the pathology of the arrest of tubercle. If a tubercle mass has been quiescent and gives rise to no signs or symptoms, we generally assume that it is encapsuled and that all connection with a bronchus is cut off. There is another form of arrest in which the tuberculous mass becomes obsolescent, and is surrounded by chronic local pulmonary emphysema, which often prevents the detection of the tubercle by physical signs. A not unfrequent and conspicuous form of arrest of consumption is that in which a cavity situated in the upper lobe of one lung, undergoes contraction, and we are able by physical signs to recognize the various steps of the process. The increase of fibrosis causes a shrinking of the whole lung, the walls of the cavity approximate, and in some cases meet and cicatrize. In addition to the fibrous transformation of tubercle, there is a calcareous degeneration. The study of this subject has convinced the writer that the permanent arrest of tuberculosis is not a simple matter, but is surrounded with considerable difficulties. On the other hand, there are certainly a large number of instances of arrest of consumption revealed to us in the post-mortem room. [T. L. C.]

4.—Hugh Walsham reports two cases in which the X-rays were employed satisfactorily in the diagnosis of pleural effusion. Illustrating that in doubtful cases of pleural effusion, the Röntgen rays will enable us to see whether fluid is present or not; and from the density of the shadow to give an opinion as to whether such fluid be serum or pus. [T. L. C.]

5. Theodore Fisher reports four cases of primary thrombosis of the cerebral veins and sinuses in children. In the first case the superior longitudinal sinus was found to contain a partially decolorized and softening clot throughout its length which obstructed about one-half of the diameter of the lumen. All the veins running up to the superior longitudinal sinus on the right side of the brain, were full of pale clots, as were a large number of veins over the left cerebral hemisphere. The onset of the cerebral symptoms in this case occurred nearly a month before death, which suggests that the cerebral veins were first affected. In the second case the meningeal veins over both hemispheres were thrombosed, the meninges intensely congested and the convolutions were studded with petechiae. Both lateral sinuses contained a little ante-mortem clot. In the third case the choroid plexuses and the veins of Galen were thrombosed. This thrombosis was secondary to summer diarrhea. In his fourth case the

middle cerebral vein was completely blocked by the thrombus. [T. L. C.]

6.—E. F. Trevelyan presents a case of syphilitic meningo-myelitis complicated with erysipelas. Recovery followed. The point of peculiar interest in the case being that the attack of erysipelas was followed by improvement in the paralytic symptoms. There is reason to believe (but unfortunately the notes could not be found) that the patient was under antisyphilitic treatment during at least a part of the 12 months preceding the paralysis. [T. L. C.]

7.—R. T. Williamson reports a case of cerebral tumor at the parieto-occipital fissure. The chief interest of the case was the locality of the tumor confirmed by autopsy, and the three unilateral convulsions from which the patient suffered which began in the left leg. The case shows that a tumor at the most anterior part of the occipital lobe and at the parieto-occipital fissure, may produce convulsions commencing in the leg through the extension of the growth into the most posterior part of the superior parietal and quadrate lobules for about half an inch. This would coincide with the view that the leg center extends backwards both on the convex and median surfaces of the cortex almost up to the parieto-occipital fissure. In the early period of the case, no hemianopsia could be detected, and optic neuritis soon led to blindness. The only mental symptoms were dulness and delay in answering questions. [T. L. C.]

LANCET.

July 6th, 1901.

1. Three Lectures on the Practical Points in the Treatment of threatened Asphyxia. ROBERT L. BOWLES.
2. A Contribution to the Pathogenesis of Cancer. JOHN MARNOCHE.
3. A Case of Tuberculous Ischio-rectal Abscess and Fistula with Lardaceous Disease of the Kidneys. CECIL H. LEAF and H. W. SYERS.
4. The Physical Causes of the Slighter Forms of Mental Defects in Children. FRANK M. POPE.
5. The Treatment of Glaucoma by Excision of the Superior Cervical Ganglion of the Sympathetic. A. L. WHITEHEAD.
6. On the Pathological Changes in a Case of Progressive Muscular Atrophy. R. T. WILLIAMSON.
7. Tetany. FRED. THESILIAN.
8. A Case of Multiple Epithelioma of the Tongue in a Woman Etc. T. E. HAYWARD and R. G. HENDERSON.
9. A Case of Extensive Enterectomy. ARTHUR E. BARKER.
10. Preliminary Note on the Direction of Air Currents in Nasal Respiration. CHARLES A. PARKER.

2.—Treated editorially.

3.—C. H. Leaf and H. W. Syers report an interesting case of tuberculous ischio-rectal abscess, complicated by lardaceous disease of the kidneys. The abscess was operated upon in the usual way; and in spite of the kidney condition and the fact that a division of the sphincter was necessary, the wound nearly completely healed, and the patient very greatly improved in general condition. The case is cited as a peculiar one because of the existing kidney condition with a tuberculous lesion. [J. B. G.]

4.—Pope discusses the physical causes of the slight forms of mental defects in children. Granting the theory, that a large percentage of those cases can be accounted for by pathological causes acting upon congenital weakness of hereditary origin be correct, does it afford any reason for believing that such conditions are likely to increase or to decrease? The cases dependent upon heredity will probably continue about the same for a long time, as a State legislation of marriage appears as yet to be far distant, and such a law will almost be the only measure that will control them. The number of cases will, no doubt, be prevented from increasing, even if they do not diminish, for reason of the law of reversion to type and intermarriage with healthy stock. He contends that women who bear more than a moderate number of children are likely to bring weakly ones into the world. The same applies to women much over 30 years of age. [F. J. K.]

5.—A. L. Whitehead reports a case of glaucoma following an iritis in which the tension was +3 and the vision re-

duced to counting fingers at six inches. Paracentesis of the anterior chamber gave no relief and an iridectomy could not be satisfactorily performed on account of an extensive posterior synechia. Another paracentesis, an attempted iridectomy, and a sclerotomy, all failed to reduce the tension. The superior cervical ganglion of the sympathetic was excised and immediately after operation the tension of the eye ball fell rapidly to $+\frac{1}{2}$, although there was no contraction of the pupil on account of the adherence of the iris described above. The tension fluctuated from day to day, but improvement in vision progressed and was maintained, until the tension remained but $+1$ and the vision equaled an ability to count fingers at 8 inches. The literature on the subject is reviewed. [M. R. D.]

6.—Williamson gives a report of the **pathological changes found in a case of progressive muscular atrophy**. Miller's fluid was used for hardening the specimens, and collodion as the embedding material. The tissues were stained according to the methods of Weigert and Marchi, and also with aniline blue-black and hematoxylin. Heller's pyrogallol and osmic acid method was used to demonstrate the nerve roots. The crossed and lateral pyramidal tracts of the white matter in the lower and middle cervical regions on transverse section appeared quite normal. The white matter of the anterior and lateral columns of the cord, and the direct pyramidal tracts were normal, except for a slight excess of neuroglia connective tissue in the direct cerebellar tracts. There was also a very slight excess of neuroglia connective tissue in the posterior median columns. The anterior horns of the gray matter were rather small. In both anterior horns the ganglionic nerve cells were absent, and after studying a number of sections the author was able to find one atrophied nerve cell in the median region of one anterior horn. It was very evident that the nerve fibers in the anterior horns of the gray matter had disappeared, and there was also a decrease in the number of fine delicate nerve fibers in the anterior horns. In the posterior horns the nerve fibers presented a normal appearance. The nerve fibers entering the median side of the posterior horns were normal, whilst the fine fibers of the surrounding median gray matter were decreased in number. In the anterior horns the nuclei of the neuroglia seemed to be increased in number. The anterior nerve roots consisted chiefly of fibrous connective tissue and empty sheaths and a few normal nerve fibers, while the posterior roots were normal. The walls of the small blood vessels of the anterior median fissure and the anterior horns of the gray matter showed a marked hyaline thickening. The upper cervical region presented a similar appearance. The upper and lower dorsal region also appeared normal. A few of the nerve cells in the anterior horns and in Clark's columns were pigmented. There was a slight increase in the connective tissue of the musculo-spiral nerve, but the bundles of nerve fibers were normal. The muscular tissue from the back of the forearm was soft and flabby, and there was slight resemblance to normal muscle. These changes were confirmed by microscopic examination, for not a single striated muscle fiber could be found. The muscle sheaths were collapsed and contained numerous round or elongated nuclei. Loose connective tissue and a few clusters of large fat cells existed here and there between the collapsed bundles. The muscular fibers did not reveal hyaline or fatty degeneration. This case is of particular interest because the crossed or lateral pyramidal tracts presented no evidence of degeneration. The author concludes that both clinically and pathologically there is a small group of cases which differs from amyotrophic lateral sclerosis. The case the author has described is an example. He believes that the old name of progressive muscular atrophy should be retained for these cases. [F. J. K.]

7.—Thesilian reports six cases of tetany. The first occurred in a male infant, aged 7 months; the second in a male infant, aged 15 months; the third in a female infant, aged 3 months; the fourth in a female child, aged 2 years; the fifth in a woman, aged 41; and the sixth in a woman 53 years of age. [F. J. K.]

8.—T. E. Hayward and R. G. Henderson report a case of **multiple epithelioma of the tongue** of a woman 25 years of age, in which the ulcer on either side of the tongue finally united in the center, causing an amputation of the anterior portion of the organ. The portion cast off measured about one inch by an inch and a quarter. The patient finally

died from exhaustion. The case is interesting because it shows certainly two and possibly three points of separate epitheliomatous growth. The age of the patient, as well as the sex, is unusual. Butlin states that a number of cases of double epithelioma have been reported, but none in which there were more than two points of disease.

[J. H. G.]

9.—Arthur E. Baker reports the case of a woman 39 years of age on which he operated for **strangulated femoral hernia**. The intestine was found quite dark in color, but had not lost its lustre, and improved upon washing with warm water after a division of the constriction. Excepting that the patient had some flatulency after the operation, she made an uneventful recovery. Subsequent to the operation the patient had several attacks of intestinal obstruction, the interval between the attacks being a number of weeks. About three months after the operation, however, the patient barely escaped death in one of these attacks. It was then decided to open the abdomen. This was done, and the portion of the bowel which had been herniated was found to be much constricted and matted together. It was impossible to separate the adhesions, so 37 inches were resected. The patient recovered very satisfactorily after this second operation. The case illustrates the importance of early operation in all cases of strangulated hernia, and shows that although the intestine may be in an apparently good condition, yet it may give rise to trouble after it is returned to the abdominal cavity.

[J. H. G.]

10.—Parker conducted experiments in order to determine the **direction of air currents in nasal respiration**. By means of an insufflator held about 8 inches from the nose, he impregnated the air with lycopodium. After quiet and forcible inspiration he observed the deposition of the powder within the nasal cavities. He determined the course of the expiratory current for both gentle and forcible expiration by carefully observing tobacco smoke exhaled through the nostrils. He suggests that a spray of lycopodium be used for practical diagnostic purposes in order to determine any irregularities which are causing obstruction in the nasal cavities. He found that during quiet inspiration the current of air traversed the middle, the superior, and probably the fourth meatus, and never the inferior meatus in the normal nose. Enlargements of the inferior turbinates seem only to interfere with inspiration when they form an obstruction to the entrance of air into the middle meatus. Great interference with nasal respiration occurs from polypi and enlargements of the middle turbinates. Considerable hindrance to inspiration also occurs from hypertrophies and growths springing from the roof of the naso-pharynx. During expiration the air current traverses the inferior meatus chiefly. An obstruction to this cavity necessarily interferes greatly with expiration. [F. J. K.]

MEDICAL RECORD.

July 20th, 1901.

1. The Suture of Wounds of Large Blood Vessels, with Report of a Case of Recovery After Suture of a Wound of the Axillary Artery.

A. E. HALSTEAD.

2. Clinical Observations on Syphilis. J. A. FORDYCE.

3. Headaches. H. H. Seabrook.

4. The Tampon in Gynecological Therapy.

MAXWELL BENJAMIN.

5. Latent Pulmonary Tuberculosis. CHAS. R. UPSON.

6. Mediate Palpation. E. W. WHITNEY.

1.—A. E. Halstead reports an interesting case in which, during the removal of a recurrent carcinoma of the breast, he accidentally cut through about two-thirds of the circumference of the axillary artery. Since at the previous operation most of the collateral vessels had been ligated, it was feared that gangrene would result from ligation of the axillary vessel. Digital compression was made on the proximal side of the injury and the wound closed with catgut sutures, which passed through the two outer coats. The patient left the hospital at the end of two weeks perfectly well, and two months after the operation the radial pulse on the injured side was as good as the other. The history of the suture of wounds of the blood vessels is reviewed and the technique of the operation discussed. When more than $\frac{1}{2}$ of the circumference of the vessel is involved it is advised that an end-to-end anastomosis by

invagination should be employed. This is apt to result in subsequent obliteration of the vessel from endothelial proliferation. In the meantime, however, the collateral circulation has been established. Temporary ligation with silk and catgut to prevent bleeding during the operation of closing the wound should not be employed. In his experiments upon dogs the author has found great satisfaction in the employment of tape twisted around the vessel until the circulation is controlled and then clamped with forceps. In suturing longitudinal wounds of arteries it is recommended that a continuous catgut suture should be used, passing only through two outer coats of the vessel.

[J. H. G.]

2.—J. A. Fordyce, in presenting some clinical observations on syphilis refers to a case of gangrene of the initial lesion which spread rapidly, and in two days involved $\frac{1}{2}$ of the glands. In this condition the author has found chlorinated soda solution either in full strength or diluted to suit the tolerance of the patient of great advantage. The author discusses at some length the various means of differentiating the eruptions of syphilis from non-syphilitic skin affections. [J. H. G.]

3.—H. H. Seabrook discusses the subject of headaches due to eye-strain which are explained by "direct mechanical" theories. Two forms of eye-strain are generally recognized as the cause of headache. They are the accommodative and ciliary-muscle strain from lack of proper glasses, and the muscular from the incoordinate action of the extrinsic ocular muscles in binocular fixation.

[T. L. C.]

5.—Charles R. Upson discusses latent pulmonary tuberculosis, using the term "latent" to indicate the unsuspected presence, in a large number of cases, of the disease. He believes that it is largely through ignorance of the true significance of the early subjective symptoms and the apathy of the lay population that the disease is permitted to gain such a firm hold on its victim. He suggests that the remedy lies in the publication and general distribution by boards of health of literature describing the early symptoms of pulmonary tuberculosis and the necessity whenever these described symptoms are observed of the examination of the lungs. [T. L. C.]

6.—E. W. Whitney calls attention to a manner of intensifying vibratory thrills in palpation. He suggests that the phonendoscope be placed on the chest and then, after removing the rubber tubes, the palmar surface of the hand laid upon the instrument and receives the vibrations which have been reduplicated. The action of the instrument is equivalent to that of a sounding-board. [T. L. C.]

MEDICAL NEWS.

July 20, 1901. (Vol. LXXIX, No. 8).

1. A Study of Sixteen Hundred and Fifty Blood Examinations for the Widal Reaction with Special Reference to So-Called Partial Reactions. ROBERT J. WILSON.
2. A New Method of Determining Approximately the Amount of Hydrochloric Acid in the Gastric Contents. MAX EINHORN.
3. Local Treatment of Female Diseases; Its Abuse. A. L. BEAHAN.
4. Disinfection Within and Without the Body in Diphtheria. M. A. VIEHNER.
5. Cerebral Apoplexy; Its Relation to Testamentary Capacity. CHARLES SCHRAM.
6. Surgical Diagnosis. JAMES J. McKONE.
7. Static Electricity in the Treatment of Sprain. LEONARD C. STANFORD.

1.—It J. Wilson gives a report of the Widal reaction. In the examination of 265 cases with the reaction, 46 were sent on or before the seventh day of the disease; 36 from the eighth to the tenth inclusive; 50 from the eleventh to the fourteenth day inclusive; 28 from the fifteenth to the twenty-first day inclusive; 7 from the twenty-second to the twenty-eighth day inclusive; 5 from the twenty-ninth to the thirty-eighth day inclusive, and in 93 the day of disease was not mentioned. In 34 cases the Widal reaction occurred upon the second examination of the blood; of these, 2 were negative on the third day and positive on the eighth and tenth days respectively; one negative on the fifth day and positive on the thirteenth day; one was negative on the sixth day and positive on the ninth day; 5 were negative on the seventh day and positive on the

eighth, ninth, tenth, thirteenth (2), fifteenth (2), and seventeenth days respectively. One was negative on the eighth and positive on the eleventh day. One was negative on the ninth and positive on the sixteenth day. Five were negative on the tenth and positive on the eleventh, twelfth, thirteenth, fourteenth and twenty-fourth days respectively. One was negative on the eleventh and positive on the fifteenth day. Two were negative on the twelfth and positive on the fourteenth and twenty-sixth days respectively. Five were negative on the fourteenth day and positive on the sixteenth (2), seventeenth, nineteenth and twenty-third days respectively. One was negative on the sixteenth and positive on the twenty-first day. Two were negative on the twenty-eighth day and positive on the thirty-fourth and thirty-eighth days respectively. One was negative on the thirtieth day and positive on the thirty-second day. One was negative on the thirty-fifth day and positive on the thirty-seventh day. [T. M. T.]

2.—M. Einhorn practices the following in Determining Approximately the Amount of Hydrochloric Acid in Gastric Contents: A minute quantity of stomach contents is placed by means of a glass rod upon a strip of dimethyl-amidoazo-benzol paper (one-half by eight centimeters). If the paper turns red one drop of the contents is diluted with two drops of water in a small porcelain dish. A glass rod is dipped into the mixture and the test paper again touched. If it still turns red, one or two more drops of water are added and the procedure repeated as before. This is done until only a slightly red or almost no red color is produced by the mixture upon the test paper. In this way the amount of dilution required for a trace reaction with the test paper is determined. It is clear that the more HCl there is in the stomach-contents the more they can be diluted, still giving a trace reaction with the dimethyl-amido-azo-benzol paper. [T. M. T.]

5.—C. Schram, in his article on Cerebral Apoplexy; Its Relation to Testamentary Capacity, gives Dr Gallard's opinion as follows: The aphasiac is (1) irresponsible if he cannot manifest his lucidity by words, pantomime or writing; (2) His intelligence is impaired, if he manifest his lucidity by words, pantomime or writing incompletely or sluggishly; (3) He is responsible if he manifest his lucidity and intelligence by words, pantomime or writing. Schram also considers the mental status in the various forms of aphasia. In the motor form uncomplicated there is least intellectual disturbance, supposed to be due to a lesion at the foot of the third left frontal convolution. Auditory aphasia is due to damage done to the posterior thirds and of the first and second convolutions of the left temporal lobe, resulting in word deafness. Visual aphasia is due to lesions of the angular gyrus of the left parietal lobe, is more serious in its effects on the intelligence than the auditory form. Finally, we have to consider verbal amnesia, which is the most serious form, leading to confusion of thought and diminution of intelligence. The lesion is found in the concept area of the brain, located by Wernicke in the convolution of the island of Reil. The condition results from the cutting off more or less completely of the connection nerve tracts between the concept area and the areas in which are stored auditory, visual and motor word memory centers. [T. M. T.]

7.—L. C. Stanford, in the Treatment of Sprain by Static Electricity, describes the method as follows: The electricity is generated from a Holtz machine of the largest size. The patient is placed on an insulated platform, which is connected with the negative pole of the machine by a brass rod. An electrode connected with the positive pole by a brass chain, gives off the spark after the circuit has been completed; the length of the spark being from two to four inches. The application is made over and around the painful areas by the positive electrode. The administration lasts from ten to fifteen minutes, and is occasionally broken by a short intermission. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

July 20, 1901. (Vol. LXXIV, No. 3).

1. The Cyst of the Omentum. A. JACOB
2. Some Remarks on Tetanus. FIELDING LEWIS TAYLOR.
3. Common Law Rights and the Physician's Prescription. J. WILKINSON JERVEY.

4. A Unique Case of Dupuytren's Contractions; Operation by the Open Method. FRANK E. PECKHAM.
5. A Case of Traumatic Rupture of the Intestine.

FREDERICK T. WRIGHT.

1.—Will be treated editorially.

2.—F. L. Taylor, in his *Remarks on Tetanus*, gives the following indications for treatment: (1) To remove the infection atrium, and so prevent the formation of more toxin; (2) To neutralize the poison in the blood; (3) To prevent the extension of the poison to the higher centers; (4) To quiet the cells already irritated; (5) To facilitate elimination. [T. M. T.]

3.—J. W. Jervy, on *Common Law Rights and the Physician's Prescriptions*, sums up the common sense and legal status of the physician's prescriptions as follows: (1) The patient has no legal nor other right to demand a written prescription or written directions from the physician, (2) It is right and wise that the druggist demand and procure from the physician his written orders for the compounding of prescriptions; (3) The physician has the undoubted right to designate what pharmacist shall fill his prescription; (4) The written prescription is simply an order from physician to pharmacist. It is, through courtesy, and by virtue of custom and convenience, handed to the patient for transmission; but the latter has not at any time, the slightest right of possession in the instrument; (5) The druggist has, at least, the right of permanent guardianship (perhaps of outright possession) of the prescription, and he must keep it on file for reference and for any form of proper investigation; (6) There can be no right, extenuation, or excuse for a copy of a prescription, with physician's name attached, to be taken by druggist, patient or any one else without the authority of the physician; (7) The careful physician should invariably retain on carbon paper facsimile copy of every prescription he writes; (8) The druggist has a legal right to utilize any formulae that is uncopyrighted that may fall into his hands, but he cannot, unauthorized, use the name of its author in connection with it. In most States, however, statutes would bar his selling intoxicants or other poisons except by direct order of physicians; (9) If a druggist refills a prescription without the order of the physician who wrote it, he does so on his own responsibility, and he has no legal nor moral right to leave or place the physician's name on the container. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

July 18, 1901.

1. The Shattuck Lectures. The Alleged Increase of Cancer in Massachusetts. WILLIAM F. WHITNEY.
2. The Clinical Value of Some of the Newer Hypnotics. ALBERT E. BROWNRIGG.
3. Cases Illustrating Minor Surgery of the Kidney. JOHN BAPST BLAKE.
4. Advantages of Sanatorium Treatment of Pulmonary Tuberculosis. HENRI T. FONTAINE.

1.—William F. Whitney in his Shattuck lecture on the alleged increase of cancer in Massachusetts presents some interesting facts. A number of statistical tables are included in the article, showing the death rate and ratio of males to females from the disease. If death from cancer should go on at the apparent geometrical rate of increase of the past fifty years, in two and a quarter centuries every person over thirty years would die from that disease. This rate is probably only arithmetical at its worst. The increase is probably due to better diagnosis and registration, and until the ratio of deaths over thirty years has reached 8 to 9%, which is shown by autopsies to be the true rate for cancer, it is not justifiable to speak of the increase as inherent in the disease itself. For purposes of comparisons with other places or years, a graphic picture, composed of both the rate and ratio curves, covering the period over thirty years, divided into decades, is the best. Comparisons with other States and countries show the rate for Massachusetts to be about the same as theirs, with greater variations between the males and females than is the case in Austria, which is remarkable for the correspondence between the two sexes. In the distribution in the New England States, there is no geographical feature that explains the variations, which is easily within the limits of better registration. In the State itself there is slight increase westward for groups of counties of the same density of population. The densest

populated part of the State, apart from these, shows a little higher rate. [T. L. C.]

2.—Albert E. Brownrigg discusses the clinical value of some of the newer hypnotics. The paper deals with three synthetic combinations: amylene chloral, (dormiol), chloroform acetone, and hedonal, a derivative of urethane. [T. L. C.]

3.—John B. Blake presents clinical notes of four cases illustrating minor surgery of the kidney. In the first case nephrorrhaphy was performed. In the second case nephrotomy was performed for traumatic rupture of the kidney and recovery followed. The third case presented acute abdominal symptoms. Laparotomy was performed and an abscess of the kidney found. In the fourth case nephrotomy, resection of the kidney and nephrorrhaphy were the operative procedures. [T. L. C.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

July 20th, 1901.

1. On the Advancement of Surgical Pediatrics. SAMUEL W. KELLEY.
2. The Study of Laryngology in the University and in the Higher Medical Education. JOHN N. MACKENZIE.
3. Simple Gingivitis, its Etiology and Treatment. GEORGE T. CARPENTER.
4. Military Dental Practice. Its Modifications and Limitations. HENRY D. HATCH.
5. Opening Discussion on "Military Dental Practice." Its Modifications and Limitations. JOHN S. MARSHALL.
6. The Tongue as a Breeding Place for Bacteria. H. M. FLETCHER.
7. A Contribution to the Surgery of the Kidney. Two Cases of Disease of the Kidney Simulating Gallstones. BAYARD HOLMES.
8. The Gynecologic and Obstetric Significance of Girlhood. HENRY P. NEWMAN.
9. Adenoma Sebaceum of the Non-Symmetrical Type. WILLIAM S. GOTTHEIL.
10. The Treatment of Laryngitis. OTTO T. FREER.
11. Edematous Laryngitis; with Report of Cases. JOSEPH S. GIBB.
12. Total Extirpation of the Thyroid Gland. GEORGE F. COTT.
13. Types of Membranous Pharyngitis. W. E. CASSELBERRY.
14. The Relation of the Middle Turbinate Body to Chronic Nasal Diseases. L. H. BAKER.
15. Acute Edema of the Nasal Septum. J. L. GOODALE.
16. Artesia Hymenalis, its Etiology and Treatment. O. THIENHAUS.
17. How Shall We Deal with Uterine Myomata? E. E. MONTGOMERY.

1.—Samuel W. Kelley discusses the advancement of surgical pediatrics. He goes very carefully into the literature of surgical diseases of children, showing that these subjects were not treated separately by surgical writers until recent times. In 1867 Holmes issued his work on "Surgical Treatment of Diseases of Children." Great stress is laid upon the fact that there is a difference between the surgical diseases of child and adult life just as there is between the medical ailments. It is thought that this subject is not given sufficient space in the curriculum of our medical colleges. [J. H. G.]

2.—Mackenzie delivered the annual address before the section on laryngology and otology at the 52d meeting of the American Medical Association. He discusses the importance of the study of laryngology and believes that it should hold a high place in the curriculum of medical colleges. He emphasizes that a thorough knowledge of the uses of the laryngoscope will be necessary to the equipment of the advanced physician of the future, and that this instrument is invaluable to the diagnostician. The greater portion of the address is given to the consideration of the development and the increasing general knowledge of laryngology and also to the methods of teaching this study in the Johns Hopkins Medical School. [F. J. K.]

3.—Carpenter states that it is very uncommon to find healthy gums, and that it is of frequent occurrence to find inflammation, hypertrophy, and ulceration of the gums.

gingivitis does not often result from bands, clasps, wedges, or ligatures. The most important causes are: imperfect contour and irregularities of the teeth; insufficient and improper use of the teeth; the use of dentifrice which contains inorganic substances; the careless and injudicious use of tooth-picks and rubber bands; improper nourishment; cachectic states; and the conditions which produce dyspepsia, constipation, sick-headache, and dyspnea may also give rise to gingivitis. He recommends the following treatment for gingivitis, the contour of crowns should be corrected and all irritants removed. Tincture of iodine should be lightly applied to the irritated surface. He also recommends cleansing the teeth and gums vigorously after each meal and before retiring, and suggests corn meal as a dentifrice. [F. J. K.]

4.—Hatch considers the subject of **military dental practice**, its modifications and limitations. He believes that prosthetic dentistry, orthodontia, crowns and bridge work, and gold filling are the branches of dentistry which should be eliminated altogether from military dental practice. The army dental outfit should consist of only such instruments which are consistent with good work, and should be snugly packed. He concludes the article with a discussion of the limitations of operative dentistry, to be assigned to the dental military surgeon. [F. J. K.]

5.—Marshall opened the discussion of **military dental practice**. He emphasizes that the passage of the Army Reorganization Bill with its sections creating the corps of dental surgeons for the United States Army, marks an important epoch which is destined to be far reaching in its beneficial results. The army dental surgeon will have the relative rank of a first lieutenant, and will be employed as a contract dental surgeon. His salary is \$150 per month with quarters. The Army Medical Department will furnish all instruments, apparatus, and materials for conducting the practice. The remainder of the address includes a consideration of the examination of candidates, assignments to duty, regulations governing dental corps, the equipments, and the system of keeping records. [F. J. K.]

6.—Fletcher states that the surface of the tongue offers a suitable soil for the development and growth of myriads of bacteria, because its irregular surface may be easily coated with pabulum. A number of the constituents necessary for the growth of micro-organisms are already present upon the tongue, namely: buccal mucus, saliva, particles of food, dead epithelium, and exudations from diseased gums. The author contends that the general consensus of opinion, in regard to the coatings of the tongue, is that they are not indicative of any particular disease, but simply of local significance. Too much importance cannot be placed upon keeping the mouth perfectly clean, for undoubtedly much fermentative and putrefactive indigestion will be prevented by such a measure. [F. J. K.]

7.—Hayard Holmes asserts that the difficulties of diagnosis cause the surgical diseases of the kidney to be neglected by the general practitioner. He then reports two very interesting cases illustrating the difficulty of diagnosis. The first case is that of a woman 35 years of age who presented at times a tumor in the region of the gall bladder. These attacks were accompanied by pain and vomiting and a slight temperature. The tumor moved with each inspiration and expiration and was tender to the touch. The tumor disappeared and with it the pain and other symptoms. At one time there was a slight jaundice and bile was present in the urine. The patient complained of pain in the back and shoulders. The urine was normal. When the abdomen was opened the tumor was found to be a cystic kidney in which the whole organ was involved. Nephrectomy was done and the patient made a good recovery excepting for a slight infection of the wound. The second patient was a woman, aged 40, who had had repeated attacks of colic with fever and jaundice. The greatest pain complained of was in the abdomen, back and shoulders and there was none in the leg or vulva. The pain came on suddenly and as suddenly disappeared. The urine was frequently examined and was normal. Finally in one of the attacks a distinct tumor could be felt in the gall bladder region. During one attack the patient's pain suddenly disappeared during palpation of the abdomen. Operation showed the gall bladder to be normal and revealed the presence of a floating kidney. This organ was fixed in its normal position and the patient has been free from suffering since. [J. H. G.]

8.—Henry P. Newman is of the opinion, as stated in an article entitled "The gynecological and obstetrical significance of girlhood," that the period between childhood and womanhood is at present not what it ought to be. The demands made upon the vital forces of the girl by the exigencies of modern educational and social systems, irregular meals, burdensome attire, all help to depreciate the physical standard of the present girl. He calls attention to the typical maldevelopment of the cervix as playing a disastrous role in the future of the woman. Mothers should be instructed in the management of maturing children and perfect confidence exist between the mother and daughter. The attire should be unconfined, forced mental development abstained from, and strict attention be paid to hygiene, sleep, diet and exercise. Various gynecological anomalies existing during the transition from girlhood to womanhood are discussed. [M. R. D.]

9.—W. S. Gottheil reports an interesting case of **adenosebaceous of the non-symmetrical type**. The patient was a girl 19 years of age. The growth was situated just above the temporal region, and presented a curved elongated patch $2\frac{1}{2}$ by $\frac{3}{4}$ of an inch in width. The surface was slightly elevated and a little rugose. At first this was thought to be a case of xanthoma. Examination, however, showed it to be an adenosebaceous. [J. H. G.]

10.—O. T. Freer, in discussing the treatment of laryngitis, begins with the treatment of the simple catarrhal type of the disease. Here cough is a prominent feature, and should be controlled by codeine. The inhalations of hot steam are of great advantage. Voice rest is absolutely necessary. The salicylates should be given internally in these cases. Menthol volatilized or sprayed in oily solutions, Freer has not found very satisfactory. This form of laryngitis usually responds promptly to treatment unless the voice is used. As the case advances nitrate of silver is strongly recommended, or what is perhaps better, protargol. This latter really does not cauterize, and penetrates tissues deeply. Stress is laid upon the fact that the oily menstrua inhibit the action of antiseptics. The spray is considered the best means of applying local treatment. The author refers to the advantage of using a tracheal spray tube devised by himself. In the acute submucous laryngitis local applications are of little advantage, since the trouble lies in the lymphatic channels which are not reached by the remedies. In fact, local applications may do harm in these cases. Pilocarpin administered by hypodermic is of considerable advantage. Occasionally the epiglottis is so swollen as to be immovable, and in such a case there is danger of fluids passing into the trachea. Under such circumstances it is advisable to feed the patient with a stomach tube. Acute hypoglottic laryngitis of adults produces a most distressing dyspnea requiring tracheotomy or intubation not infrequently. Laryngitis sicca, in which there is scabbing and crusting of the larynx, is greatly benefited by the inhalation of normal salt solution from a steam atomizer. The greatest advantage, however, has followed the use of the protargol spray. In hemorrhagic laryngitis tannic acid is indicated, together with cold applications to the neck. Finally the author describes the various forms and treatment of chronic laryngitis. [J. H. G.]

11.—J. S. Gibbs discusses **edematous laryngitis**, and reports a number of cases illustrating the condition. He concludes by describing several types of idiopathic edema of the larynx. First there are those cases in which there is no true inflammatory condition of the mucous membrane, but simply a transudation of serum into the submucosa. This condition is found in cases of far advanced nephritis with cardiac and vascular changes. Another type is that found accompanying acute catarrhal laryngitis. The condition may also be of an infectious or septic origin. The latter class of cases is frequent during epidemics of influenza. [J. H. G.]

12.—G. E. Cott reports a case of a 17-year-old boy in whom he removed nearly the entire thyroid because of pressure which it produced upon the trachea. [J. H. G.]

13.—Casselberry believes that the classification which attempts to differentiate the types of membranous pharyngitis by the sneezal micro-organisms which induce the infection is far from complete. The author gives a report of a case of pharyngitis due to the staphylococcus which so closely resembled the pharyngitis due to the diphtheria

bacillus, that antitoxin was given without waiting for the bacteriological report. On the third day, the membrane separated. A second report is given of a case of membranous pharyngitis due to the streptococcus and staphylococcus infection. [F. J. K.]

14.—L. H. Baker, in discussing the relation of the middle turbinate bone to chronic nasal affections asserts that this turbinate is much more frequently the cause of keeping up chronic nasal inflammations than is generally supposed. It is frequently the seat of polyps due to irritation of the discharges coming from the adjacent sinuses. This mucous membrane becomes swollen and hypertrophied, producing a blocking of the sinuses, thereby preventing free drainage. Frequently upon the removal of a polyp, there will be a gush of pus from the maxillary antrum. Under such circumstances the author urges that the whole turbinate bone should be removed, and not the polyp only. The author refers to two patients who died from cerebral involvement due to poor drainage of the nasal sinuses, and in which he thinks a removal of the middle turbinate might have prevented death. The author considers the fetid crusting of the discharges on the upper portion of the nasal chambers in non-specific patients an indication for the removal of the bone. "Bulbous hypertrophy" is also considered an indication for the removal of the bone. When the middle turbinate presses upon the septum, producing more or less severe symptoms, it should be totally removed. [J. H. G.]

15.—J. J. Goodale reports two cases of acute edema of the nasal septum. The condition closely resembles the edematous inflammations occurring in the soft palate. There is a marked constitutional disturbance and evidence of an infectious process. In the cases reported the mucous membrane of the naso-pharynx was generally inflamed, but the edema was confined to a limited portion of the nasal septum. It presented in both of these cases a large translucent pedunculated mass resembling closely a mucous polyp. The duration of the process was from two to three weeks. In each case the growth was examined microscopically and found to present the appearance of an acute inflammatory edema. [J. H. G.]

16.—O. Thienhaus, in discussing atresia hymenalis, its etiology and treatment, comes to the following conclusions: 1. The origin of gynectresias in a simple genital tract may be two-fold: a. caused by an inflammatory process, which is true in the majority of cases; b. caused by congenital malformation, as shown by Van Tussenbroek. In a case of atresia hymenalis, which, however, can find, as above cited, another explanation, and by Landau in a case of atresia cervicalis produced by a mesonephric fibroid. 2. The practitioner must pay attention to every case of birth where he suspects a gonorrhoeic infection of the maternal genital tract, not only to the eyes of the new born, but also in the same manner to the vulva and vagina; and, if he finds an infection of these parts he should treat them carefully with .5% of protargol solution three times a day, as advised by Siebert, or by other methods. 3. In all infectious diseases during childhood possible inflammation of the genital apparatus must be taken into consideration. 4. The physician must enforce a thorough examination in all cases of molimen menstruale with absence of menstrual flow. 5. If he finds an atresia somewhere in the general tract as the underlying cause, he must not cut blindly into the hematocolpos or hematometra, but must direct his method of treatment after the question: Is there hematosalpinx present or not? 6. If the latter is diagnosed, laparotomy must be performed first, and then the hematometra or hematocolpos opened by the vaginal route. [W. A. N. D.]

17.—E. E. Montgomery, in considering the question "How Shall We Deal With Uterine Myomata," believes that from our knowledge of the progress of these growths we are justified in answering the question as follows: 1. Small uterine myomata, which do not give rise to symptoms, are subperitoneal or interstitial, and may be permitted to go untreated, but the patient should be kept under observation, and any increase in size should indicate operation, as continuous growth may result in destruction of the uterus. 2. Small growths which cause hemorrhage are submucous or interstitial, and should be removed through the vagina. They can be made accessible by tents, or by incision through either the anterior or posterior lip. 3. Multiple growths, or small growths, non accessible by

the vagina, which cause symptoms, could be removed by abdominal incision. The uterus should be preserved whenever practicable. 4. When the growths are large, or when extirpation of the uterus necessary, the entire removal of the organ, as described in the text, is the simplest and most expeditious procedure. [W. A. N. D.]

AMERICAN MEDICINE.

July 20, 1901.

1. A Review of the Progress of Therapeutics for the Preceding Twelve Months.

REYNOLD WEBB WILCOX.

2. Pneumotomy for Abscess of the Lung, with Exhibition of Patient. W. JOSEPH HEARN and W. J. ROE.
3. On the Evils Arising from the Failure to Recognize the True Nature of Neurasthenia, and Some Causes of this Failure. W. W. JOHNSTON.
4. Anesthetization as a Specialty: its Present and Future. S. ORMOND GOLDAN.
5. The Relation of Pharmacists to Physicians, and the Relation of Pharmacy to Materia Medica and Drug Therapeutics. F. E. STEWART.
6. Foreign Bodies in the Rectum, with Report of a Case. LEWIS H. ADLER, Jr.

7. Removal of Ovarian Cyst, Broad Ligament Cyst and Appendix at the Second Month of Pregnancy; Delivery at Term. MAURICE KAHN.

1.—R. W. Wilcox, in the presidential address delivered before the American Therapeutic Society, reviews the progress of therapeutics for the preceding 12 months. The progress made in internal antisepsis is mentioned, as well as the Corning-Bier method of producing anesthesia by cocaineization of the spinal cord. The electrical light bath is discussed, the Flinston light treatment and the Röntgen rays. The action of sodium cacodylate, adonidin digitalin and digitoxin are also mentioned, as well as serum therapy and organo therapy. An urgent plea is also made for drug standardization. [T. J. C.]

2.—W. J. Hearn and W. J. Roe report an interesting case of pneumotomy for abscess of the lung. After giving a brief history of the operation and the improvements made in the operative technique, the authors give a minute account of their patient, who was a young man 24 years of age. The patient's lung trouble dated back to his third or fourth year. When he first applied to the authors for treatment he was suffering from a large abscess in the left lung which emptied itself through the trachea. Repeated explorations of the lung were made without revealing the abscess. Finally, however, the abscess was located in the lower back part of the lung, and found to have opening into it two bronchi, into which a probe could readily be passed, producing severe paroxysms of coughing when it reached the trachea. The abscess was drained by means of a tube. The patient improved after the operation, but required daily irrigation because of the excessive discharge and its foul odor. Palladium bichloride solution was found to do more toward lessening the quantity of pus than any other remedy employed. Permanganate, pyoktanin and formalin solutions could only be used for a few days because of the irritation which they produced. Colored solutions introduced through the tube could be readily coughed up by the patient. During the two years following this operation the patient continued to improve in general health, but the discharge from the abscess cavity continued profuse and very offensive, causing the patient to beg that something further be done. Ether was administered, a portion of the abscess was excised, and its margins sutured to a large opening made in the chest wall. Great local improvement followed this operation, there being no longer a necessity for irrigation or the wearing of a drainage tube. The discharge, however, continued, but there is no longer the horribly offensive odor which was so distressing to the patient. At no time were tubercle bacilli found either in the pus or in the expectoration. The authors think this abscess to have been the result of a localized gangrene of the lung. No difficulty was observed in the administration of ether in any one of the many instances in which it was employed, nor was any difficulty encountered from the daily irrigation through the drainage tube when that was employed. [J. H. G.]

3.—W. W. Johnston presents a paper on the evils arising from the failure to recognize the true nature of neurast-

thenin, and some causes of the failure. He cites the case of Charles Darwin, which includes every essential fact necessary to show the evil arising from the failure to carry out a proper treatment of neurasthenia. Johnson mentions the hindrance to prompt and thorough treatment of neurasthenia in the general want of appreciation of its symptoms among young medical graduates, and believes there is a great opportunity in this country for the development of the treatment of neurasthenia in institutions properly conducted. [T. L. C.]

4.—S. O. Goldman, in writing upon **anesthetization as a specialty**, discusses the present and future status of the anesthetist, showing the great responsibility of his position and devoting considerable space to the question of fees. [J. H. G.]

5. See the **Philadelphia Medical Journal**, May 11th, 1901 [T. L. C.]

6.—L. H. Adler reports an interesting case in which a man 60 years of age, a machinist, passed into his rectum the handle and valve of a steam radiator pipe. The diameter of the smaller end of this foreign body was 1½ inches and of the larger end was 2½ inches. From a history obtained from the patient's son and his attending physician, it seems that the patient had been in the habit of introducing this foreign body into the rectum and extracting it by means of a specially made hook. The extraction of the foreign body was accomplished after long and tedious efforts. [J. H. G.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

June, 1901. (Vol. 28, No. 6.)

1. A Case of Bullet Wound in the Spinal Cord; Operation three years later. JOSEPH SAILER.
2. The Rationale of Subjective Healing. SMITH BAKER.
3. An Anomalous Case of Paralysis and Dystrophy of Muscles Probably Dependent Upon Both Neural and Spinal Lesions. F. X. DERCUM.
4. Notes on a Remarkable Case of Insomnia and Its Treatment. JOHN E. BEEBE.

1.—Sailer reports a case of **Bullet Wound in the Spinal Cord** in which the interesting features were, (1) Localization of injury in spinal cord; (2) Satisfactory results of the operation three years after receipt of injury; (3) The curious sensory phenomena (talochiria) shortly after operation while improvement was still in progress. [T. M. T.]

2.—Baker in summing up his article on the **Rationale of Subjective Healing**, comes to the following conclusions: (1) The final unsatisfaction of diagnosing, if never so accurately, the special affection alone, and not at the same time giving heed to the entire individual in whom it is found. The time has already seemed to come when we should go to the modern psychological and pathological laboratories and there learn that the human being is neither mind nor matter alone, but that in every feeling, thought and act there is a unified energizing, of which mind and body alike are necessary concomitants; (2) The utter uselessness of wearing out people with multitudinous remedies, of no matter what order, that are aimed only at symptoms; and, likewise, the harm which may be done in thus cultivating unneeded for dependence upon just such supports. One need not be an extremist, or a skeptic, to see the absolutely scientific injustice of this; (3) The danger of extreme concentration of a purely subjective order, and of the psychical elation which has not been given a corresponding solid basis to sustain it. It cannot be said that any such exclusive devotion to one aspect of life, is very generally developmental or safe, in the long run. What most of these people need is a clean, new set of mental images to be derived objectively rather than concentered from, no matter how intense, subjective application; (4) The inadequacy of even a good initiation, when subsequent developments are defective or counteracting. The "healer" often seems to make a good start and in the right direction, so far as the particular individual is concerned. But his lack of physical and pathological culture, to say nothing

of the theological and psychological atavism which possesses him, robs the patient of that further restoration and development of mind and body alike, which he so universally needs; (5) Unless the body has been remedied, the mind furnished and stayed, and the conduct ordered in accordance with actual needs comprehensively estimated, no cure worthy the name can be expected from either materialist or idealist; (6) That neurologists and psychiatrists should proceed at once, to determine how far results, which are now secured haphazard and irresponsibly, can be gained by scientific inquiry and practice. This is needed, if for nothing more, than that medical education and practice may receive a proper impetus and backing in this much-needed direction; (7) That people, especially when young, should be encouraged to most sedulously cultivate bodily endurance, mental growth and freedom, moral heroism, and spiritual self-reliance, faith in inductive science, rather than trust in dogmatic deduction; all in the hope, that where now there is such a readiness to develop morbid introspection and fears, imperative conceptions and mental shiftlessness, there shall be achieved a commendable flexibility and direction of mind, and the possibility of a joyous overcoming of ordinary obstacles. [T. M. T.]

VRATCH.

April 14, 1901. (Vol. XXII, No. 15).

1. A New Institute for Massage at the University of Berlin. I. V. ZABLUDOVSKI.
2. The Mechanism of the Action of Pilocarpine on the Glands. L. B. POPELSKI.
3. On the Action of the Electric Current of High Tension on the Human Body. S. A. BRUSTEIN.
4. Chaffkin's Lymph and Other Substances Elaborated by the Human Organism, Producing Immunity Against the Plague. A. F. VIGOURA.
5. The Treatment by Koumiss and Some Koumiss Settlements in the Government of Oufim. P. V. TSEZAREVSKI.

1.—Treated editorially.

2.—Popelski directed his attention to the fact that pilocarpine exerts a stimulating effect on the salivary and other superficial glands, but its action on the deep-seated glands, such as the gastric or pancreas, is either altogether absent or very inconstant. In seeking an explanation to this phenomenon, he found that by injecting pilocarpine into the circulation of a cat and at the same time stimulating the pancreas by some irritant, he could cause a free flow of the pancreatic secretion. Such an irritant to the gland is supplied by hydrochloric acid 0.4-0.5% introduced into the small intestine either artificially or in the course of normal digestion. The explanation offered is that pilocarpine can act on the glands only when the latter are stimulated by external irritants to physiological activity, the effect of the drug being to heighten the excitability of the terminals of the secretory nerves. In the case of superficial glands external irritants are as a rule always present, and, moreover, their inhibitory apparatus is much weaker than that of the deep-seated glands. [A. R.]

April 21, 1901. (Vol. XXII, No. 16).

1. Sporadic Elephantiasis. L. V. ORLOFF.
2. Chaffkin's Lymph and Other Substances Elaborated by the Human Organism, Producing Immunity Against the Plague. A. F. VIGOURA.
3. On "Stiffness of the Spine." A. N. VINOKUROFF.
4. On the Action of Electric Current of High Tension on the Human Body. S. A. BRUSTEIN.
5. The Treatment of Koumiss and some Koumiss Settlements in the Government of Oufim. P. V. TSEZAREVSKI.
6. On the Question of Reforming the Suvoroff School at the Kalkin City Hospital in St. Petersburg. P. E. OHOZHENKO.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

3.—Vinokuroff observed two cases of complete rigidity of the spine resulting from spinal meningitis which developed in the course of convalescence from typhoid fever. (In one case the existence of typhoid fever is only pre-

sumed). In one the disease became chronic, and muscular atrophy supervened; in the other the meningitis did not advance beyond the acute stage, and muscular atrophy, as well as paresis, was absent. The following conclusions were reached: 1. "Stiffness of the spine" (*odererweitert*) is one of the conditions associated with cerebro-spinal meningitis. 2. The location and extension of this condition depends on the location and extension of the inflammation of the spinal meninges. The assertion of Bechteroff that the morbid changes take place at first in the cervical and dorsal portions of the spinal column is not well founded for in the above cases the affection commenced from below. 3. The paralytic state and atrophy of the muscles occur only when the underlying meningitis passes into the second or paralytic stage. 4. Kyphosis also appears only in the paralytic stage, and, seen in the second case, may be absent altogether, although the disease lasted for four years. 5. Similarly, anesthesia may be either slight or altogether absent. 6. The opinion of Bechteroff that the stiffness of the spine is simply the result of the kyphosis is contravened by the observation that kyphosis may be absent. The stiffness appears in the first stage of irritation, while kyphosis is of myopathic origin and can only occur during the paralytic stage. 7. The causes of "stiffness" are the same which produce the meningitis, viz., cold, trauma, infectious diseases, syphilis, alcoholism, diseases of the lungs, heart and liver. It may also be the result of rheumatism. 8. It is improper to include all cases of immobility of the spine into the group described by Bechteroff. The distinction between the various forms should rest on the pathologo-anatomical changes, and not on the symptoms. [A. R.]

4.—Brustein, after reviewing the literature on injuries caused by the electric current of high tension, reports the case of a man, 39 years old, who, while working on an electric transformer standing on a perfectly dry floor, received a shock of 3000 volts with 100 interruptions per second. He lost consciousness for 20-30 minutes, when he was able to get up and walk to the carriage. For about two months he was treated for the burns which he received, and recovered sufficiently to resume his work. Soon after he developed a neurosis associated with hysteria and neurasthenia. He presented a concentric narrowing of the field of vision, clonus of the patella, irregularity of the pulse, increased reflex action and muscular irritability, vasomotor disturbances and weakness of the extremities; in other words, this was a typical case of traumatic neurosis developing several months after the injury. The patient finally recovered under bromides, massage and electricity.

CENTRALBLATT FUER GYNAEKOLOGIE.

February 2, 1901. (No. 5).

1. Extirpation of a Right-Sided Ovarian Cyst Through a Left-Sided Inguinal Incision.

LEOPOLD REINPRECHT.

2. Case of Precipitate Labor. WILHELM KUNZE.
3. On the Treatment of Incarcerated Retrodisplaced Pregnant Uterus. L. SEELIGMANN.
4. A New Method of Protecting the Perineum.

J. HOFBAUER.

1.—Reinprecht reports a very interesting case of a patient presenting an ovarian cyst which was removed through an incision in the left groin, the cyst springing, however, from the right ovary. The patient was 65 years of age who menstruated first when she was 16 years old. Her menses were always regular and she had given birth to 4 children followed by normal puerperia. When 40 years of age the patient experienced the menopause. For 16 years before the operation she suffered from bearing-down pains in the abdomen, and for 1 year from severe left-sided abdominal pain, most marked in the inguinal region. For 3 years she had suffered from dragging and pressure in that region and had discovered a tumor the size of a hen's egg, which gave rise to some difficulty in urination. It was this pain in urination which brought the patient to the clinic. Examination showed an appreciable resistance over the right Poupert's ligament. A cystocele the size of a hen's egg was also present. The vagina was short, the portio small and undergoing senile changes and the cervix lacerated bilaterally. In front of the uterus and to the right a tumor was found the size of a fist, the uterus itself being retroverted. The parametrium was free, and the

adnexa could not be felt. There was also a left-sided inguinal hernia. The diagnoses were left-sided inguinal hernia, a tumor resembling a right-sided ovarian cyst, cystocele, and an old incomplete peritoneal rupture. The operation was performed primarily to relieve the hernia, and an incision was made and Haslani's operation performed. Before closing the wound, however, an examination was made intraperitoneal, the tumor palpated and the incision enlarged a little in order to extract the cyst after puncture. About 400 ccm. of a greenish fluid were removed. The cyst was then drawn out from the wound, its pedicle ligated and fixed in the lower extremity of the womb; the peritoneum was closed and the muscles united by means of 6 celluloid sutures. This operation was followed by an anterior kolporrhaphy and a restoration of the floor according to Lawson Tait's method. [W. A. N. D.]

2.—Kunze records an interesting case of premature labor in which the child was born almost without any labor whatever. Delivery was accomplished as he entered the corridor of the house, and on reaching the room he found a loudly crying new-born child lying upon its back in a large puddle of slightly stained liquor amni. The child had been born so quickly that the umbilical cord had been drawn out of the abdominal wall. No hemorrhage had taken place from the site of rupture. The end of the cord hung from the birth-canal. The woman had immediately taken to her bed upon the birth of the child. The child breathed well and strongly and showed no signs of injury resulting from its precipitate delivery. The labor was but 8 minutes long. The child showed all the signs of maturity. It was 50 cm. long and the circumference of its head was 34 cm. The cranial diameters were normal. There was no caput succedaneum. The measurements of the woman's pelvis were on the other hand below normal. The distance between the anterior, superior iliac spines measured but 23 cm. Between the crest $25\frac{1}{2}$ cm. and the external conjugate 19 cm. The length of the umbilical cord remaining attached to the placenta was 25 cm. The mother was 24 years of age and in her second pregnancy. The puerperium was quite normal. The interesting feature in this case was the precipitate labor in an undersized justo minor pelvis. [W. A. N. D.]

3.—Seeligmann refers to a paper written by Dührsenn in 1898 on the subject of the treatment of backward displacement of the pregnant uterus with incarceration under the sacral promontory. He then describes the case of a woman 35 years of age who had become pregnant in a retroflected and fixed uterus, the abnormal position resulting from a chronic perimetritis. He was able to restore the uterus by a process of treatment which he describes as follows: In cases of uteri which are backward displaced with their long axes lying in one of the oblique diameters of the pelvis he makes energetic traction on the portio with one hand while at the same time moderate pressure is made upon the fundus uteri toward the normal position. Usually it will be found that the pressure may be best made from the right side posteriorly toward the left on account of the position of the rectum toward the left side. The uterus having been partially restored in this manner a kolpeurynter filled with fluid is placed under the displaced fundus uteri to that side toward which the uterus is directed. The constant pressure made by the kolpeurynter will tend to restore the uterus to its normal position. After 2 or 3 hours the kolpeurynter may be withdrawn. Subsequently the treatment may be repeated as required. [W. A. N. D.]

4.—Hofbauer questions which is most advantageous, the patient resting on the back or in the side position, in the protection of the perineum during labor. He remarks that particularly in primiparae the preference is generally given to the side position. The author gives a review of the mechanism of labor and speaks of the various methods of perineal preservation. He describes a method which he has adopted, in which the right hand rests flat on the perineum so that the frenulum remains open to inspection. When the tension of the perineum becomes great, especially when the posterior margin of the larger fontanel begins to pass the perineum, the head is twisted in such a manner that the hand which grasps around the head from backwards is brought into the oblique diameter. The twisting may reach to 40 degrees, and may be performed to the right or to the left. The tense perineum is thereby relieved and the sides of the vulvar orifice become stretched. The emergence of the head is thereby facilitated and delivery will probably be accomplished without laceration. [W. A. N. D.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 63, No. 2.)

10. Habitual Luxation of the Patella. WILHELM FRIED LAENDER.
11. Small Caliber Rifle Wounds from the Experience of Recent Campaigns. HEINRICH MOHR.
12. Tumors of the Fingers. ROBERT F. MUELLER.
13. Necrosis by Schleich's Anesthetic Mixtures. F. SELBERG.
14. Inflammatory Tumors of the Omentum. HEINRICH BRAUN.
15. Some Contributions to Lung Surgery. FR. BORCHERT.

10.—Luxation of the patella is traumatic, congenital, or pathological. Traumatic luxation, when not treated, tends to become habitual. Congenital luxation may also become habitual, in the later years of life. Pathological dislocation of the patella is generally habitual. Friedländer reports cases of congenital dislocation of the left patella, and double pathological dislocation. The first was seen in a girl of 12, with dorsal scoliosis and decided deformity of the thorax. Accidentally, luxation of the left patella was discovered, which had never caused any trouble. She only noticed that it slipped out of place on rapidly running down stairs. With extension, it always slipped back into place. The internal condyle on the left leg was noticeably more prominent than on the right, the external condyle being markedly flattened. On bending the left knee, the patella rotates outward, causing a projection to the left side of the knee. The second case occurred in a girl of 12, who had double congenital dislocation of the hips until 5 years of age. Following operation, ankylosis of both hips resulted, so that standing and walking are very difficult. Only this year was the double luxation of the patella noted. Her brother, six years older, had had the same operation performed for congenital dislocation of one hip, with resulting ankylosis and luxation of the patella of that leg, later. The ankylosed hips stand at an angle of 20°, and there is slight compensatory lordosis. The luxation of the patella occurs whenever the knees are bent. The knee joint looks flat. With extension, the patella returns into place. In these cases the dislocation is outward, as is most common. The tendency toward the "knock knee" position in girls is considered a cause of the luxation, as is traumatism in men. It is also due to changes in the configuration of the ends of the bones forming the joint, and to an enlarged and flaccid condition of the joint capsule. Neither rachitis nor heredity have any influence etiologically. But in the second case a congenital disposition to luxation of the patella existed, probably aided by the changed muscle action due to the ankylosis of the hip-joint. The prognosis of untreated cases is bad. Massage, gymnastics, and bandages may aid, but operation will probably still be necessary. Friedländer advises Hoffa's modification of the Le Dentu operation in both cases. A table of the 43 cases of habitual outward luxation of the patella collected, follows. [M. O.]

11. There is now a concurrence of general opinion in the belief that the modern small caliber rifle is much less dangerous to human life than any gun formerly used. The larger the caliber, the more deadly is the effect upon the enemy. Deflected, ricocheted bullets do more harm than primary shots. Mortality has decreased 50%, and a much less number are chronically invalided. The wounds are clean cut, depending upon the distance from the shot. Fewer bullets remain in the body, and these are harder to extract than formerly. The surrounding tissue is but little damaged. The nerves are much less frequently injured, and paralysis is rare. Shock may, however, be severe. Hemorrhage from injury to large blood vessels is seldom seen, and immediate operation is often followed by recovery. Primary infection is now very rare, but secondary infection occurs, during transport, etc. When infection appears, nowadays, it remains localized to the external wound. Pyemia and tetanus follow very rarely.

To prevent infection is the main treatment at first. Aseptic and antiseptic dressings are employed universally. Intercurrent disease often causes extremely retarded healing in cases of gunshot wounds. Operations are much less frequent than they were. Only when infection occurs is immediate extraction of the bullet considered necessary. Immediate death followed bullet wounds of the heart, in spite of three cases operated. But in four, out of five cases of wounds of the pericardium, which came to operation, recovery followed. Wounds of the chest and abdomen were in many cases followed by spontaneous recovery, especially intestinal wounds. Gunshot wounds of the bones and joints showed remarkable freedom from infection. Wounds of the spinal column generally proved fatal. The worst wounds were those of the skull, yet immediate modern treatment effects some good results. But infection occurs quickly in these cases. The Röntgen apparatus has been of great assistance in finding bullets and fractures. Bombs produced fatal wounds, with the exception of the lyddite bombs, which did little harm. A greater number of instant deaths followed infantry shots than formerly; but this was not true of the artillery. A vast mass of detailed statistics has been compiled by Mohr in this article. [M. O.]

12.—During a year's observation, Müller could find but 16 tumors of the fingers. Of these, 11 were seen in the Poliklinik, where 19000 cases came during the year. He reports these sixteen cases, of which two were lipomas, one on the middle finger of an old man of 72, and the other on the index finger of a baby under two years. The former had existed 6 years, the latter 16 months, and was possibly congenital. One was a mucous cyst of the index finger, and there were four ganglions on different fingers. The next two cases were tumors of cellular tissue caused by a thorn, and a piece of a needle. In neither case did the process go on to suppuration. The foreign bodies were encapsulated by cicatricial tissue. Six cases were pigment containing fibrosarcomas of the sheath of the tendons, with giant cells. The last case reported was a subungual perithelioma, which had existed 23 years. All the cases except the four ganglions were operated, with histological and microscopical examinations of the tumors removed. [M. O.]

13.—Selberg reports the results in 175 cases in which Schleich's anesthetic mixture was used. A useful anesthetic must be safe, and as pleasant as possible for the patient; it must be practicable, must keep, and must not be overly expensive; and it must produce complete anesthesia. It was prepared according to Schleich's directions. The average amount used, (from 22 laparotomies), was 2.85 c. cm. of the mixture per minute. There was very little excitement noticeable among the patients while being anesthetized. It was noted that there was no secretion of mucus, as is the rule with ether. Selberg concludes that the patient recovers more easily than from chloroform; that there is less pain after it than after ether or chloroform; and that the patient seems in much less danger during anesthesia. But it is harder to put the patient asleep; he is more disposed to complications afterward; and the administration of the mixture is peculiar. Unfortunately it is not the ideal anesthetic. [M. O.]

14.—Braun has in the last year observed 5 cases of inflammatory tumor of the omentum, which was neither epiploitis due to resection of the omentum, nor an infiltration with torsion of the omentum, following appendicitis. In all 5 cases, following an abdominal operation, a small tumor appeared, gradually increasing in size. Upon rest and moist bandages it gradually disappeared. In the last case he operated, excising a piece of the tumor, which was pure connective tissue with fat. All four recovered slowly. These inflammatory tumors of the omentum generally follow laparotomy. Braun has collected 30 cases in all, 21 of which followed laparotomy. They may appear after silk or cat-gut has been used, which had not been perfectly sterilized. They come on some time after the operation, from a month to three years. Pain appears first, some

for it, then the gradual growth of the tumor. It is generally found high up in the abdomen. Potassium iodide and mercuryunctions will aid its absorption. The 25 other cases collected follow in detail. [M. O.]

15.—Borchert reports 29 operated cases of lung disease, in 21 of which the affected part was itself surgically treated. The others were cases of empyema. The great majority of the cases were chronic inflammation of some sort. Some were degenerated cavities, which showed no tendency to heal upon internal treatment, accompanied by suppuration and necrosis; in others was bronchiectasis with ulceration; but most cases were abscesses of the lung. Operation is necessary when there is danger of pyemia, septicecemia, or hemorrhage. Or, when a great amount of pus with lung substance is expectorated, operation is indicated. Tubercular cavities should, however, not be operated, and when tubercle bacilli occur in the sputum, surgical interference is contraindicated. Thus far no tumor of the lung has been diagnosed early enough to attempt operation. Echinococcus cysts, when diagnosed, should also be operated upon. Actinomycosis of the lungs and pleura has already come to operation. The exact situation of the process existing, its limits, the fact that the same process exists in no other part of the same lung, and the diagnosis of its character must all be determined before operation. The character of the sputum, its amount, the presence of tubercle bacilli, lung tissue, elastic fibres, pus, etc., will be of great assistance in diagnosis. In these cases too much must not be expected from percussion and auscultation. Exploratory puncture will often aid, as will Röntgen photographs. Operation will be divided into two parts, going through the thorax and pleura, and opening the lung, pneumotomy. If empyema exist, that is first opened and drained, then pneumotomy follows. The pathological process is then removed, and the lung left open. The pleura can be sutured whenever there is danger of air entering, or to induce pleural adhesions. Hemorrhage is easily controlled; pneumothorax, dyspnea, and cyanosis occur rarely. Drainage is kept in for some time after operation. Healing occurs by granulation, filling up the fistula gradually from below. To facilitate expectoration, the fistula must at times be plugged. The histories of 30 operated cases follow, 3 of which were gangrene, 6 bronchiectasis, 12 abscess, (9 with empyema), 8 empyema alone, and 1 cancer. Death followed in 14 cases. The operations are described in full. Borchert concludes that operation is justified in acute or chronic cavity, when not tubercular; bronchiectasis; and abscess of the lung, with or without empyema. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

May 21, 1901. (No. 21.)

1. The Technique of the Amputation of the Veriform Process. O. LANZ.
2. The Question of Cholecysto-Gastrostomy. F. KRUMM.
3. Reflections upon the Prophylaxis of Venereal Diseases. An Echo of the Brussels Conference. T. v. MARSCHALKO.
4. The Inhalation of Atomized Liquids. M. SAENGER.
5. The Various Forms of Hereditary Degeneration Considered According to Clinical and Biological Points of View. ADLER.
6. Blood Poisoning and Amputation. R. SCHMIDT.
7. A Case of Precipitate Birth. H. WITTHAUER.
8. Portable Aseptic Alcoholic Holders for Medical Syringes. SALM.
9. Contribution to the Knowledge of Acute Yellow Atrophy, Especially the Regenerative Processes that occur in Connection with It. A. IBRAHIM.

1.—Lanz not being entirely satisfied with Kocher's method of treating the stump of the appendix, has tried angiothrypsy with the idea that perhaps he would secure

more satisfactory results. The objection to Kocher's method is of course that it requires considerable time, and that the occlusion of the lumen of the appendix is necessarily somewhat imperfect. By the crushing method the occlusion is necessarily complete, and the operation can then be terminated by invaginating the stump and fastening the serous surfaces together by a Lembert's suture. He has employed this method in about 100 cases with excellent results. [J. S.]

2.—Krumm, in view of the fact, that in some cases where it is necessary as a result of tumor or other form of occlusion of the common duct to unite the gall bladder with part of the gastro-intestinal tract, the operation of election, that is anastomosis with the duodenum, is impossible, discusses the advisability of anastomosis with the stomach itself. He reports the case of a man 57 years of age, who developed intense icterus with great distension of the gall bladder. A diagnosis was made of pancreatic tumor, and an operation was performed. This confirmed the diagnosis, and also showed the impossibility of a cholecysto-duodenostomy. The gall bladder was accordingly united to the stomach, an operation that was rendered more difficult by the difference in the thickness of the walls of the two structures. It was, however, satisfactorily accomplished, and the patient recovered very successfully. Seven weeks later death occurred as the result of progressive cachexia and a carcinoma of the head of the pancreas was found with secondary growths in the liver. [J. S.]

3.—Von Marschalko, in discussing the results of the Congress for the prophylaxis of venereal diseases, lays down certain principles that he believes indicate the proper direction in which reform should be instituted. In the first place he does not believe that any drastic laws will be effective; the only result will be an increase of clandestine vice, or at least such a degree of opposition on the part of the populace that they will, of necessity, be repealed. In the second place, he does not regard the present methods as at all efficient. He therefore suggests that the whole thing be modified and altered, and that more attention should be paid to instruction in individual prophylaxis. [J. S.]

4.—Saenger has performed a number of experiments with the object of determining to what extent liquids in a fine spray can be thrown into the larynx. He found that solutions of methylen blue taken into the throat or nose at the same moment as an inspiration, were deposited almost exclusively upon the posterior wall of the pharynx or in the nostrils. He then performed a series of experiments with glass tubes bent in various ways, and found that in all cases a single bending at an angle of 110° was sufficient to prevent the further progress of the liquid. A rubber tube was substituted for this, with practically the same results. A further series of experiments were therefore made in order to determine to what extent dry powders could be injected into the larynx. Glass tubes were taken, bent slightly, the inner surface covered with moisture by allowing water to run through them for several minutes, and then the powders injected at one end whilst aspiration was being performed at the other. It was found that in glass tubes bent 10 times at an angle of 110° no trace of powder could be found behind the 6th or 7th corner. He concludes that we cannot accept the inhalation of liquids in a finely divided state even when they are found in the bronchi and aveoli after death, because it is quite possible that they are inspired in the form of drops and reach the glottis. Even if small quantities are inhaled they are so minute that they can be of no practical value. [J. S.]

5.—Adler discusses the various forms of hereditary degeneration. He includes among these states of depression somewhat varied in character, usually associated with nervous constitutions. More serious than these is a general depression of a psychical resisting power. This is characterised by extreme reaction to slight stimuli, either in the

form of anger or grief, etc., diminution of intelligence after moderate debauches and rapid exhaustion of the ability to work. The next degree is a morbid increase in the susceptibility to certain impressions. As a general manifestation of these he mentions imperative conceptions or obsessions such as the fear of high places, or sharp instruments, the irresistible impulse to touch objects, etc. Many of these patients become so profoundly interested in questions of relative insignificance that they are unable to pay attention to other things. Still more serious forms are circumscribed mental or intellectual defects, periodic melancholia, periodic mania, and finally circular insanities. Finally we have hebephrenia, brachyphrenia, paranolia, and in the last stage imbecility or idiocy. He also divides the hereditary conditions into those with defects in the functional, in the nutritive, and in the constructive parts of the body. Among the functional conditions he includes all defects in intellect; among the constructive, the morbid formations of the brain and spinal cord, and among the nutritive, precocious senility of various parts, of actual degeneration as in muscular dystrophies. [J. S.]

6. Schmidt reports an interesting case. A man of 60 injured his finger and had blood poisoning. On admission to the hospital he refused to submit to amputation and returned to his home where he came under Schmidt's care. At this time there was a phlegmonous infiltration of the entire arm extending to the shoulder, with areas of circumscript gangrene. Free incisions permitted the evacuation of a considerable quantity of pus; the spread of the inflammation ceased, and the patient finally recovered with good use of the arm except where a scar, as the result of the gangrene, slightly limited the extension at the elbow. He regards this case as a brilliant confirmation of Dörfler's views. [J. S.]

7. Wittlauer reports a case in which a woman was entirely unconscious of the process of birth, and the child, in consequence, fell into a chamber vessel and was killed. There was no possibility of a pre-conceived act. [J. S.]

8. Salm describes a small apparatus designed to keep two hypodermic syringes with needles constantly in alcohol, so that whenever used they will be perfectly sterile. The apparatus consists essentially of a small cylindrical bottle with a screw top; in this is placed a small rack holding the syringes and needles. Beneath the lower part there is a coiled spring so that when the top is tightly screwed down the syringes are held firmly against it and no injury is possible. The alcohol which Salm regards as the most available liquid, may be replaced by any other antiseptic, at the wish of the physician. [J. S.]

9. Hirsch continues his discussion of the acute yellow atrophy of the liver, and reports a case that came under his observation, occurring in a woman 28 years of age, who was brought to the hospital with intense jaundice and reduced area of liver dulness. The history was that of jaundice which lasted for 6 weeks, and there had been loss of power and frequent attacks of fainting. Fever did not occur until the 9th week of the disease, and death at the end of the 10th. At the autopsy the characteristic changes of acute yellow atrophy of the liver were found, with beginning atelectatic pneumonia. Careful examination of the liver showed numerous areas in which the liver cells were arranged irregularly. The most important changes were the extraordinary numerous proliferated biliary ducts, which were found chiefly in the connective tissue. In a few cases proliferation of the parenchymatous cells of the liver could also be observed. These marked degenerative changes probably occurred as a result of the prolonged course of the disease. [J. S.]

CENTRALBLATT FUER INNERE MEDICIN.

April 27, 1901.

1. Investigations Concerning the Dialysate of Digitalis Grandiflora. SCHWARZENBECK.

1.—Basse has previously reported that the dialysate of Digitalis purpurea produced marked improvement in car-

diac symptoms, increased the diuresis notably, and was well borne by the stomach. Schwarzenbeck has investigated the clinical value of the dialysate of the digitalis grandiflora, and presents a series of case histories which show good results on the cardiac symptoms, the digestive organs, the respiration and the secretion of urine. Its prolonged use, however, like that of the usual preparations caused symptoms of cumulative action. He believes that the action of digitalis is chiefly due to the digitoxin which it contains. [D. L. E.]

ZEITSCHRIFT FUER HEILKUNDE.

May, 1901. (Volume 22, No. 5).

1. Secondary Infection in Pulmonary Tuberculosis. ALEXANDER VON WEISMAYR.
2. The Study of Poisoning. ERNST VON CZYHLARZ.
3. Influenza as a Cause of Secondary Infection in the Exanthemata, with the Appearance of the Influenza Bacilli in the Blood. LUDWIG JEHL.

1.—Von Weismayr has examined 100 specimens of sputum from 81 phthisis patients. 35 of these gave tubercle bacilli alone; 20 also showed the streptococcus pyogenes; 13 the staphylococcus pyogenes aureus and albus; 10 gave both streptococci and staphylococci; and 3 cases revealed micrococci and diplococci also. The case-histories are given in full, with a table containing the result in the 81 cases. Of the 46 cases of mixed infection, staphylococci and streptococci were generally present. With mixed infection there is much fever, and the prognosis is less favorable than in pure phthisis. Besides mixed infection favors the destruction of the tuberculous tissue and hastens the formation of cavities. Von Weismayr concludes that mixed infection must be suspected in many cases of phthisis; cases. Of the 46 cases of mixed infection, staphylococci and prognosis is unfavorable; and that mixed infection may cause laryngeal complications. Finally von Weismayr hopes that more statistics upon the subject will soon be collected by other observers. [M. O.]

2.—Von Czyhlarz, after a review of the literature of the subject, describes a series of 18 experiments made upon guinea-pigs poisoned with strychnin, both in the air and in oxygen. Then followed 16 more experiments upon rabbits. From all of these, it was plain that oxygen weakened the intensity of the convulsions due to strychnin. From four experiments upon pigeons, von Czyhlarz shows that asphyxia, besides strychnin, hastens death, when a dose of strychnin had been given which alone would not have caused death. In 11 guinea-pigs the leg was ligated, strychnin injected, and 8 hours later, the leg was cut off, and the strychnin recovered. In 8 others, morphin was used instead of strychnin. From this it was seen that more than half of the poison injected could not be recovered. From 27 other experiments upon guinea-pigs, von Czyhlarz shows that, after the blood has been excluded from the leg to be ligated and injected, by an Esmarch bandage, the effect of the strychnin injected is much weakened. From 5 more experiments upon guinea-pigs, it was shown that long continued increasing small doses caused no preparation for receiving a large dose of strychnin. Death occurred immediately after the large dose. Four hens were then given increasing doses of strychnin, their excreta collected and examined for strychnin. The hens were then killed and examined for strychnin. The greater part of the strychnin given had disappeared, being found neither in the excreta nor in the dead hens. Dogs fed upon these hens showed no symptoms of poisoning. One hen, killed two weeks after the strychnin had been stopped, showed absolutely no strychnin in her body after death. [M. O.]

3.—Experiments have failed to isolate definite bacteria in many of the exanthemata. A long streptococcus has been found in some cases. Jechle has examined the expectoration and the blood in 48 cases of scarlet fever; in 23 cases of measles; in 9 cases of varicella; in 24 cases of pertussis; in 15 cases of diphtheria; and in 20 different affections in adults in which abundant influenza bacilli were found in the sputum. Of the 48 cases of scarlet fever, influenza bacilli were found in the sputum in 19, in the blood in 22; of the 23 measles cases, in the sputum in 18, in the blood in 13; of the 9 varicella cases, in the sputum in all, in the blood in 5; of the 24 pertussis cases, in the sputum in all, in the blood twice; of the 15 cases of diph-

themia, in the sputum in all and in the blood of one case. With the mixed infection the mortality was highest. Jehle concludes that in childhood, influenza is frequently found as a secondary infection. It is generally localized in the lungs, but may also be found in the tonsils. The influenza bacilli reach the blood in the exanthemata very rapidly, appearing in scarlet fever even before the eruption. In the other infectious diseases of children and in influenza of adults, the influenza bacilli are very rarely found in the blood. When the influenza bacilli are found in the blood, severe organic changes have occurred. Jehle believes that the exanthemata exert some predisposition to the entrance of a secondary infection into the blood. [M. O.]

REVUE DE MEDECINE.

April 10, 1901. (21me. Année, No. 4).

1. Lacunar Disintegration of the Brain and Other Cerebral Cavities. PIERRE MARIE.
2. Re-education in the Movements of the Heart, by Methodic Exercise. FERNAND LAGRANGE.
3. Angina and Stomatitis Due to Bacilli and Spirilli. NICLOT and MAROTTE.
4. Malaria and Mosquitoes. C. VANEY.

1.—Marie, who has made a large number of autopsies upon old hemiplegics, found but few areas of hemorrhage or softening, the great majority of brains showing **lacunar disintegration**. This consists of irregular cavities varying in size from a millet seed to a pea, the brain substance showing torn edges. In number they vary from one to ten, and they appear in both hemispheres. They are generally found in the lenticular nucleus and optic thalamus, but may also occur in the internal capsule, caudate nucleus, corpus callosum, etc. They are very rare in the cerebellum. With this lacunar disintegration the dura is adherent, the pia thickened, the convolutions and nuclei are atrophied, and the ventricles dilated. The choroid plexus may be cystic and the corpus callosum thin. Senility may be the predisposing cause, but arteriosclerosis is the main factor in the production of lacunar disintegration. Out of 50 brains of old men with this disintegration, cerebral hemorrhage was found in 16, and softening in 7. These lesions Marie believes follow lacunar disintegration. In all cases hemiplegia existed, 32 having had strokes of apoplexy, 13 of them more than twice. Marie also mentions three other cavities found in the brains of old men, the "sieve-like brain," well described by Durand-Fardel, frequently seen about the island of Reil, due to a general retraction of the cerebral parenchyma; **isolated perivascular dilatations** about a lenticulostriate vessel at its entrance to the lenticular nucleus, which may be as large as a bean, and is rarely seen; and **cerebral porosis** or cystic degeneration of the brain, a postmortem change, consisting of many cavities which may reach the size of a nut, found all over the brain. [M. O.]

2.—Lagrange believes that the human heart should be educated by **methodic exercise**, so that its movements will continue to be regular while the individual accomplishes a certain amount of work. Especially is this necessary where troubles of co-ordination exist in the muscles regulating the circulation of the blood. Effort, however, is too violent, and should be prohibited. When compensation fails the heart must be re-educated. This will be due to mechanical or functional causes. For either sort, massage and active movements of the extremities will do good. There should be no violent motion, no gymnastics. For the functional disorders all exercise must be rhythmic. Organic lesions will need regulated massage of the extremities for arterial hypertension; for arterial hypotension, deep massage of the abdomen, etc. It is by exercise that Lagrange believes **coordination in the movements of the heart** may be re-established. M. O.

3.—Niclot and Marotte describe 16 cases of ulcerative angina and stomatitis due to fusiform bacilli and spirilli. They give a complete review of the bibliography of the subject. It seems common among students and in the army. It cannot yet be proved epidemic. Symptoms are few, the chancreiform ulcers lying upon the tonsils, the mucous membrane of the gums, lips, or cheeks, with enlarged lymphatic glands, a fetid odor to the breath, and increased salivation. Appendicitis may occur as a complication, as do pulmonary or articular symptoms. Its course and duration are variable, the disease lasting from a week

or two, to two months. The only danger rests in grave complications. Erythema, purpura, etc., may appear. Tincture of iodine applications and a hydrogen peroxide wash form the only treatment. The diagnosis is settled by finding the fusiform bacilli and spirilli. It often resembles syphilitic or diphtheric angina. It is difficult to cultivate these bacilli or spirilli of Vincent, and inoculations often prove a failure. Niclot and Marotte made two series of over 75 experiments, with rather unsatisfactory results. No pure culture of either were obtained. Out of 32 inoculations, the two bacteria were found 14 times, the bacilli alone 7 times, the results being negative in 11 cases. Histories of the 16 reported cases follow in detail. They conclude that streptococci also exist with these bacilli and spirilli in inoculations, especially upon the mucous membranes. [M. O.]

4.—Vanev reviews the subject of malaria from the discovery of the hematozoa of Laveran in 1880, to the present time. He details the life history of the malarial organism, and mentions the **mosquito theory** advanced in 1884 by Manson. He describes the anopheles, and reviews the entire recent literature upon the subject. [M. O.]

JOURNAL DES PRATICIENS.

May 4, 1901. (XVme. Année, No. 18.)

1. A Case of Acute Cerebro-spinal Meningitis. DEBOVE.
2. The Spinal Method of Cocain Analgesia. TUFFIER.
3. Intestinal Pseudo-lithiasis of Medicamentous Origin. MAURICE DE LANGENHAGEN.

1.—Professor Debove reports a case of **acute cerebro-spinal meningitis** in a man of 25. He became ill suddenly, after having worked on an intensely cold morning, with pain in the forehead, back and neck, vomiting, and general malaise. The headache persisted, with fever and torticollis. The pain, with Kernig's sign, confirmed the diagnosis. Delirium, herpes, constipation, slight pupillary inequality, and occasional diplopia appeared. **Tâche cérébrale** was also present. Lumbar puncture gave a pure culture of the meningococcus of Weichselbaum, with many polynuclear leukocytes. Croupous pneumonia developed on the sixteenth day, and he died upon the 24th day. Lumbar puncture had been made twice, and baths of 95° F. were given four times daily. The autopsy showed widespread purulent cerebro-spinal meningitis. Debove believes that meningitis may be caused by the pneumococcus, the meningococcus, or the streptococcus. All three can be found in the nasal mucous membrane. He reviews the technique of lumbar puncture. [M. O.]

2.—After noting that Corning was the discoverer of the spinal method of cocain anesthesia, and that Bier operated by this method, but with faulty technique, Tuffier describes the precautions which he takes in carrying out the new method of spinal analgesia. The puncture must not be made in the operating room. The needle must be tiny, the cocain a 2% solution of cocain hydrochlorate. The patient should sit up, and the puncture should then be made on the level of the crests of the ilium. The injection should be made very slowly, taking a minute for injecting a gram of the liquid. The most common disadvantages of this method are vomiting during operation and headache after operation. During operation the mortality has been nil. Six cases, out of 2000 operations, died after lumbar puncture, three of them with tuberculous meningitis. [M. O.]

3.—Langenhagen reports the case of a woman aged 48, with **intestinal calculi** which she has been passing for a year. She had kept over 300 such stones. They were round, regular, grayish yellow, and calcareous in character. During this time she took four grains of sodium bicarbonate, calcined magnesia, and prepared chalk, in "cachets" at each meal. Upon stopping the medicine, no more calculi appeared. Chemical examination showed them to be formed of carbonate of lime and carbonate of magnesium, about half and half. As the medicine had been taken in "cachets," they may have formed calculi at once. Or when they reached the water in the stomach, a cement was probably formed immediately. But that this occur, it was necessary that there be no hydrochloric acid present. This was, then, much diminished, or absent. The literature of the subject has been cited in full. [M. O.]

Original Articles.

ATYPICAL AND UNUSUAL VARIETIES OF APPENDICITIS.*

By JOHN B. DEEVER, M. D.,

of Philadelphia.

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Mr. President and Gentlemen:—

I acknowledge with much pleasure the honor of addressing this body, and hope that I shall be able to give you a few ideas that you can carry away that will be of practical value.

While I was as yet undecided as to what specific part of the vast domain of surgery upon which to speak to you, the subject which I have chosen was suggested to me by your secretary. I at once decided that nothing could be more appropriate or more likely to be of practical benefit. There is no disease which is trifled with more in the attempt to cure it with medicines and which causes as many deaths as neglected appendicitis.

Although appendicitis is in the majority of cases easy of diagnosis, if this condition be constantly kept in mind, yet there are many manifestations of this protean disease that are puzzling even to those with the largest experience with this affection.

The symptoms present in an attack of appendicitis depend upon a variety of factors, any or all of which may be involved in the case. These elements may be considered as: 1st, Anatomical; 2nd, Pathological; 3rd, The duration of the attack, and 4th, The idiosyncrasies of the individual. It is difficult to define a typical or usual form of appendicitis, for it is a disease which is prone to a great variety of pathologic phases. We can, I think, accept as the type of the disease that form in which the appendix occupies a position in the right iliac fossa, pointing toward or extending over the brim of the pelvis and overlying the psoas muscle. In this variety, we most frequently find the symptoms corresponding to the classical description and indicating the pathologic processes going on within the abdominal cavity. This definition falls short of accuracy from the fact that not infrequently, in cases in which the appendix occupies the pelvis, the pain in the early stages of the attack is referred to the left side of the abdomen. Nevertheless, I think that this variety can be accepted as the usual type of the disease; therefore this paper will take up the consideration of types of appendicitis in which the appendix varies from the above position and in which the pathological phenomena vary with the position of the appendix.

When the appendix occupies a position behind the cecum, pointing north or toward the liver or kidney we meet with a variety of the disease which is associated with many unusual phases and where a differential diagnosis is of vast importance and the difficulties manifold. One fact must be always kept in mind in a study of these cases, and that is, that if the inflamed appendix or an appendiceal ab-

scess is in contact with or contiguous to the kidney, liver or gall-bladder, there may be present symptoms which might lead to a belief that the primary disease is there located instead of in the appendix. It is therefore of prime importance to exclude disease of these organs by the proper examinations which in the case of the kidney would be the urine, and in the liver or gall-bladder the symptoms which characterize their diseases.

Let us now take up seriatim the diseases of the kidney which may be mistaken for an attack of appendicitis which has occurred post cecal.

Movable Kidney.—To arrive at a correct diagnosis between a movable kidney and a post cecal appendicitis, the following points must be duly weighed. Movable kidney is most commonly met with in nervous women who have gastro-intestinal disturbances. The attacks of pain are associated with nausea, vomiting, fever and *chills*. The urinary functions are disturbed as evidenced by frequent urination, which is apt to be painful and the urine is large in amount. The urine may contain blood and even pus; excess of uric acid or oxalates are of common occurrence. From the history of the case can be learned the frequency of the attacks of pain, the nature of the pain and the part of the abdomen to which it is referred and whether it is fixed or migratory; whether or not it occurred after the ingestion of a heavy meal, after exposure to cold, or to fatigue, or after unusual movement, or from position or indirect violence. The tenderness of a movable kidney is out of proportion to the degree of muscular rigidity and extends over a larger area than in a case of appendicitis. The above symptoms with the physical signs of a movable kidney make a plain case.

In the case of appendicitis, the three cardinal symptoms are: pain at first general or referred to the ensiform cartilage or around the navel, the latter becoming localized to the region of the appendix; tenderness, most marked in the immediate neighborhood of the appendix; and, rigidity of the lower portion of the right rectus muscle or the flat muscles of the abdomen overlying the appendix.

Floating kidney with twisted ureter may present symptoms very similar to an attack of post cecal appendicitis. The pain, however, radiates in the line of the ureter and is not increased by pressure to any marked degree. This condition, combined with a history of a movable tumor corresponding to the site of the kidney, the presence of blood in the urine, and changes in the amount of urine, and the absence of the cardinal symptoms of appendicitis will clear up the diagnosis.

Renal Colic.—Error in diagnosis between renal colic and appendicitis can only occur in the early stages of the disease. There are some cases where the pain of appendicitis is referred to the groin and is associated with retraction of the testicle and vesicle tenesmus. Renal colic, however, is usually ushered in by a distinct rigor, followed by excruciating pain in the loin posteriorly, usually increased by pressure. The pain radiates along the ureter and is somewhat relieved by voiding urine. There is no marked rigidity of the abdominal wall, and usually not marked tenderness in the right iliac fossa and the urine shows characteristic changes.

*Address on Surgery before the Wisconsin State Medical Society, Waukesha, June 27, 1901.

The X-ray is of use in making a differential diagnosis: A collection of pus behind the cecum may be mistaken for a surgical kidney, although it is not common for such a diagnostic point to come up. The pus resulting from appendicitis occurring post cecal is so rapidly destructive in its effects that it is unlikely to become chronic, while pyonephrosis is slow in onset and development. The local tenderness of pyonephrosis is always elicited by pressure in the loin, while that of appendicitis is located in the right iliac fossa as well. In pyonephrosis we have the characteristic findings in the urine of pus and blood; urine usually diminished in amount. Pain referred along the ureter and retraction of the testicle and irritability of the bladder. Usually in pyonephrosis a history of retroinfection from the bladder can be elicited.

A pyonephrosis in a movable kidney and especially in the absence of urinary symptoms presents a knotty problem. Here we must depend upon the tender, movable tumor and sick stomach without a tendency to let up, and the absence of the three cardinal symptoms of appendicitis.

Perinephritic abscess, and post cecal or post colic appendiceal abscess may be confounded, and, as a matter of fact, a peri-nephritic abscess may be appendiceal in origin. Personally, I believe that the majority of so-called perinephritic abscess cases are cases of post colic appendicitis abscess. The character of their onset will be sufficient to establish a diagnosis.

The following case taken from my list (Deaver's *Appendicitis*, Vol. I, 2nd Edition, p. 211), will illustrate the difficulty of the differential diagnosis:

The original diagnosis was appendicitis, and, on account of the desperate condition of the patient, when I saw him, an incision was made in the loin for the evacuation of an evident collection of pus. Recovery with repair of the wound followed. The patient, however, was unable to resume his occupation on account of localized pain, referred to and above the posterior half of the crest of the ilium. Six weeks after recovering from the operation for the evacuation of the abscess he was again referred to me. Upon examination the incision was found intact, but tender. Upon palpation over the appendix pain and resistance were noted. Removal of the appendix was recommended. When the patient was under the anesthetic and was placed upon the operating table, a distinct fecal odor, which was thought to be due to a bowel movement, was noticed. Upon removal of the antiseptic dressing which covered the proposed field of operation, it was found that the cicatrix had broken down and that fecal matter was escaping from it. Believing this to be a fecal fistula, the result of an original attack of appendicitis, I opened the abdomen, isolated the field of operation by gauze packing and located the appendix. The tip of the organ was perforated, and its lumen was found to be in direct communication with the fecal fistula. The appendix was removed and the wound disposed of after the manner of such cases.

Pyelitis and ureteritis can be mistaken for appendicitis. The differential points are the history of the infection by route of the ureter and bladder, the presence of tenderness at the bladder extremity of the ureter, as made out by vaginal or rectal examination, deep seated tenderness in the line of the ureter and the pelvis of the kidney, the absence of pronounced muscular rigidity; associated tuberculous or calculous disease of the kidney, and the presence in the urine of blood, pus, ureteral epithelium and gonococci.

I have operated on a case (*Treatise on Appendici-*

tis, Deaver's II. Edition, page 206), in which the symptoms were those of pyelitis and where the urine contained blood, pus and ureteral epithelium, but where the initial symptoms were those of appendicitis. The condition found was that of an appendix, which was adherent at its tip to the pelvis of the right ureter, and had ruptured at this point and the contents of the appendiceal abscess were being drained by the route of the ureter and bladder.

A differential diagnosis between an acute appendicitis and acute affections of the gall-bladder is at times one of the most difficult ones to make in the domain of intra-abdominal diseases.

Fulminating appendicitis and acute phlegmonous cholecystitis and gangrene of the gall-bladder or fulminating cholecystitis are diseases so similar in onset, symptoms, and results that they may present an almost identical picture and in certain cases are coexistent. But there are differences in the aspects of the two affections which serve to draw a line and enable us to establish a diagnosis, although the indications for early and prompt interference are so absolutely imperative that it is justifiable to proceed with an operation even before a positive differentiation is established. The following points are to be borne in mind—Vomiting occurs in both, but is less persistent in appendicitis; pain is intense in both conditions and is persistent, but in cholecystitis it is under the lower border of the ribs and radiates toward the right scapula while in appendicitis it is at first periumbilical and becoming localized, in a short time, in the right iliac fossa. In cholecystitis the pulse is quick and of small volume, the temperature high, the breathing shallow and rapid, and great depression, amounting almost to shock. Jaundice is not always present and its absence should not mislead one. Tenderness is present in both conditions, but it must be recollected that in appendicitis the point of greatest tenderness is usually located at a spot along the outer border of the right rectus muscle, where it bisects a line drawn from the anterior superior spine of the ileum to the umbilicus. In acute phlegmonous cholecystitis, on the other hand, and in gall bladder inflammations in general, the point of greatest tenderness is most frequently at the junction of the upper two-thirds with the lower one-third of a line drawn from the end of the ninth rib to the umbilicus.

In the less acute forms of inflammation of the appendix and gall-bladder and ducts, the diagnosis of each is difficult at times, but does not offer the obstacles that do the intensely acute forms just described.

Biliary colic can be mistaken for an attack of acute appendicitis. In both the onset is sudden and is accompanied with vomiting and colicky pain. In biliary colic the vomiting is more persistent, and there is apt to be a chill as an initial symptom. Tenderness is more marked in appendicitis. In biliary colic there is usually a history of previous attacks and jaundice is present oftener in this affection than in appendicitis, which, along with the characteristic color and pruritus and hemorrhagic tendencies, may persist during the interval between attacks. The location and degree of pain in the two affections differ, in that

the pain of biliary colic is more continued and more severe and radiates usually from the lower right chest margin to the umbilicus. In the latter stages of biliary colic the pain may become constant and involve the entire epigastric region or extend even lower; it will, nevertheless, usually, at intervals of two or three days, become localized and more acute in the region of the gall-bladder.

In appendicitis the localization is always toward, if not directly in the right iliac fossa, while between the severe paroxysms there is marked tenderness at this point and characteristic rigidity of the overlying abdominal walls. If, in addition to the above signs, there is found, as is frequently the case, gall stones in the stools, the diagnosis is positive. *Empyema* of the gall-bladder is a condition which may simulate appendiceal abscess. In the early stages of empyema of the gall-bladder the diagnosis can be made by the following points: the history, the onset, the location and character of the pain, the area and degree of muscular rigidity, and the character and position of the tenderness. A most important point in the differentiation of the two affections, if the patient be seen before adhesive inflammation occurs, is the movement of the distended gall-bladder with the movements of the diaphragm, and the rounded fluctuating swelling extending below the margin of the ribs.

Jaundice, as in the other affections of the gall-bladder, is rather unreliable as it is frequently absent. When it is present we know that there is an associated trouble in the common or hepatic ducts due to inflammation or blocking by stone.

The differentiation between a ruptured empyema of the gall-bladder and a ruptured appendiceal abscess is extremely difficult and at times is impossible short of operation. Points to be noted in the previous history and the fact that it is the upper portion of the right rectus muscle that becomes rigid in cases of ruptured gall-bladder will aid in the differentiation.

In hepatic and perihepatic abscess a differentiation can usually be made by the history, the location of the collection, the hectic temperature and emaciation and the absence of the characteristic history of an attack of appendicitis.

With all the points which we have at our command in making a differential diagnosis between acute appendicitis and acute disease of the kidneys, liver and bile apparatus, it is, nevertheless, not uncommon to meet with cases which are extremely puzzling and where a ripe experience comes in to carry us to a correct estimation of the pathological changes taking place in the abdominal cavity and help us to bring our patient to a safe haven of health.

There is another acute abdominal affection which may be confounded with appendicitis when the appendix holds a retro-cecal and retro-colic position, i. e., acute hemorrhagic pancreatitis. But this is so rare a disease that we need not to mention it. This much can be said, however, that it occurs in middle-aged, obese alcoholics, and usually follows debauch.

In the female, an appendiceal attack, and particularly when attended with suppuration, and where the appendix points toward or into the pel-

vis, may simulate any of the acute conditions of the uterine adnexa.

I have opened the abdomen for appendicitis and have found an ovarian cyst with twisted pedicle, hematoma of the broad ligament, extra uterine pregnancy, ruptured pyosalpinx, ovarian abscess, etc., but those were the days of early experience. The difficulties of a differential diagnosis in these various diseases is real and not fancied and often call for our greatest skill and acumen. It can be said for our comfort, that the treatment of all these diseases is essentially operative, a procedure which can be carried to a successful issue through the incision made for the purpose of removing the appendix.

In right-sided salpingitis, pyosalpinx, ovarian and tubalovarian abscess, the essential points of differentiation are the history of gonorrheal or septic infection by route of the uterus, the absence usually of vomiting, the lesser degree and location of the tenderness, the slower onset, and the location of the mass and the tendency to excessive flow at the menstrual period. Yet I do not consider an operation for pelvic disease finished without an investigation of the condition of the appendix.

In extra uterine pregnancy we have the history of one or more months of partial or complete suppression of menstruation, generally associated with signs of pregnancy and collapse supervening upon an attack of acute abdominal pain. These points, with absence of inflammatory symptoms, the latter being present, however, in late cases, and the finding of decidual shreds in the vaginal discharge will help to clear up a diagnosis. The pain is long continued and paroxysmal, but not like that of intestinal or appendiceal colic.

The following case will illustrate the difficulties which sometimes arise in making a diagnosis between acute pelvic and appendiceal disease:

J. G., aet. 26. History of an attack of acute abdominal disease occurring at the age of 12 years. She was sick for 7 weeks and recovered after the discharge of a large quantity of pus per rectum. The mass was confined to the right iliac fossa.

The present attack occurred at the end of a menstrual period and was brought on by violent dancing. She experienced a sharp pain in the right lower part of the abdomen, which grew steadily worse. There was rigidity, tenderness and vomiting present. A tender mass could be plainly felt in the vault of the vagina. She was operated on 20 hours later. The appendix showed chronic inflammation and was involved in a mass of old and dense adhesion along with the right tube and ovary. There was a large hematoma of the right broad ligament, which was evacuated through the vagina. The patient did well for 10 days, excepting the tendency of the vaginal opening to close. At this time she developed an acute intestinal obstruction for which her abdomen was re-opened. The patient made a good recovery and went home. One year after the original operation she was again operated to relieve adhesion between the ovaries and tubes, because of metrorrhagia and menorrhagia and dysmenorrhea.

This case will serve to point out to you the remote possibilities of appendiceal inflammation. It is not an uncommon occurrence to have an acute intestinal obstruction following operation for the relief of acute suppurative appendicitis, and especially so in those cases in which adhesions are numerous and dense.

An ovarian cyst with a twisted pedicle may pre-

sent symptoms resembling appendicitis. The onset of the symptoms of a cyst with twisted pedicle is sudden, and is usually caused by sudden changes of position of the body or to excessive peristalsis. If the twisting be complete enough to shut off the circulation, gangrene of the walls rapidly supervenes and the patient becomes rapidly septic. At first the peritonitis is local, but soon becomes general. Here we have some points of resemblance to appendicitis with abscess formation. The points of differentiation are the slow growth of the tumor preceding the acute condition; the shape and elasticity of the tumor, the difference in character of the pain and tenderness, and the widespread rigidity of the abdominal muscles.

I might go on to a discussion of some other forms of acute abdominal disease with which appendicitis can be confounded, but I fear I have taken up enough of your valuable time and will content myself by mentioning some of those which are met with. There are, splenic abscess, tuberculous peritonitis, circumscribed peritonitis due to inflammation of the right spermatic cord, psoas abscess, lumbar abscess, abscess of the abdominal wall, aneurysm of the iliac artery, enlarged mesenteric glands, and acute inflammation of the glands of the mesentery of the terminal portion of the ileum, mesenteric hematocoele, lead poisoning, incipient inguinal hernia. It seems inconceivable that acute appendicitis could be mistaken for hip disease or dislocation of the hip, but this error has occurred in a case I operated several years ago. The patient had a fall, striking his hip. He had some pain and tenderness in the hip joint. The day following he ate a large quantity of ice cream and acute abdominal pain soon followed. His physicians diagnosed dislocation of the hip and sent him to the hospital for reduction. The abdomen was generally distended, tender and rigid. The rigidity and tenderness, however, was more pronounced, immediately above the crest of the right ilium, just behind the anterior superior spine. Attempts to move the thigh caused excruciating agony. By examination I felt convinced that his condition was not due to his accident, but a post cecal appendiceal abscess. The belly was opened and a gangrenous terminal appendicitis with the appendix holding a retro-cecal position, lying upon the psoas muscle and surrounded by a small collection of offensive pus, was found. Inflammation of an exceptionally long appendix stretched along the ascending colon to or beyond the hepatic flexure gives rise to very confusing symptoms.

I have seen cases of subhepatic abscess consequent upon an appendicitis, which had been diagnosed empyema. In one, the abscess had pushed up the liver and diaphragm, giving all the signs of effusion in the lower right chest, which, added to edema of the chest wall, made the case very confusing. In the other, the abscess ruptured into a bronchus with expectoration of the pus, which made the diagnosis still more difficult.

Yet even in these cases the coexistent abdominal symptoms, previous history, mode of onset and absence of the usual causes of empyema made the diagnosis possible. In another of such cases the

abscess was situated nearer the median line and very closely simulated subphrenic abscess.

I have seen abscess due to appendicitis break through the posterior peritoneum and following the psoas muscle out of the pelvis infiltrate the tissues of the thigh as far as the knee.

Among the most difficult cases of appendicitis to diagnose are those chronic cases in which there are practically no symptoms except those of intestinal indigestion and dyspepsia. In all such cases it is well to palpate the appendix most carefully, and if it is found to be enlarged or tender remove it.

I have seen many such cases cured by this operation, done after years of suffering and invalidism from so-called intestinal indigestion. There are some cases of follicular appendicitis that simulate typhoid fever very closely in the early stages. In these cases a study of the blood is one of the valuable means of differentiation.

Appendicitis quite frequently complicates typhoid fever and should always be watched for. I have operated for appendicitis during the course of typhoid fever with the most fortunate results. Ulceration of Peyer's glands in the terminal portion of the ileum in typhoid fever with deposit of inflammatory exudate around or contiguous to the bowel, presents some points in common with appendicitis, therefore careful examination is necessary to determine between the two conditions in order that operation, if considered, be properly advised. I have seen a few cases of appendicitis with the appendix adherent to the bladder complicated with gonorrhea. Such cases present great difficulty of diagnosis, and the true nature of the trouble can only be ascertained by the most careful study, if, indeed, it is possible at all.

At the time of operation there is an atypical condition met with so frequently that it is worthy of note. In cases of acute appendicitis, with the appendix in the right iliac fossa, I have often found a collection of pus in the pelvis; therefore, I make it a routine practice to pass a drainage tube into the pelvis to determine this point and find pus in a surprisingly large percentage of cases.

After all, gentlemen, it is on the three cardinal symptoms of appendicitis, mentioned above, upon which we must rely most to make our diagnosis—pain, tenderness and rigidity.

The pain is a great stumbling block to many who do not remember that the initial pain may be referred to any part of the abdomen, and it only becomes localized to the right iliac fossa at the latter period. It is generally cramp-like and to a certain extent paroxysmal.

The tenderness is variable in degree, but a very valuable sign. It is in the great majority of cases most exquisite in a small area directly over the base of the appendix. In cases of referred pain a very valuable sign is the fact that pressure over the point of greatest pain gives pain not so much there as at McBurney's point. The rigidity is also as valuable, if not more valuable, than the other signs. It is best elicited by the gentlest possible pressure and is nearly always greatest over the appendix.

In conclusion, let me say that the greater my experience in appendicitis the firmer rooted become

my convictions in favor of early operation as being the only justifiable method of treatment.

The first attack, and the early hours of the attack, when the pathological lesions are confined entirely to the appendix, is the only time when the diagnosis is easiest, and is also the best time for operation, before complications have set in which not only make the diagnosis more difficult, but also the operation, as well, and render more certain the saving of useful lives which otherwise would be sacrificed to this variety of the dread monster, disease.

APPENDICITIS WITH THROMBOSIS AND SUPPURATION IN THE RIGHT ILIAC AND FEMORAL VEINS.

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of Telluride, Colorado.

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Present illness. A robust laborer, 31 years old, was suddenly seized with a sharp pain in the abdomen. Shortly afterwards he felt chilly and weak, perspired some, and went to bed. During the next 10 hours the pain remained the same, and the patient vomited three times. He rested some during the next 8 hours. When he awoke the pain was not so severe, and was located in the right lower region of the abdomen. Patient said he had a fever, that he could not eat, and that his bowels would not move. He took some pills and succeeded in having a slight evacuation of the bowels on the fourth day of his illness. 8 or 9 days after the onset of the attack a sudden sharp pain occurred in the right leg. This was followed by blueness and swelling of the entire right lower extremity. These symptoms continued during the remainder of his sickness. The pain, however, was described as "a throbbing pain" during the last 12 or 14 days. The patient remained in bed, complaining of pain, fever and chilly sensations for five weeks, when the following examination was made: The patient, a well developed man, was very anemic and emaciated; anxious expression of face and eyes; very weak; cold perspiration on forehead and hands; tongue coated. Examination of chest and lungs was negative, except for the presence of many coarse moist rales over the lower lobes posteriorly. Heart not enlarged or displaced; no thrills. There was a faint systolic murmur heard all over the chest, but it was most marked over the pulmonary area. The abdomen was distended, tympanitic and motionless. No peristalsis heard on auscultation. Slight movable dullness in the flanks (?). The right thigh and leg were discolored, swollen, and pitted on pressure. No fluctuations could be found and no gangrene present. The extremities were cold, but the right was not of a perceptibly lower temperature than was the left. Nothing of importance was noted in the remainder of the examination. Examination of the liver and spleen was negative, and no rose spots were found. The pulse, extremely weak, but regular, was beating 152 times per minute, and the thermometer registered no abnormal temperature. The patient was considered to be in a dying condition and operation was not advised, but strychnine and salt solution were ordered. Four hours later the patient regurgitated some dark brown material into his mouth, and died one hour afterwards. Inquiries were made concerning the occurrence of previous attacks, but the patient's friends stated that they had never known him to be sick before.

Autopsy. The post mortem examination was made 10 hours after death by Dr. H. C. Hall, to whom I am indebted for the following report. The external examination has been previously stated. The peritoneum was everywhere covered with a whitish easily removable exudate. A slight amount of seropurulent fluid was found free in the peritoneal cavity. In the right iliac region the omentum, small intestine, cecum and ascending colon were matted together and firmly adherent to the posterior abdominal wall. In separating the adhesions many collections of foul smelling pus were found. The appendix was gangrenous and almost completely separated from the cecum. No solid particles (as enteroliths) were found within, or near the appendix. The retroperitoneal glands were enlarged, but not softened. The right common iliac, external iliac and

femoral veins were enlarged and of a semi solid consistence. On opening them many collections of pus were found, the largest in Scarpa's triangle, and the next largest at the point of bifurcation of the common iliac vein. The internal iliac vein was not examined. Adhesions were found about the iliac and femoral arteries, but these vessels did not seem enlarged or solid, and no openings were made into them. **Pericardium:** The pericardial cavity contained a slight amount of straw colored fluid. Both parietal and visceral layers were perfectly smooth. **Heart:** Seemed slightly enlarged (not weighed). The semilunar valves were not subjected to the water test. No abnormal changes were found in any of the cardiac valves. The mitral orifice admitted 3 finger tips, the tricuspid admitted 5 with difficulty. The beginnings of the coronary arteries were normal. The endocardium was smooth; the linings of the aorta, pulmonary artery and coronaries showed no areas of thickening. The heart muscle seemed pale; was slightly flabby; and, on the cut surface, had a slightly granular appearance. No increase of connective tissue was observed. The liver, kidneys and spleen were slightly enlarged, and presented a granular surface on sections. No gross changes were present. The lungs were normal except for an excess of dark fluid in the lower lobes posteriorly, the presence of muco-purulent material in some of the bronchi, and a small irregular cicatrix in the right apex. The bronchial glands were not examined. Examination of the small and large intestines showed nothing abnormal. The nervous system was not examined. No note was made of changes in the stomach, pancreas, adrenals, bladder, prostate, testicles or thyroid.

There are three questions of importance concerning thrombosis of the iliac veins in appendicitis. First, how frequently does it occur? Second, what causes it? Third, how can it be prevented? I have seen 186 cases of appendicitis, and the one reported, in this paper, is the only case in which the iliac veins were involved. Mynter (*Appendicitis*, p. 91), states that phlebitis and thrombosis of the iliac vein may occasionally be found. In his report of 75 cases he records two cases (Nos. 9 and 13) as being complicated with iliac thrombosis. Case No. 9 was operated upon on the 5th day after the attack. The next night she collapsed suddenly, "and died with symptoms of an embolus, probably from the iliac vein." No autopsy was made, and no symptoms referable to involvement of the iliac vein were complained of. In case No. 13 of Mynter's series, the patient complained of pain in the right thigh followed by swelling of the foot and leg, elevation of temperature and pulse rate, and tenderness and hardness along the right femoral vein. These symptoms occurred on the 9th day after the attack, and the swelling and tenderness in the region of the vein did not appear until the 14th day, or 5 days after the pain in the thigh was complained of, and 9 days after operation had been done. Willy Meyer (*Annals of Surgery*, May, 1901) reports two cases of iliac thrombosis following operations for appendicitis. In case No. 1 the pain and elevation of pulse and temperature came on the first day after operation; the swelling and edema appearing two days later. He was unable to feel an induration along the course of the vein at this time. A few days later the entire extremity became edematous and an infiltrated cord corresponding to the course of the femoral vein was present. These symptoms lasted about three weeks and then the opposite side became similarly affected and presented similar symptoms extending over a period of four weeks. Recovery in this case was complete.

In Meyer's second case the patient complained of pain referred to the area corresponding to the

passage of the left femoral vein under Poupart's ligament. The symptoms in this case corresponded to those in case No. 1, the difference being that in case 2 the symptoms came on at the beginning of the 2nd week following operation. The symptoms were milder and the opposite extremity became affected 10 days after the involvement of the first one. I have been unable to obtain records of cases of iliac and femoral thrombosis occurring in cases of appendicitis treated in the institutions in which I now work, and I could find no record of such complications occurring in the cases of appendicitis treated in Cook County Hospital, Chicago.

The second question that I have to consider is, what causes the thrombosis? The cause in the case which I report, was doubtless involvement of the vein from direct extension of the inflammatory process. Among causes other than infection are: (1) Contraction of inflamed retroperitoneal tissue around the iliac vein. (Hawkins.) (2) Compression of the veins by bandages, or by constipation. These were suggested by Lennander as possibilities only. Contraction of the retroperitoneal tissue could not be considered a sufficient cause of thrombosis in cases in which the complication occurs early in the primary attack, as it did in the case herein reported, but it seems reasonable to suppose that the contraction might act, at least, as a predisposing cause in chronic cases. In discussing this subject, Osler says: "In the healing of extensive inflammation about the margin of the pelvis the iliac veins may be greatly compressed and one of my patients had for months edema of the right leg, which is now permanently enlarged." I have nothing to offer to prevent thrombosis occurring in these cases. Early operation, of course, is desirable. Lennander recommends that the foot of the bed be elevated in cases in which a thrombosis of the iliac or femoral veins might occur. I have not resorted to his method in any case with the idea of preventing thrombosis.

GASTRO-INTESTINAL AUTOINTOXICATION OCCURRING WITH FORMS OF MUCOUS COLITIS IN CHILDREN.*

By HENRY KOPLIK, M. D.,
of New York.

Former President of the American Pediatric Society.

In the strictest sense of the term, gastro-intestinal autointoxication takes place in conditions in which foreign toxic substances are produced in the stomach and gut as a result of abnormal fermentation. These toxic substances are absorbed and cause pathological manifestations. (Weintraub.) The products of normal digestion, when produced in increased quantities, may be absorbed and cause autointoxication. According to the French school, even in the normal condition the absorption of such substances (peptones) is constantly going on, but pathological manifestations are avoided by the splitting up and neutralization of these products in the wall of the gut and in the liver.

Symptomatically, gastro-intestinal autointoxication may manifest itself in the skin by changes of

color, such as anemia, bronzing or icterus. In the muscles we have polymyositis. On part of the intestinal canal there are nausea, vomiting, diarrhea, constipation and pain. The functions of the kidney are interfered with, as shown by the appearance of albuminuria, hematuria and biliary pigment in the urine, acetonuria and diaceturia. The nervous symptoms which are a part of the symptom-complex of gastro-intestinal autointoxication consist principally of vertigo, headache, delirium and even stupor and coma. Finally there are disturbances of the functions of the heart and lungs, with loss of the general nutrition.

The cases which I shall describe in this paper form a class by themselves. They occur in children from the fourth to the later years of child life. The children have as infants been either breast or bottle-fed. They have always suffered from some disturbance of the functions of the gut. As a rule, these children have from infancy been constipated, or this condition has been a very trying problem at various periods. In some cases the parents suffer similar intestinal disturbances. Certain articles of diet, such as unboiled milk or varieties of vegetables, have disagreed with them. There are times when these children physically are not as strong as they should be for their age; they are anemic, slow in their movements, peevish, suspicious; again they are bright, have a good color, and are vivacious. These intervals of improvement and depression have dominated their lives. The one prominent symptom is the constipation. On close examination there is nothing in the physical state either of the heart, lungs or kidneys to account for attacks which seem to be species of intestinal toxemia. These children, after living for months on a carefully selected diet, in which certain articles known to be irritating have been excluded, in a moment of indiscretion, may partake of some simple, but hitherto avoided, article of food. They then after 24 hours will develop symptoms of such alarming nature as to arouse even in the mind of the physician a solicitude as to their ultimate recovery; in other words, these attacks are of a distinctly toxic character. In all of the cases which I shall describe and which belong to the same category, there have been at one time or another, alternating with the constipation, discharges of mucus, either in small or large masses, from the gut. There has been in all of the cases which I refer to a mucous colitis. The exact nature of this mucous colitis, first described in children by Eustace Smith, is still very obscure. It is for this reason that we should analyze them in the light of our more modern knowledge of the toxemias and diseases of the gut.

The case with which I desire to illustrate my theme, and which is similar to two others, is the child of healthy parents. He is now six years of age. He has had very slight signs of rickets; was bottle-fed. When 18 months old he had an attack of acute gastro-enteritis, which became a subacute enteric catarrh. The boy recovered. Following this attack he remained pale, and in the following winter developed an endocarditis after a possible influenza. He made a good recovery, but always remained pale, slow in action, and inordinately constipated. The movements in this child of two years of age, in spite of mixed diet with cream and the administration of cathartics, such as cascara, were passed in the form of scybala. The urine examined at the time of the endocardial attack contained a slight trace of albumin, so slight as to be

*Read before the New York Academy of Medicine, May 16, 1910.

scarcely recognizable. In the summer of his fifth year the boy developed, without any apparent cause, having been under a very rigid diet, an attack which I shall describe later on. He recovered from this attack, and in the following winter, having all along suffered from constipation, developed another attack, and still a third, of a very alarming nature.

The child for some days prior to an attack is noticed to be very pale and listless. There are dark rings under the eyes. The appetite is capricious. There is vertigo, even when the child lies in bed; he will say that articles of furniture move about him. The patient wakes up in the morning, complains of a feeling of nausea and pain in the epigastrium, asks for water, and begins to vomit. The vomited matter at first consists of some food which was partaken of the previous day. Then, after this has been rejected, the vomiting persists, glairy mucus is brought up and the vomiting occurs even in the recumbent position. Everything, even albumen water, is rejected. It is noticed that there is very little absorption and the fluids are vomiting in much the same quantity as introduced. There is no diarrhea, and a cathartic may have been administered and followed by a very good result. In spite of this, the vomiting continues for one or two days at intervals. During this time there is a full-bounding high-tension pulse from 128 to 148 per minute. The heart impulse is forcible, and in one case the radial arteries could be felt as high as the mid-region of the forearm. In all cases albumin is present in the urine to a greater or less extent. At the outset in one case the albumin in the urine gave a very marked reaction with abundant hyaline casts of small calibre. In the other cases there was simply a trace of albumin in the urine. In one case the urea excreted in a boy of five years amounted to 13 grammes, then rose to 15 grammes, and finally to 19 grammes in the 24 hours. The urine in one case was of a specific gravity of 1020, acid, and contained abundant urate of ammonium crystals when passed. There is in these cases abdominal pain. In some the pain is not a prominent symptom; it is a feeling of distress in the region of the umbilicus. In other cases the pain is quite severe, and in one patient simulated the pain found in appendicitis. There is, however, no distension of the abdomen. Examination may reveal a distended cecum, but no distinct pain on pressure. The pain seems to be in the gut and is not intensified on pressure. The nervous symptoms in all of these cases give great concern. The patients seem very much prostrated; they are pale, and the face is anxious. They seem to be suffering from some noxious poison. The temperature is scarcely half a degree above the normal, or it may at first be a degree or a degree and a half above the normal and rapidly reach the normal. The odor of the breath is of interest in these cases, in view of the case published by Senator, in which the expired air had a distinct odor of H₂S. In one of my cases, a marked mucous colitis, during the toxic attack the breath had the same odor as the flatus expelled. The boy passed quantities of this gas by the anus quite unconsciously. The father of the child, a physician, called my attention to this fact. In another case the breath had a so-called indescribable sweetish odor. In the third case the breath was offensive and the tongue coated.

After the symptoms have subsided and the bowel has been emptied, such patients, after two or three days pass either large mucous casts or masses or small amounts of mucus with the movements. These masses of mucus are sometimes very ill-smelling, and may be passed for days or weeks after such attacks, and finally the movements may become normal both in form and consistency. The mucus or shreds of mucus may disappear entirely for weeks or months from the feces. In one case in which large masses of mucus were passed, I examined these masses and found them principally composed of mucus, round granular cells from the surface of the gut with bacteria. There is nothing like a membrane. It was rather gelatinous. In the intervals the children regain their strength and color; the albumin disappears from the urine; the casts can no longer be found, and the patients seem to have made a complete recovery. The constipation alone remains. There is no pain whatever; no colic. I cannot describe these attacks better than by referring to them as crisis. They remind one very strongly of a toxemia. They are no doubt brought about by the constipated condition of the individual and the stasis of feces in the gut. The mucous discharges seem to be the accumulations in the gut of what, under normal conditions, would be discharged in inappreciable quantities with the daily evacuations; instead of this, the mucus seems to accumulate until an attack is impending. The whole picture reminds one, with the bounding pulse, forcible heart and vomiting, of what is seen in uremia; and yet there is no edema of the tissues, and the urine in the intervals of these attacks is perfectly normal. The diminished urea, the evident excess of ammonium in the form of ammonium urate in the urine, point to some form of intestinal toxemia similar to what is seen in cases of chronic intestinal infection and toxemia of chronic marasmus and atrophy. In these cases Czerny and his pupils have shown that there is an increased elimination of ammonium through the urine and feces pointing to a marked disturbance of metabolism and the normal processes in the gut. Ammonia is increased in any form of gastro-intestinal disturbance. Under normal conditions the ammonia is excreted in the form of urea. If there is an excess of acids produced in the gut, the capacity to neutralize these acids with alkali is diminished, the acids combine with alkalies drawn from the tissues and appear in the urine and excreta in the form of increased ammonia in combination. Thus Keller has shown that this form of toxemia is really an acid intoxication. This acid intoxication is favored by fat and nitrogenous food and diminished by a vegetable diet. This is the form of intoxication which I think we have in the cases of intestinal disease just described.

Treatment.—The immediate attack can be successfully treated in all these cases by absolute rest in bed. All food by the mouth is stopped. In the beginning of the attack large warm enemata (110°) of the Cantani salt solution are given twice daily. After the bowel is completely washed out, the patient is given a nutritive enema of a solution of somatoze, made by dissolving one teaspoonful of somatoze in eight ounces of cold water. Two ounces of this solution is given to the patient every two

hours. The vomiting and pain, if the latter be present, is relieved by small doses of codeia. Strychnia is given later in the case, after the first 24 hours of the onset of symptoms. The recumbent position is maintained until the patient is quite strong and the heart has returned to its normal action. If the patient has recovered, the treatment of the interval is one of the most difficult problems in the management of these cases. We try to regulate the diet, if possible, by first placing these patients on a skim-milk diet. I find that cream (fat) is especially noxious in some cases. The children will not take it; fat causes alarming symptoms, such as nausea. These patients get along by a carefully selected mixed diet. Skim-milk, cocoa, cereals of all kinds, meat once a day, and vegetables which leave very little residue seems to be the best form of diet. We study the movements and avoid those vegetables which appear undigested in the feces. Spinach is of such a character that it is not assimilable in these children. Strained purée of peas and baked potatoes seem to be the most easily assimilated. Fruit juices, such as orange juice, are well borne.

The constipation is most difficult to eliminate. One patient does very well with a small dose of strychnia once a day and an enema twice weekly; another must be given hydrochloric acid after meals with the above; another does well if given cathartics daily, such as cascara. If an attack is impending (and in these patients we can forestall one by watching for symptoms of intoxication, such as pallor, listlessness, peevishness and loss of appetite with coated tongue), a good dose of Carlsbad salts seems to be a safe and effectual cathartic, on account of its alkalinity and thorough action. I have not succeeded in completely curing the main condition at fault in these cases, but I have tried to outline to you my efforts in this direction.

TREATMENT OF INFANTILE DIARRHEA.

By WILLIAM H. ROBEY, JR., M. D.,

of Boston.

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Of one hundred and seventy-two cases of diarrhea seen in the Children's Room of the Boston Dispensary, one hundred and sixty were diagnosed as fermental, eight as mechanical, and four as ilio-colitis. The ages ranged from three weeks to three years. Only twelve of the mothers stated that their children were fed absolutely on the breast as the majority which were called breast-fed, admitted on questioning that other food was allowed from time to time. In the cases of mechanical diarrhea there was either a history of fruit seeds or skins being ingested or they were washed out in the enema.

In the ilio-colitis cases there were blood and mucus in the stools with some bits of membrane. The movements were usually frequent and small.

The average temperature taken in the rectum was one hundred; a temperature as high as one hundred and four was rare. The temperatures were not uniformly as high as those of some previous reports, and while it has been suggested that the lower temperature may possibly be due to the late

stage of the disease when first under observation, a further inspection of the records has not been conclusive. Like the character of the stools, the temperature may change within a few hours and is not a reliable guide to the condition of the patient. In the only case of cholera infantum which I saw last summer, the temperature was a hundred and one and a half 5 or 6 hours before death, although the nervous symptoms were evident at the time.

If we knew the specific cause of infantile diarrhea we might or we might not be assisted in our immediate treatment of the case; there is no doubt that the knowledge would be of great value in prophylaxis. At present no special organism has been found to account for fermental diarrhea, although several observers have isolated what they considered the specific cause. We do, however, appreciate its contagiousness. As to the action of the various organisms, we believe that the condition is first a local one due to the toxic products of enormously increased numbers of bacteria and that later these products are absorbed, causing the constitutional symptoms.

The treatment is obviously:

- a. To cleanse the bowel of the bacteria and their toxic products.
- b. To give the remaining bacteria as unfavorable conditions as possible for further production.
- c. To soothe the irritated intestine where the continuance of the condition makes this necessary.
- d. To support the patient against constitutional symptoms, as fever, nervous irritability, etc., as in other acute diseases of childhood.
- e. To guard against infection of others by isolation when possible and by carefully washing the hands after handling the stools in order not to infect other food and common household articles.

Naturally, the small intestine must be cleansed by a purge, and for this purpose calomel 1 gr. was given in 1-10 gr. doses at $\frac{1}{2}$ -hour intervals. It has been asked why castor oil was not given since it has such soothing properties. In treating infantile diarrhea, especially in dispensary practice, one must try to accomplish as much as possible at the first visit for obvious reasons. The gastro-intestinal tract of the infant being in an irritable state, the oil is more apt to be vomited; whereas, I have never known this result with calomel; in fact, it will allay vomiting should that dangerous symptom be present. Furthermore, castor oil is such a common household remedy that it may have been tried already, while calomel in divided doses keeps the mother busy and aids her patience in carrying out the second important step in the treatment: starvation.

Each case of diarrhea before leaving the hospital had the bowel washed out by a trained nurse. This was done by passing a large soft rubber catheter into the bowel allowing the tepid normal salt solution to flow in during the passage, thus dilating the bowel and facilitating the introduction. At least two quarts of the salt solution were allowed to run in, the bag of the fountain syringe being held about three feet above the table.

The character of the washings from each case was noted and a record made of the reaction, odor, color, presence of curds, fat globules, mucus, blood,

and membrane. The color and odor may, however, alter in a few hours. The washing was repeated upon as many successive days as the case required; being out-patients, it could not be done oftener—twice daily I think sufficient. Personally, I cannot see the objection to washing out the bowel in every case. Kerley thinks that it is unnecessary in a bowel that is constantly emptying itself, but in our experience it has seemed to allay the fever and the nervous irritability of the child. No special attention was given to anatomical position in administering the enema. The majority were given on the back. The results in any position were equally good. It has been considered objectionable by some because most children are frightened by the operation and will cry and struggle; but I have only seen one child that was appreciably exhausted by it and that was a feeble infant already much debilitated by a long continued diarrhea. They are not more frightened than by the ordinary examination of the throat or taking of the temperature, and the majority of them quiet down after the tube has once been introduced and become used to subsequent washings, as to other manipulations of the physician or nurse. Irrigation is the most rational treatment when there is any question of irritation from foreign bodies, such as fruit skins and seeds. An Italian infant, fifteen months old, of fine physique and always well, was brought to the dispensary because of frequent convulsions since the night before. When seen the convulsions occurred on the average of two every five minutes. The mother stated that she had no idea of the cause of the sudden illness. We washed out in the enema quantities of water-melon seeds, string-bean pods and tomato skins, and during the hour that the child remained in after the washing, but one convulsion occurred.

The simple outfit needed for irrigating the bowel may be readily carried by the physician to any case.

As important as cleansing the bowel of the toxic products is not to give the gastro-intestinal tract more work to do nor the remaining bacteria any more culture media upon which to grow and thus continue the production of toxins. Hence food was withheld for 24 hours and albumin water (whites of two eggs added to a pint of boiled water with a pinch of salt and a teaspoonful of brandy) was given—a half teacupful every two hours. Sterile water could be given just as well, but in dispensary practice especially the mother is more ready to carry out this very important part of the treatment if she is giving what she considers to be a food.

It is a good plan to tell mothers going into the country with their children to stop food for 24 hours at the very onset of a diarrhea. If there is vomiting the stomach must be washed out as well as the bowel, and this can be done with the same kind of catheter. If the temperature is high and the nervous symptoms marked, a tepid bath will be a valuable addition to the treatment. This was employed in some of the cases before they left the dispensary, but in the majority of our cases the temperature not being high, the desired effect was produced by the enema.

After 24 hours the majority of cases require no further medication and depend for continued improvement upon the gradual resumption of food.

All cases were put upon a weak modification of sterilized milk, the point being to have the percentages low enough. We have not found it necessary to use dextrinized barley or other starch foods, the very dilute alkaline milk mixtures being sufficient.

As was shown at the outset, breastfed babies seldom have diarrhea, and when they do are easily returned to the breast after 24 hours starvation; especially if the interval between feedings is increased. Where there was still some irritability of the bowel, the sub-nitrate of bismuth was given in at least 20 gr. doses every three hours. Where bismuth was given immediately without the initial purge, the results were unsatisfactory, and in almost every case where it was tried the treatment had to begin over again upon the following day. Opium was used only where pain was a marked symptom, and then only where the stools were frequent since the danger of opium in stopping peristalsis and thus favoring absorption from the bowel is very well known. The necessity of cleanliness, pure food and fresh air was carefully explained to each mother.

In a small number of our cases which showed no improvement after three days, we referred them to that excellent charity, the Boston Floating Hospital, where the required treatment could be carried out under proper atmospheric conditions.

SPASTIC ILEUS.*

By EDWARD QUINTARD, M. D.,
of New York.

(Continued from Page 111).

Haidenhain's Case. (12) A 30 year old healthy fisherman up to time of hospital entry entirely well. On February 17th he was taken with vertigo, nausea, violent vomiting and complete stoppage of stool and wind. Pain in the abdomen was not present. On the 22nd, with his temperature normal, and pulse 64, he continued to have nausea, violent vomiting and complete stoppage of stool and wind but the physical examination of the abdomen was negative. In spite of energetic measures, such as high enemata, etc., the symptoms kept up. No opium was given. On the 22nd of February, i. e., 9 days after the first symptoms began he was operated upon. The exploration resulted negatively. The small intestine was found to be completely empty and collapsed, or, contracted. In one place a round worm was readily palpable through the intestinal wall. It was motionless. There was no obstruction of any kind to be found. The abdominal wall was closed with a feeling that an unnecessary and dangerous operation had been performed. Strangely enough the vomiting now ceased, but the intestinal occlusion kept up. It was not until 3½ days after the operation that stool occurred spontaneously. Morphine had been given but no opium. There was no temperature and recovery was complete.

Quintard. "My own two cases of spastic ileus are as follows: My first case was that of a young society woman aet. 25, who came from a markedly neurotic family, and whom every now and again during the course of several years, I had treated for slight and transient nervous disorders, and for a mild form of anemia which showed itself from time to time. She never had shown any of the true symptoms of hysteria, but the digestive disturbances which in her case occasionally showed themselves, were undoubtedly due to disorders of the abdominal sympathetic system. Two years previous to the attack about to be described, the patient had married. Her married life brought many cares and anxieties, especially as her husband experienced about this time serious business reverses, and her worry over money matters was very great. The strain told on her nervous system and gradually but surely she drifted into neurasthenia. One evening, after a hearty meal, at which among other things she had partaken of green corn, fruit

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and pickles, she was seized suddenly with a violent abdominal pain which was so severe that it made her feel faint. I was sent for at once and found the patient already in bed with hot water bags applied to her abdomen and groaning with pain, the worst of which seemed to be located on the right side of the abdomen, and, for the most part, above the umbilicus, but which at the same time was more or less general. The abdomen, on examination, was found, so far as could be seen, perfectly normal, no distention, no tumor visible or to be felt on palpation; no tenderness on pressure. The patient now vomited a good portion of the undigested food and at the same time felt an inclination to pass stool, but neither stool, nor yet flatus could be expelled. The patient in this case suffered intensely and the pain grew worse in paroxysms although there was a constant pain in the region mentioned. The pain finally became so great that morphine was given and the hot water bags were changed to hot stupes, these latter relieving the patient more than anything else. Dr. A. A. Smith was called in consultation, and after the most careful examination possible could find no definite cause of the trouble. We came to the conclusion at that time that it was a case of spastic ileus, and this proved to be correct, for although the patient continued in more or less pain for four days, during which the same symptoms continued, and during which despite cathartics and enemata complete suppression of stool and flatus continued, together with vomiting of bile stained fluid, nevertheless, at the end of that time and quite suddenly, the patient expelled considerable amount of gas which was presently followed by stool of a semi-fluid character, the attack ending almost as abruptly as it had commenced. The temperature during the entire attack was practically normal but the pulse varied a good deal, and became quite weak and rapid during and after a paroxysm of pain, so much so in fact that we used strychnine hypodermically.

Since the first attack I have treated the patient for a similar one, and once when away for the summer, she had another, lasting several days.

My second case was that of a merchant, X. W., aet. 36, a highly intelligent, but nervous man. He came to me in March, 1900, to consult me for what he called peculiar attacks of stomach trouble. This history is as follows: Was well up to 1892. Then after a hard year of business, came down with neurasthenia and acute attack of catarrhal gastritis. From that time up to the year of the first attack, which was 1897, he was in fairly good health, only at times very nervous. He drank moderately, but was an inveterate smoker, smoking as many as twelve cigars daily and inhaling constantly. During the fall of 1897 he had again many business cares and anxieties, and on the day before Thanksgiving he felt particularly tired and nervous, and, in order to brace up his appetite, indulged in cocktails, and at dinner ate some roast duck and drank some ale. After this he experienced a good deal of abdominal distress, which the patient said was not cramp-like at all, but was a "steady, peculiar pain about the navel." Tried to move bowels that night, but without success. The next morning, still feeling the distress and pain he walked to the doctor. The pain was so severe that he had to walk "doubled up." He was given a dose of *Ol. Ricini*, but it did not work. He took another and with equally useless result. The pain was now so severe that he rolled about in bed and even bit the bed clothes, so great was his distress and agony. The patient neither passed flatus nor stool. Patient now began to vomit, at first bile; then, according to himself and family, fecal material, i. e., a fluid of fecal odor. Morphine was given, and this seemed to allay the vomiting and distress somewhat, yet he for several days more was in great pain, and did not pass either stool or wind, but vomiting still continued. At the end of this period he experienced a sudden desire to stool and against the orders of the doctor and the nurse, he walked to the bath-room, and there expelled per rectum a great amount of gas. After this enemata given worked. The next attack was in July, 1898, when he again had an attack such as described above. From that time on several such attacks, but not so long or severe. As the nurse, who had taken his temperature in the attack of 1897 could not be found, and as the physician himself, who attended the man, no longer remembered the pulse and temperature, my notes in these respects are deficient. This must be added, however, that the patient during such attacks did not turn yellow,

and that the most careful search for gall-stones resulted negatively. When the patient first came to me on March 2nd, 1900, his condition was as follows: His general condition was that of a man suffering from a mild degree of neurasthenia with quite a decided secondary anemia. His blood examination showed red cells, 3,929,000; white, 5700. The red cells were fairly regular, somewhat pale, and there were a few polkilocytes. Small lymphocytes, 28%. Large lymphocytes=10%. Polymorphonuclear neutrophils=61%. Eosinophils=1%. Hemoglobin=78%. The urine was negative, except for the ratio between urea and uric acid, which stood 36. The ratio of mineral and etheral sulphates was normal. Physical examination gave absolutely negative results.

Test breakfast=normal. He was treated for his anemia and his general nervous condition. Was placed on a liberal diet, and his cigars and alcohol were cut off. Everything went along well until April 19th, 1900. On that day the patient went to his club for dinner. Although feeling somewhat tired he sat down to a hearty meal, consisting of meat, vegetables and some new Bermuda potatoes, he was hungry and he ate very fast. After leaving the club house, he had scarcely walked the distance of a block, when he was suddenly seized with a violent pain in his abdomen, which was so very severe that he hailed a cab and was driven home. When I arrived, I found the patient in bed, with cold feet and hands, and an anxious and somewhat drawn face. His pulse was 90, of fairly good force, but somewhat wiry. His temperature was normal. He complained of great pain in the abdomen, but could not localize it. The abdomen was slightly distended, but there were no painful points on pressure. The patient had tried to have a stool, but found he could not, nor could he pass any gas, he had, however, vomited a quantity of undigested food. At four o'clock on the morning of the 20th, his temperature was 100.4-5; pulse 90. This is the highest the temperature or pulse ever went. At 8 A. M. his temperature was 100.2-5; pulse 80. He complained of a throbbing pain all over his abdomen and of pressure in the epigastrium; expelled some gas by mouth. At noon he was given a high oil and hot water enema: result, negative; it did not even return. Hot stupes were applied to the abdomen, which afforded some relief to the distress, and at times agony of the patient. Morphine 1-8 hypodermically was given at about 2 o'clock. Shortly afterwards he vomited a large quantity of undigested food, large pieces of the Bermuda potatoes and pieces of meat, which had evidently been swallowed whole, being readily seen in the vomit. At 3 P. M.—pulse 78; temp. 99. A saline enema was given and retained—neither stool, nor yet gas, passed per rectum. Patient's abdomen by this time was somewhat distended and tympanitic, there were no visible peristaltic movements, he was vomiting undigested food and biliary matter; he was in great distress and I suspected ileus. I now called in Dr. Frank Hartley. Together we again made a most careful examination of the patient. From the previous history, from the character of the pulse, from the temperature, and from the fact that despite the great pain and distress there were no very serious or threatening symptoms, we continued with the morphine, washed out the stomach, gave calomel by the mouth, and continued the hot stupes from time to time, and the enemata. Not, however, until the evening of the 22nd, i. e., the third day from the commencement of the attack, did we obtain any encouraging results. Then a soap and hot water enema brought away a few fecal masses. A few hours after this another soap and hot water enema was given with a large semi-fluid yellow stool as a result, and the expulsion of a great amount of gas. From that time on the patient improved, and in twenty-four hours he was up and about, although somewhat weakened by the attack. Only once during the entire three days of his illness did his pulse go above 90, or his temperature reach higher than 100.4-5 and that was at four o'clock on the morning of the 20th. After that his pulse varied between 65-84; his temperature between 98.2-5-99. There was no fecal vomiting but the patient's stomach was washed out several times during the course of the attack. The Urinalysis on the afternoon of the 20th showed the following. Sp.gr. 1028. Albumin—trace. Sugar—negative. Bile—negative. Indican—considerable excess. Phosphate—some excess. Microscope—a few hyaline casts, few blood cells, few pus cells, few bladder epithelial cells, few uric acid crystals. There was no jaun-

dice throughout the attack and the examination of the feces gave negative results.

It seems to me that this again is a fairly typical case of "Spastic Ileus," seen in a neurasthenic man and that the cause of this particular attack was in all probability his rapidly eaten and undigested meal. After the attack the patient followed treatment very carefully for several months and it is now over a year and he has had no return of the attacks, so far as I know.

Etiology.—Aside from basilar meningitis in its first stages, as well as other diseases of the central nervous system, we have seen that Spastic Ileus after all is not such an uncommon ailment as many suppose. We see it most frequently in those who are suffering from neurasthenia or hysteria, as in the cases of Chérchevsky, Treves, Schloffer, and my own two cases.

The general disorder in these cases seems to render the abdominal nervous system peculiarly liable to disturbed innervation, and, as a consequence of this, any particular shock or irritation seems at times capable of producing "Spastic Ileus." S. Talma, in his highly interesting article, "*Zur Kenntnis des Leidens des Bauchsympathicus*," relates many very interesting cases of the manner in which the diseased sympathetic ganglia and plexuses affect the various abdominal organs, and, amongst others, the case of Spastic Ileus quoted. Again, we have seen "Spastic Ileus" arise reflexly, as in the cases of Tansini and of Grundzack, and possibly even so small an object as a round worm may be the cause of the irritation, as in Haidenhain's case. Again, it occurs in the course of systemic poisoning, as in Murphy's case of lead colic, or in the course of an organic spinal disease, as in Sandoz's case, where it seemed to be the first pronounced symptom of an ataxia, or, again, but what, as Nothnagel says, must be extremely rare, as a distinct neurosis. Once more, to rapidly review the etiology, we see Spastic Ileus occurring:

- (1) In the course of a neurasthenia or hysteria.
- (2) Reflexly, as is seen at times after operations, or when foreign bodies irritate the intestinal canal—the spasm in this case taking place not only at the point of irritation, but involving other portions of the tract as well.
- (3) From irritating substances and poisons in the intestinal canal, such as toxins, ptomaines, leuko-ptomaines, or when there is general tissue poisoning from such products.
- (4) From peritoneal irritation (not necessarily septic).
- (5) Diseases of the sympathetic ganglia.
- (6) As a distinct neurosis.

Diagnosis.—Of course, if there is a history of previous attacks, this is our greatest aid in diagnosis. But when it comes to the diagnosis of cases where there are no such histories, it is at times extremely difficult, if not quite impossible, to tell whether we have to deal with a case of Mechanical or a case of Spastic Ileus. As a rule, it may be said that although the subjective symptoms of Spastic Ileus are very severe, that, nevertheless, the general condition and appearance of the patient does not give one the idea of a profound systemic disturbance, that the temperature and the pulse in Spastic Ileus, as a rule, follows more nearly the normal, and that in the case of Spastic Ileus we do not get a visible

peristalsis. As to the latter point, however, we must not forget, as Boas very rightly says, that we frequently miss this last phenomenon in cases of mechanical ileus, and we all of us have seen visible peristalsis in cases where there was no mechanical obstruction. As to the temperature and pulse, in hysteria, this is at times so very misleading and under certain conditions causing Spastic Ileus might be so raised that here again we have no definite clue. The urinalysis in my own cases showed some excess in the indican, but then almost all cases of neurasthenia, and many cases of hysteria, at least in my experience, show a similar condition, and, as a consequence, such tests cannot be relied upon. The sound "household judgment of Laurence Sterne's" must, therefore, in these cases, be with us, and the general conditions of the patient should guide us much more than any particular symptom. My earnest advice to every practitioner of medicine is, however, that unless he himself be a surgeon, to, in every and all such cases, call in a surgeon at once. By so doing he may save himself many bitter reflections in the end, for the mistaking of a Spastic Ileus for a Mechanical Ileus by a surgeon would not be nearly so serious a matter since abdominal sepsis has been perfected, as would be the case of a medical man who should happen to mistake a mechanical for a Spastic Ileus. Finally, we must remember the lessons taught by such cases as described by Dr. Milkuliez and Dr. J. W. Bryant, where the patients are afflicted with that most loathsome of habits—coprophagy. Otherwise a serious abdominal operation may be performed without cause.

A word here as to the cause of the fecal vomiting seen in such cases. From Galen, of ancient times, who was the originator of the Theory of Antiperistalsis, to Hagnenot, who, in 1713, gave us what for a better name may be called the hydraulic pressure theory, the subject of the cause of fecal vomiting has been one of the most mooted of the centuries. To enter into the discussion ourselves would be foreign to the object of a clinical paper, but for such as desire to read a few of the ablest articles on the subject, they are referred to the various articles and monographs given at the end of this paper. A word as to the Hagnenot theory may, however, not be out of place.

Hagnenot's theory of fecal vomiting was published in 1713, although this same theory has been wrongly credited to Van Swieten. According to Hagnenot, fecal vomiting occurs as follows:—If at one particular spot the lumen of the intestine is completely stopped, there accumulates above the occlusion thin watery, or thin mushy intestinal contents in great quantities. At this point there results by reason of a simultaneous accumulation of gas a not inconsiderable pressure, which by every inspiration, by the movements of vomiting, and especially by energetic contraction of the intestinal musculature is yet further increased. Under the influence of this pressure the stagnating, readily movable, fluid contents of the intestines above the occlusion, gives way, and as its passage is stopped below, follows in the direction of least resistance, which is upwards, and, as a consequence, finally reaches those intestinal coils adjacent the stomach.

If these coils become filled with the decomposed intestinal masses, a regurgitation, or, rather, as Hénle strikingly defines it, an overflow, takes place into the stomach, the mucous membrane of the latter is irritated by the intestinal contents, and vomiting follows. (Fleisher.)

It would seem, therefore, that whereas in many cases of Mechanical Ileus, the Hagenot theory is sufficient to explain the occurrence of fecal vomiting, that in the vast majority of cases of Spastic Ileus it is not. For in cases of Spastic Ileus we find two distinct objections to the acceptance of the Hagenot theory, which are as follows: In the first place, if we accept the Hagenot theory, we must imagine a dilatation of the intestine above the point of obstruction, whereas we have seen that the very reverse of this was found in such cases as reported by Wölfer, Schloffer and others. For here the laparotomy revealed an intestine, the different portions of which were in spastic contraction, but above which contracted portions the gut was collapsed or normal. Secondly, in almost all cases of Mechanical Ileus, and in every case where the Hagenot theory is accepted, the stagnating, fecal matter vomited is fluid. And in reference to this we may mention that Schloffer, in his very able article, "Ueber Ileus bei Hysterie," suggests that in those cases where we find solid or formed fecal matter vomited, we have every right to suspect that the case is one of Spastic and not Mechanical Ileus, and that then the possibility of there being a hysterical basis for the attack must be considered, and again, to quote the last-named author more directly, "As to the question of how antiperistalsis occurs in cases of hysteria, we cannot answer, for we know so little of the nature of hysteria itself. But we do know, on the other hand, how manifold and variable and unreliable are the disturbances which hysteria can produce."

What is far more to the point, it seems to me, in these cases, is the fact that unless we accept the theory of antiperistalsis, we cannot explain the cases as reported by such keen and scientific observers as Briquet, Treves, Schloffer, or Rosenstein. In these cases the sick man for us as physicians ought to have far more weight than the well dog. Personally, therefore, I am of the opinion that at times antiperistalsis with fecal vomiting as a result does occur; or, to put it in other words, that there exists such a phenomenon as a pathological antiperistalsis.

Finally, as to the treatment: In all such patients as thorough and as complete a subjective and objective examination should be made as is possible. The blood, the urine, the gastric contents, the feces, should all be the subject of patient and diligent search. No subjective or objective symptom should be passed over hurriedly. We should remember that every symptom, no matter how trivial, has its own significance for the wise physician. When we have to deal with neurasthenia, or hysteria, hygienic conditions must be strictly carried out. And in many of these cases the only salvation is a rest cure. The proper and judicious use of hydro-therapeutic measures, in some cases the wet pack, in others the spray, in its many forms, electricity, general and local, massage,—being careful,

however, not to begin abdominal massage too early in such cases where there is hyperesthesia of the celiac or other ganglia or plexuses—passive and active movements, all these measures will, in properly selected cases, stand us in good stead. Nor should we ever forget that it is just as important for many of these patients that we build up their moral as well as their physical tone. So far as drugs are concerned, of course their selection will depend upon the various general and local conditions found. During acute attacks, and when once we feel sure that we have to deal with a Spastic and not a Mechanical Ileus, then the local application of hot moist stupes, together with carefully conducted intestinal lavage, and if vomiting is obstinate, or fecal vomiting supervenes, gastric lavage may bring about the desired result.

Purges and all gastro-intestinal irritants are to be avoided. Anti-spasmodics, such as extract of belladonna, atropine, or camphor, and the coal tar products seem at times to relieve the spasm much more quickly and efficiently than opium. We may here mention that S. Talma found antipyrine and quinine signally successful in many cases where the sympathetic ganglia and their plexuses were involved. My own experience with disease of the sympathetic ganglia also would lead me to the conclusion that the coal tar products and quinine give at times good results, but in neurotic people we frequently notice a peculiar idiosyncrasy as to coal tar products, especially in reference to their depressing effects, and we should therefore be careful and avoid too large doses of such remedies at the start.

Lastly, if in an acute attack of Spastic Ileus, all medical measures seem unavailing, and the patient's condition becomes more serious, laparotomy should be performed, but, of course, long before this, if a wise medical man, you will have had the sound advice of your consulting surgeon.

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REPORT OF CASES EXAMINED FOR THE NATIONAL JEWISH HOSPITAL FOR CONSUMPTIVES, AT DENVER, COLORADO.

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It would probably not be out of place before giving the report of the cases examined for admission to the N. J. H. for Consumptives, during the past eighteen months, to explain how this most worthy institution is conducted, and how admission thereto is obtained.

The hospital is entirely under Jewish lay management, and is supported by the Jews throughout the U. S. It is, however, non-sectarian as to the religion of the patients admitted. The institution is under the control of a National Board of Directors, consisting of thirty five members, residing in the principal cities of this country. The immediate management is in the hands of a local board of managers, of whom there are eleven, assisted by a medical advisory board of three physicians. Among the rules governing the admission of patients, the following is quoted: "The National Jewish Hospital for Consumptives at Denver is intended for the treatment of tubercular diseases only, among the indigent, in whom the disease is not sufficiently advanced to preclude the possibility of recovery or the arrest of the disease within the time, assigned for the treatment." Every applicant desiring admission to the hospital must have the endorsement of the local director,

and be examined by a properly authorized physician of the city in which he lives, and the examination blank together with the application submitted to the Denver Board for action. Upon arrival in Denver, he is at once admitted to the hospital, and re-examined by the admitting physician. Should the answers of the applicant be untrue, or the examination found unsatisfactory, and in the opinion of the admitting physician, hospital treatment not likely to prove beneficial, the applicant is returned to the place from which he came. A guarantee that the patient, when discharged, will not become a charge on the city of Denver, signed by three responsible persons, must accompany each application. During the first six months of the hospital's existence, a number of advanced cases of tuberculosis were admitted. These patients had been in Denver for some time, and there being plenty of room at the hospital, admission was readily granted, consequently a great number of deaths occurred at the hospital during the first year. Since then only those in the early stages of pulmonary tuberculosis, who are likely, in the opinion of the admitting physician, to be improved by hospital treatment, have been admitted. Following upon the enforcement of this rule, the number of deaths has been materially decreased. During the first six months twelve patients died, during the second six months eight, and during the last five and a half months three, making a total of twenty-three deaths.

At the present time every applicant, who has resided in Denver for less than a year, is referred to his former home city for endorsements of his application, by the resident member of the National Board. A patient who comes to Denver for the purpose of obtaining admission to the hospital, to avoid having his application go through the regular channels, will find it a difficult matter to gain entrance. During the past eighteen months three hundred and fifty applications for admission were made; two hundred and twenty-eight patients were examined, and two hundred and four were admitted. One hundred and forty-six were rejected, either because they had relatives who could provide sufficient funds for their care, or because their condition was too far advanced, and for other reasons. Patients are admitted for a six months' term, which may be extended upon the recommendation of the medical advisory board, but no patient is permitted to remain longer than one year. Patients are examined every two months by the attending physicians to note their progress. Their sputa are examined upon admission and several times during their stay, and again upon discharge. Patients are weighed weekly to note gain or loss.

There were one hundred and seventy-four males and fifty-four females examined; one hundred and thirty were single, ninety-two married and six widowed. Thirty-one were between the ages of ten and twenty, one hundred and twelve between twenty and thirty, fifty-six between thirty and forty, twenty-five between forty and fifty, and three over fifty.

All cases have been divided into four stages: Those showing slight involvement of one or both apices, that is, some dulness, increased fremitus, and prolonged expiration, without rales, are classed as incipient. Those cases in which the physical signs

are somewhat more pronounced, and where rales are heard, are classed in first stage. Those cases in which there is marked consolidation, and beginning softening with numerous moist rales, are classed in the second stage; and those cases in which softening is marked, and cavities are in process of forming, or have formed, are classed in the third stage. Such a classification, it will be understood, is more or less arbitrary and often difficult to make, as there are no distinct dividing lines between the ending of one stage and the beginning of the next. Where the examiner was in doubt how to classify a case, he was assisted in coming to a decision by the patient's general aspect and the rational symptoms.

Of the two hundred and twenty-eight cases examined, twenty-five were found to be in the incipient stage, nine of whom had the apices of both lungs involved, fourteen the apex of the right lung and two the apex of the left. Twenty-four of the incipient cases were decidedly improved by hospital treatment, and one, a woman, died; she had slight tubercular infiltration of the larynx, and was also four months pregnant at the time of her admission. After her delivery of a seven and a half months' child, her lungs and larynx grew rapidly worse, and she died within four months of her accouchement.

Forty-two were in the first stage of tuberculosis, and of these five had the upper lobe of the right lung and apex of the left lung involved. Seven had the left lung and apex of the right, twelve had both lungs nearly equally, and seventeen had the upper lobe of the right lung alone, and one the upper lobe of the left lung alone involved. Of the first stage cases thirty-three were improved, eight remained stationary, and one died.

Eighty-two of those admitted were in the second stage, and twenty-six had the right lung more extensively involved than the left, nine the left more than the right, fourteen both lungs equally, and twenty-three the right lung alone, while ten the left lung alone. Of the second stage cases fifty-four were improved, seventeen were unimproved, eight became worse, and three died.

Forty-three of those admitted were in the third stage, the lungs in five being in a fibroid condition. Of these eight had the right lung more extensively involved than the left, sixteen the left more than the right, eight both lungs equally, six the right lung alone, and five the left lung alone. Of the third stage cases ten were improved, twelve unimproved, six worse, and fifteen died.

Of the twenty-four not admitted, eighteen were too far advanced, two were not tubercular, and in four the physical signs were too indefinite or slight. There were also four cases of miliary tuberculosis admitted, three of whom became worse and one died. Three cases of phthisis florida were admitted, of whom one became worse and two died. Two were admitted in whom the physical signs were indeterminate. Both were discharged improved. Two were admitted and afterwards found to be non-tubercular, and were discharged.

Summing up the totals, we find, that out of the two hundred and four cases admitted in the hospital, one hundred and twenty-five were improved, thirty-nine were unimproved, seventeen became worse, and twenty-three died.

One feature that invites attention is the predominance of the right lung involvement over that of the left; in the incipient cases the ratio was seven to one, in the first stage seventeen to one, in the second stage two and a half to one, and in the third stage cases six to five.

Many of the cases marked improved were practically well when discharged, but sufficient time had not elapsed, from the disappearance of all symptoms of the disease, to warrant one in pronouncing them well or cured. Nearly ninety per cent. of those discharged still live in Denver, and vicinity, and while not under direct observation, are frequently seen, and the majority of these report themselves continuing well and able to work. It is the intention of the hospital authorities to devise some means of keeping patients under observation after their discharge, in order that the statistics in the future may determine the number of permanent cures obtained. In recommending the discharge of patients from the hospital, the attending physicians are guided by the improvement that has taken place in the patients' general condition, such as gain in weight, healthy appearance, as well as the disappearance of all marked pathological signs in the lungs and tubercle bacilli from the sputum.

Colds contracted in exposure from their work was assigned as a direct cause by eighty-three patients. La Grippe was given as the cause by twenty-four. Six had slept with some member of the family who had tuberculosis. Forty-five gave various other causes, and the remainder assigned no definite cause.

The occupations of the patients were exceedingly varied, seventy-four different ones being given. Forty-five were employed as tailors or in allied work, twenty-eight were employed in stores as sales people or clerks, twenty-three in house-work, fourteen peddlers, eight cigar makers, six laborers, and six school-children. The largest number, it will be noted, were employed as tailors, most of them in the sweat shops of New York City and Chicago. This certainly justified the authorities in taking cognizance of this evil, as was done by the legislature of New York State and the health boards in enforcing certain hygienic and sanitary rules in the tenements, where these people live and work. The next highest number were employed as clerks or salespeople in stores, and would indicate that here, too, health boards might find a field for investigation and improvement. Nearly all those engaged in house-work were women, most of them as wives and at the same time assistants to their husbands in their work. The peddlers, a large proportion handling old clothes and rags, form the next most numerous class. If one were to deduce anything from these figures, it would be the influence of in-door work and bad hygiene as contributing to produce tuberculosis.

The family history in one hundred and fifty-two cases was negative. In two both parents had been affected with tuberculosis; in twenty-two either one parent or the other had been affected, and in eight one or more brothers or sisters had tuberculosis; in fifteen cases some paternal or maternal relative had been affected, in two cases wives of the patients had been affected, and in one the husband. I cannot help but noting here how small a part, if any, hered-

ity plays in causing tuberculosis. Many of the patients examined for the hospital, as well as those in private practice, express their surprise, that they should be affected with tuberculosis, since no member of the family had ever had it. Long years of the establishment of the belief that consumption is hereditary, has left a deep impress upon the minds of the laity, as well as the profession, which will require time to efface.

Among the important symptoms noted, hemorrhages were present in ninety-eight cases and spitting of blood on one or more occasions, in twenty-three patients. One hundred and seven had not coughed up any blood during the course of their illness. One hundred and twenty-one patients had night-sweats, in sixty-four of whom they ceased on coming to Colorado. Ninety-two had never had any. Seventy-five per cent. of the patients had fever, varying from one-half to four degrees; this occurred mostly in the afternoon. A rapid pulse even without fever seems to be almost the universal rule. The microscopic examinations of the sputa showed tubercle bacilli present in one hundred and sixty-six cases, and absent in thirty-three; there was no report of the remainder.

I shall briefly touch upon the treatment of the patients at the hospital. The climate, nutritious food, and personal hygiene, were mainly relied upon. Patients are encouraged to keep out of doors as much as possible, and to further this purpose, games are provided for their amusement, upon the porches and grounds surrounding the hospital. The food provided is the best the market affords, and is properly prepared. There are a number of special diets upon which the patients may be placed, as directed by the attending physicians, besides numerous extras, which may be ordered for the patients. It has been the aim of the staff to give particular attention to the quality and preparation of the food provided for the patients, and in this it has found the ready co-operation of the Board of Managers.

All patients are instructed in the danger that lies in communicating the disease through the sputa, and paper spit-boxes are provided for them, which they are required to carry with them in and around the hospital. They are not allowed to expectorate in or use handkerchiefs. Pieces of cheese-cloth, which can be cremated, are provided for their use. Various other measures to secure personal cleanliness are enforced. In regard to medication, no systematic attempt has as yet been made to use true specific medicines. Patients are treated symptomatically, and the majority of the attending physicians avoid the use of large numbers of drugs.

It has been found that the fever in this disease is best combated by putting the patient to bed. One patient was kept in bed almost constantly for four months before his afternoon rise of temperature ceased. In treating excessive cough heroin is the drug most frequently used.

I desire to acknowledge my indebtedness to Dr. John Elsner and other members of the staff for the use of their reports of the cases examined by them; to Dr. Philip Hillkowitz for the microscopic examinations of the sputa; to Dr. M. Collins, superintendent of the hospital, for other data required in making this report.

JOURNAL DE MEDECINE DE BORDEAUX.

May 12, 1901. (31me. Année, No. 19).

1. The Dreamy Delirium of the Intoxications and Infections. E. REGIS.
2. Four Cases of Glioma of the Retina. LAGRANGE.

1.—With any toxo-infection some confusion and delirium occur. The delirium occurs during sleep and is of a peculiarly dreamy character. It may cease when the patient awakes, or be continued. But in the auto-intoxications and the infectious diseases, the delirium is stronger, there is true somnambulism. These patients talk and walk in the dream, and they often retain a fixed idea long afterward. The condition could be discovered and combated by hypnotism. It may also be noted after accidents, operations, etc. Somnolence is seen in gastro-intestinal or hepatic intoxication; catalepsy, tetany, or eclampsia with renal intoxication. It is easy to differentiate this dreamy delirium from that noticed in the insane. Yet the former may with time develop into the latter. [M. O.]

2.—Lagrange reports four cases of gliomata of the retina, with detailed histories. They occurred in young children, were all operated upon successfully, and have all recovered. The diagnosis was in every case confirmed by microscopical examination of the extirpated tumor. Three were true gliomata, one a neuro-epithelioma. [M. O.]

May 19, 1901. (31me. Année, No. 20).

1. Purulent Otitis Media. E. J. MOURE.
2. Recovery from Acute Mania following the Appearance of a Large Carbuncle. G. LALANNE.

1.—Acute suppurative otitis media in children may be mild or severe. The mild attack will go as quickly as it came, the pain disappearing and the discharge ceasing. This generally is seen with nasopharyngeal adenoids. In severe cases vomiting and meningitic symptoms appear, lasting several days. In adults there is greater pain, but fewer general symptoms. Pain over the mastoid is only found after suppuration has occurred. With influenza the discharge may be hemorrhagic. Hearing is always diminished. Before the ear-drum is perforated, it bulges. After 10 days of suppuration, the mastoid pain should disappear, and the secretion gradually cease. As prophylaxis, the adenoids should be removed. Counterirritation behind the ear may be begun at once. Antiseptic solutions should be used in the nose, throat, and ear. If the pain is severe, the ear drum must be perforated. Insufflation of air by Valsalva's or Politzer's method will do good. The injections of hot antiseptics into the ear should be continued until the discharge stops. An astringent powder may be insufflated into nostrils and ear also. As soon as symptoms of mastoiditis develop, the bone should be incised and the pus evacuated. [M. O.]

2.—Lalanne reports a case of acute mania in a man of 58. He had already had three such attacks, all due to the same cause, an argument with his neighbors about the limits of his property. This attack had lasted five months when a large carbuncle developed on the back of his neck. When this reached the stage of free suppuration, the mental symptoms gradually disappeared and he was cured in six weeks. Off and on through the literature, similar cases are reported. Some alienists have applied counterirritation to cause suppuration in the hope of curing mania. Lalanne suggests the formation of a fixation abscess as a means of curing mania. [M. O.]

A Case of Primary Tubercular Ulcer of the Skin of the Penis. M. A. Tshienoff (*Medicinskoie Obozrenie*, April, 1901.) describes a case in which a tubercular ulcer made its appearance on the prepuce and gradually extended to the glans. A piece of tissue removed for diagnostic purposes presented the characteristic appearance of tuberculosis of the skin and was found to contain tubercle bacilli. The patient, a man of 43, was otherwise perfectly healthy. An alcoholic and a man of very loose morals, he indulged in promiscuous intercourse, having had connection with prostitutes just prior to the appearance of the ulcer. While the author considers infection *per coitum* possible in this case he does not feel justified to make a positive assertion. He cites authorities to prove that genital infection is quite possible. [A. R.]

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Immunity from Malaria.—In his book on Malaria (which we have reviewed in another column), Celli discusses the subject of immunity. His discourse on this subject is of great interest. He says that it is proven that among the lower animals there are immune races. Bovine malaria, for instance, rarely attacks the indigenous oxen of the Agro Romano, but it decimates imported cattle. Thus of 100 Dutch cows imported thither, all but one solitary cow perished in a severe epidemic of malaria. Celli believes that no human race is by nature immune from malaria. Negroes are no more immune than whites. In regions where severe malaria exists the negroes may acquire a relative immunity, but if other negroes, not thitherto exposed, are brought into such localities, these latter are decimated by the disease. Celli believes that a white population, whose ancestors have for centuries lived in intensely malarious regions, comes to acquire a relative immunity. He instances the population of the Pontine Marshes—one of the worst infected regions in Italy. This population has become resistant to malaria, but a colony of Venetians, brought thither, was literally decimated by the fever, and the survivors fled in terror. The indigenous population, it is true, sometimes suffers, but it continues to live in localities where other populations would soon be exterminated. The hut-dwellers of the Agro Romano, who are badly clothed, fed and housed, are descended from a population which for centuries has inhabited this infected region, and they suffer much less than strangers. Celli thinks that this immunity may be due in part to those acquired habits, especially in relation to habitation and work, which experience has taught the people through many generations. In this case it seems to us that it would not be a true immunity, but a form of prophylaxis. Celli, however, sees here the action of a Darwinian law; the part of the population which survives is that which is specifically more resistant. In other words, there is a survival of the fittest, and thus from generation to generation a process of natural selection acts, and, as Tommasi-Crudeli has shown, produces a race continuously more resistant to malaria. This is an interesting appeal to the all-pervading philosophy of evolution.

Some individuals, however, are absolutely immune for causes peculiar to themselves. Thus Celli cites the cases of four men at Sezze, in the Pontine Marshes, who are thus immune from malaria notwithstanding that they have lived exposed for years, without taking any precautions. They work hard, live on poor food, and sleep in the open air in the marshes, where they are continually exposed to the bites of mosquitoes. Yet these four persons were in good health, and without enlargement of the liver and spleen. Such immunity in persons who have never had the disease cannot be explained on the theory of an antitoxin. In fact, Celli tested this question, by taking serum from these individuals and injecting it into a man whom he afterwards inoculated with malarial blood. The result proved that there was no immunity secured in this man. Moreover, it is well known that an attack of malaria does not establish an immunity, for the infection easily recurs. Celli made numerous scientific tests of this whole subject. He recognizes that an acquired immunity is sometimes obtained, and gives instances in which individuals far advanced in malarial anemia and cachexia, have recovered and remained resistant. But such an immunity has not yet been produced artificially, except with a few drugs (but that is a different matter).

Acting on various theories, Celli bled patients during defervescence, in the hope of obtaining an antitoxin, but without success. The serum thus obtained was not effective either to prevent or to cure. He sought to obtain also a pyrogenic toxin, even by using the red blood corpuscles from a malarial patient, at the time of a paroxysm, but without success. He then turned to the lower animals; for instance, the oxen of the Agro Romano, which are known to be immune. He expressed the juice from the brain, lymphatic glands, spleen, bone-marrow, liver, and pancreas. But neither preventive nor curative power was observed. Finally he made an ingenious test of the mosquito itself. Reflecting that *Culex* does not transmit the plasmodium, he argued that this particular mosquito may contain some principle that is noxious to the germ. Therefore, he prepared a juice from many of these insects. But this, too, was without success. While these re-

sults are not encouraging, still Celli points out that there is a solid basis to start from in the fact that some individuals, and even whole populations, are absolutely or relatively immune. Perhaps this problem, which is of the greatest hygienic and economic importance, will yet be solved along the lines suggested by the eminent Italian investigator.

Professor Koch's Statement.—There have not been wanting occasions upon which Professor Koch has made some rather startling announcements in science which have subsequently not been sustained by ample knowledge or more extended research. His most enthusiastic supporters do not even now claim that he has discovered a new fact. The distinction between bovine and human tuberculosis had been made before him; for an American investigator, Dr. Theobald Smith, claimed some years ago that in his studies in Texas he had been led to believe that the bovine bacillus differs from that of man. It sometimes takes some years for a new idea in science to cross the Atlantic Ocean from west to east, and such a vagrant idea then turns up unexpectedly and with startling effect. But if Professor Koch has not discovered a new fact he has possibly helped to settle a controversy by finding out a new way of demonstrating a theory. On this point, we must wait and see. It is obviously easy enough to demonstrate that the human bacillus can be transmitted to the lower animals, but it is next to impossible to prove the converse. We have not yet come to the stage when we dare produce tuberculosis by experiment in man. Civilization is not prepared for this final step. It never will be. Therefore, the *experimentum crucis* is wanting; and mere clinical observations are somewhat untrustworthy. Hence those London hygienists who are answering Koch by pointing to children's hospitals in which the inmates die of tuberculosis because they are fed on tuberculous milk, are not furnishing conclusive proof. Something more direct is wanted than such statistics from the kitchen.

The question whether tuberculosis can be conveyed from animals to human beings has up to the present time, in the opinion of some persons, been an open one. There has been little or no demonstration for or against. We know that this statement will be disputed by some, but our reply is that we need positive, not merely presumptive, proof. Dr. Leonard Pearson, in another column of this number of the *Journal*, has presented the positive side of the argument with an authoritative pen. In favor of the theory that tuberculosis can be conveyed from animals to man is the converse, that this infection can be conveyed from man to animals. This raises a strong inference in favor of the thesis—but after all it is only an inference, a rea-

soning from analogy. On the other hand, the claim that cases of human infection with bovine tubercle are wanting, must be received with caution. Since meat and milk are so universally consumed, who will venture positively to deny that any of the thousands of cases of tuberculosis are thus contracted? Here again, real scientific proof, such as we have in the case of malaria, is wanting.

It is just possible that the public has been stampeded into an unnatural fear of milk and meat. Governments have possibly allowed themselves to be hurried into unwarrantable expenditures. But we should clearly recognize that one of the evil effects of Koch's pronouncement may be a relaxation in our sanitary methods, with consequent carelessness in our dairies and shambles. This would be deplorable. In conclusion, the discussion which is bound to rise and vibrate about Prof. Koch's theory, will make us take soundings and see just where we are.

The Crusade Against Bovine Tuberculosis Must Continue.—The mischief that may come from a misinterpretation of Koch's statement is obvious, but it is not one for which he is to be held entirely responsible. The flaring headlines in many of the daily papers announcing in effect that bovine tuberculosis is innocuous to man, were quite characteristic of newspaper enterprise, but they were evidently premature. The saner and less sensational of our newspapers discuss the subject intelligently and wisely in their editorial columns. There will be no excuse for any one—much less for any one in authority—to relax due care and vigilance. Dr. Samuel G. Dixon, of this city, calls attention to the fact that milk can be contaminated with tubercle bacilli after it has left the cow. The sources of such infection are in milkers and milkmen, who may be tuberculous, and thus contaminate the milk in its transit to the consumer. In this way milk can convey human tubercle bacilli.

The vital question after all is: How do the bacilli of tuberculosis gain entrance into the human body? Let us recall the fact that in many infectious diseases this is still *terra incognita*. How extraordinary, almost startling, was the exact truth on this subject in the case of malaria, and how contrary to all preconceived ideas. Have we the right to assert dogmatically that the bacilli are swallowed with our food? The practical indications so far are clear. The stamping out of tuberculosis in cattle should continue, but it should be clearly understood that this is for the purpose primarily of securing healthy herds, and that it is not an absolute guarantee of security for man. The proper methods of stamping out tuberculosis in the human family are by the establishment of special hospitals and sanatoria; the registration of every case; the

disinfection of rooms that have been occupied by consumptives; and the rigid care of the sputum. One of the last acts of the recent Congress in London was to pass resolutions urging the suppression of expectoration.

The Identity of Human and Bovine Tuberculosis.—It must not be forgotten in view of the interest excited by the recent statement of Koch at the Tuberculosis Congress in London, to the effect that an essential difference exists between the human and bovine tubercle bacillus, that the same statement had already been made by an American and backed by almost irrefutable experimental evidence.

The monograph of Dr. Theobald Smith (*Journal of Experimental Medicine*, Vol. III., p. 451, 1898) is one of the most thorough and satisfactory of all contributions to the subject. His practical conclusions differ in this respect from those of Koch; that although the sputum (human) bacillus is incapable of finding a foothold in the bovine body, the bovine bacillus may pass to the human subject owing to its higher pathogenic power (p. 498). It would therefore be reckless to a degree to relax in any respect our efforts to control tuberculosis in cattle.

Celli's Opinion of Quinine in Malaria.—Dr. Koch also unburdened himself while in England on the subject of Malaria. That some of the Italian investigators disagree widely with Koch is apparent all through Celli's treatise. The German is quoted as saying that malarial parasites can be stamped out with quinine treatment. Celli controverts this very point very strongly. His exact words are "complete disinfection of malarial blood cannot always be obtained (with quinine), and therefore a complete rational prophylaxis by means of this disinfection, notwithstanding what Koch says about it, is not easy nor is it always possible." (Page 193).

Celli reviews the subject of the quinine treatment very thoroughly. He examined the action of quinine on the hemosporidia under the microscope, and saw that these organisms, which had been exhibiting active amoeboid movements, became still and were expelled from the red corpuscles on the addition of a trace of a solution of quinine. This drug in sufficient dose and at the right time always has a good effect in what we may call the stage of acute infection. This is in accord with world-wide empirical knowledge. Celli seems to think that the preferable time to give quinine is at the end of the attack, in the sweating stage, which is the time when there is the greatest number of young amoeboid forms in the circulating blood. Thus another paroxysm is prevented. Young amoebulae in the red corpuscles are also arrested in their development.

Before the attack, when the gymnosporidia are in the blood, quinine is but slightly efficacious against them. "It also has little effect on the parasitic forms which give rise to the obstinate recurrent fevers."

Finally, Celli says that quinine does not act on the gametes which ensure the sexual cycle in the mosquitoes. Even with large doses given hypodermically every day for a month, he says that he has not often succeeded in destroying the crescentic forms. He relies largely upon this drug, but he evidently sees its limitations. He believes that at the very beginning of the fevers the formation of gametes can be prevented or controlled.

The Cedron Seed as a Cure for Yellow Fever.—It is so seldom in this age of serum-therapy that we see a new vegetable drug extolled as a sure cure for anything, that we think such an event is specially noteworthy. In a letter in the *Public Health Reports* for July 27th, Dr. S. H. Hodgson, of the Marine Hospital Service, praises the virtues of the cedron seed as a cure for yellow fever. Dr. Hodgson writes from Progreso, Mexico. He says that in Central and South America the seed or bean of the cedron is used as a remedy for the stings of insects and the bites of snakes, and acting on this hint he used it in cases of yellow fever. The results were so satisfactory that Dr. Hodgson concluded that the cedron is as true a specific for yellow fever as quinine is for malaria. This is certainly high praise. Unfortunately, he kept no notes of the cases treated, and consequently his report is lacking in the precise details of systematic observation that we always desire to see in support of such claims. Dr. Hodgson urges that a careful investigation be made of the action of this drug, and even asks to be transferred to a yellow fever focus so that he may himself make further observations. We should remember that Peruvian bark was a long while in gaining confidence, and we should not be too skeptical in the trial of a remedy which has impressed a sense of its value upon an educated observer.

Methyl Alcohol Blindness.—Among the toxic substances having a selective affinity for the visual apparatus, methyl alcohol is now beyond a doubt deserving of decided recognition, not only from a toxicological standpoint, but from one of prophylaxis. The case of blindness from drinking methyl alcohol, that had been taken under the supposition of it being cologne spirits, as reported by Dr. Harold Gifford, of Omaha, in the *Ophthalmic Record* for July, 1901, is an indication that all packages containing methyl alcohol should be marked "Poison." The subject, while it is no longer a novelty in ophthalmic literature, sounds a warning note to the medical profession that in all cases of sudden blindness of obscure

origin, this substance should be thought of. It is not uncommon for those addicted to alcoholic beverages to procure the "next best thing" when in a locality that supplies no alcoholic drinks, and the danger to sight and even life requires that precautionary measures be observed. The case reported by Dr. G. E. de Schweinitz, of Philadelphia, in the *Ophthalmic Record* for June, 1901, shows that the pathway of entrance of the poison may even be by the lungs and cutaneous surface.

The Bed Treatment for Insanity.—In the first number of the new *Journal of Mental Pathology* (which we cordially welcome), the editor comments on this subject. As this mode of treatment is coming more and more into favor, as it deserves to do, in our hospitals for the insane, it is a good subject for brief discussion. Guislain, in 1852, was the first observer, according to Dr. Robinovitch, to record the results of what is now known as the "bed-treatment." He claimed that this treatment was of great benefit in melancholia. Hagen, in 1853, extolled it for its good effects in mania. Other alienists, among the most celebrated of whom were Griesinger and Falret, joined in this praise; the latter claiming that this treatment was especially beneficial in mania with fever. The method won its way slowly, however, and was in greatest favor in Germany. But recently the tendency is to emphasize the value of this treatment in the various forms of insanity which are attended with physical depression and exhaustion—in other words, in the majority of the acute psychoneuroses, and in some other cases. In Europe the value of this treatment seems to be generally recognized at the present time, although, as we have shown, it is not new. Magnan introduced it in its present form in France, and Joffroy has adopted it. In America some of our alienists have adopted a systematic bed treatment, which has long been familiarized among us as the "rest cure" by Dr. Weir Mitchell, and used extensively for neurasthenia and hysteria.

We have long been convinced that systematic rest cure is strongly indicated in many forms of insanity. But we also believe that it must not be given by a fixed rule, but should be modified and suited to each individual patient. Herein is where the wisdom and skill of the alienist are shown. There is no greater mistake made in the treatment of many of the cases of incipient insanity than that of giving the patient "change of scene" by hurrying him or her from one place to another. Thus exhaustion, brain-tire and confusion are increased. It were far better that the patient were put to bed. Another mistake is in postponing treatment too long. There are, however, certain auxiliary modes of treatment that should not be neglected. Among these we at-

tach first importance to hydrotherapy. With these two agents—bed treatment and hydrotherapy—we would rather take our chances than with any other two distinct methods. Massage is an important adjunct to hydrotherapy. Skilful feeding, of course, needs no championing; a good guide to go with it is an occasional blood count.

We know on good authority that in one hospital in Philadelphia they are making more and quicker cures in insanity since they introduced hydrotherapy and resort more to bed treatment. These means save the nutrition of the neurons, and that is the first and last indication in insanity. Drugs will not do it. During convalescence an out-door life, and then possibly a little change of scene, are indicated.

A Word About Temperance.—We suppose there is not a physician in the world who on principle is not in favor of temperance. In fact, we could not imagine a physician who would deliberately advocate or defend intemperance, either in eating or in drinking. The thought is preposterous. We venture to say, moreover, that there has never been a period in modern social life when a higher standard existed in the medical profession on this subject than at the present time. Intemperance in habit is certainly and fortunately a very rare vice among medical men to-day, although there are doubtless individual cases which we must all deplore. Neither public nor professional opinion will condone intemperance in physicians. While this is all true, it is equally noteworthy that the medical profession as a whole is not a supporter of total abstinence. We mean by this the total abstinence which is upheld as a moral principle and a principle of public policy—a principle which some of its extreme supporters contend is to be not only advocated, but enforced. The recent action of the American Medical Association on the subject of the Army Canteen has been variously interpreted, and we have received not a few letters on the subject. To those of our correspondents who severely criticise the Association, we must say that we believe the differences of opinion on this subject have to do as much with a question of *method* as of principle. The idea of enforcing temperance by act of Congress is repugnant to many physicians, who may be better friends of true temperance—by which we mean moderation—than are some of their critics. Intemperance in thought and language is just as possible as intemperance in eating and drinking. One of our correspondents has declared that it would be just as proper for the United States Government to maintain prostitutes for the use of the army as to maintain the canteen. We quote that sentiment merely in order to let it display its own hideousness.

Reviews.

Malaria According to the New Researches.—By Professor Angelo Celli, of Rome. Translated from the Second Italian Edition by John Joseph Eyre, M. R. C. P. With an Introduction by Dr. Patrick Manson. With Maps and Illustrations. Longmans, Green, and Co. London, New York and Bombay. 1900.

In his introduction to this important work, Dr. Manson reminds us that we owe to the Italians not only the name but also much of our knowledge of Malaria. The author of the book is one of the foremost Italian investigators of this disease. A mere statement of these facts is sufficient to indicate that we have here one of the most authoritative and most thoroughly scientific works on malaria that are now in print. The reader feels instinctively when he opens the book that he is in the presence of a fund of knowledge that is first hand, and that he is to have the advantage of following on every page the teaching of an original investigator. This anticipation is not disappointed. The book is a complete exposition of our knowledge of malaria; it is strictly scientific, replete with facts and written in a condensed but lucid style. The English-reading medical public cannot be too grateful to the translator and to Dr. Manson for putting this work into its hands.

Professor Celli's book shows from cover to cover how the field of medical investigation has changed in recent years. It is necessary now for a physician to be a naturalist in order to be an investigator in some important fields. It is needless to say that the mosquito is the central figure in Celli's book. The plasmodia come next. The order sporozoa, and its various suborders, to which belong some of the disease-producing parasites, are described. The book is very wide in its scope, beginning with a discussion of the epidemiology of malaria, and passing from this to a description of the hemsporidia. These organisms are found in the blood not only of man but also of batrachians, reptiles, birds, and mammalia other than man. The description of the parasite that infects man is complete. Celli discusses at length all phases of malarial infection. The natural history of the parasite, and of the mosquito; the conditions of environment in agriculture and drainage; the causes of predisposition or immunity; the influence of place, season, and occupation; and the various social causes. Finally in Part 4 the author takes up the difficult but vital topic of prophylaxis. It is necessary to read the book in order to appreciate the thoroughness with which Celli and the Italians have gone into this subject of prophylaxis. This is a very real problem with them, and they are studying it, not merely in the laboratories, but in the fields of the agriculturist. The book is an extraordinary revelation of a breadth of view and thoroughness of work in this domain of malaria that are worthy of the highest encomiums. From the strictly literary or academic standpoint the bibliography at the end of the book demands notice. The author states that he believes it to be an almost complete bibliography of Roman Malaria from 1600 to the present time. It is invaluable for reference to the work of recent Italian investigators.

This book should be read, of course, by every physician interested especially in malaria, but it should be read also by every physician who feels pride and interest in the progress of science in medicine. It is not a voluminous or expensive work, as it contains less than 300 pages. [J.H.L.]

Operative Surgery.—By Joseph D. Bryant, M. D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College, Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital, Etc. Vol. II. Published by D. Appleton & Company, New York. 1901.

It is seldom that one meets with such an eminently satisfactory work as the Second Volume of Bryant's Operative Surgery. One feature of especial importance in the work is the illustrations. No present day work on Operative Surgery can be satisfactory without the aid of good illus-

trations, and in this respect Bryant's work is very complete. Among the first chapters is one on operations upon the Esophagus. It is gratifying to find here special space devoted to description of the proper method of passing instruments into the esophagus. The general technique of abdominal operations is minutely dealt with. Every suture worth describing is here described and illustrated. One omission, however, is noted in this chapter, namely, O'Hara's forceps, which have proved so satisfactory to those who have used them in intestinal anastomosis. The author's view regarding the removal of the appendix in cases of appendicular abscess in which the general abdominal cavity is well shut off by adhesions, cannot but meet with approval by all but a few more radical surgeons. The author's attitude is that the appendix should not be removed at the primary operation, if its removal means the breaking up of all adhesions and the danger of a general peritonitis. Considerable space is devoted to the discussion of hernia. This is an excellent chapter, containing a description of every modern operation for the cure of hernia. We are glad to find in his description of hemorrhoids that Bryant heartily condemns the injection treatment. Probably no portion in the book is more complete than that which deals with operations done upon the pelvis of the kidney and the ureter. In stating that splenectomy is a more dangerous operation than splenopexy the author is not in accord with the view lately expressed by Collins Warren. The chapter on the pancreas would seem to one who has read the recent literature on this subject to be rather brief. The only omission which we have been able to detect, and which would seem to be worthy of any mention is the lack of any reference to the recent operation for hydrocele in which a simple eversion of the sac is done. The work as a whole will be found a most excellent book of reference, for the author has carefully described in each chapter every operation for the condition with which he is dealing. We cannot close a review of this work without again referring to the illustrations which render the descriptions very comprehensive. [J. H. G.]

Saunders's Question-Compend, No. 14. Essentials of Refraction and of Diseases of the Eye, with a Consideration of Ocular Injuries and the Ocular Symptoms of General Diseases. By Edward Jackson, A. M., M. D. Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic; formerly Attending Surgeon to Will's Eye Hospital, Philadelphia; Ophthalmologist to the Arapahoe Hospital, and Consultant in Ophthalmology to St. Anthony's Hospital, Denver. Third Edition, Revised and Enlarged. 82 Illustrations. Philadelphia and London. W. B. Saunders and Company. 1901.

This little volume of some several hundred questions and paraphrased answers in ophthalmology, has through the good work of the author and the seemingly untiring energy of the publisher, reached a well-deserved third edition.

Comparison with the previous editions shows that much that is new and useful has been added. Consideration of radiography, bacteriological disease, traumatic affections, and visual and color-tests, with a chapter on the relation of the eye to the general system, has helped to make the subject-matter more complete, and to bring the work directly to date.

The book as written is a most excellent companion for the practical student in eye disease, and, as such, can be heartily recommended. [C. A. O.]

A Case of Marked Improvement of Elephantiasis Following Subcutaneous Injections of Calomel.—S. D. Schaginin (*Meditsinskie Obozrenie*, April, 1901) reports a case of elephantiasis in a woman 54 years old who also suffered from general obesity, developed during the climacterium. 14 injections of a 5% solution of calomel in liquid vaseline into the affected limbs brought about a marked improvement, the decrease in the size of the legs amounting in some places to 26%. The injections were made every 3, 6 and 8 days, 0.9 grm. of calomel having been used altogether. No constitutional disturbances were observed; the local reaction, on the other hand, was marked. The patient left before the treatment was completed. [A. R.]

Correspondence.

EYE AND EAR EXAMINATIONS OF RAILROAD EMPLOYEES.

By WILLIAM THOMSON, M. D., of Philadelphia,

Emeritus Professor of Ophthalmology, Jefferson College.
To the Editor of the Philadelphia Medical Journal.

It is to be regretted that Dr. Allport, in his reply to my plea for a hearing of July 6th upon the subject under discussion should have seen proper to use his opportunity to call attention to the personal deficiencies of his much esteemed friend, Dr. Thomson, as a member of his committee, instead of giving to our readers his opinion of the views contained in my paper, which seems to have caused unusual irritation. Some self defense seems but proper on my part.

At the meeting of the American Medical Association at Atlantic City, in the Section on Ophthalmology, I heard for the first time of this burning question, when Dr. Allport brought before the members a most voluminous report based on the replies from the officers of sixty-four railroads to eight questions submitted to them by him. The statistical information obtained through the frank replies of the roads, although impossible of comprehension at the moment, gained at the expense of much time and effort, awakened some admiration, and led to remarks extemporaneous and badly reported, which have been assigned to me. I fancied that this confidence of the officers of the roads would surely be rewarded by an effort to gain their co-operation with, or assistance to the committee of our Section with a view to perfect and adopt a system of examinations practical and satisfactory to both interests. With this hope in mind I accepted the position on the committee vacated by the wise Dr. Williams. That I was not alone in this feeling is shown by the action at the end of the debate. Dr. Lippencott, of Pittsburg, moved "That the paper of Dr. Allport be referred to a committee, appointed by the chairman, who shall use it as a basis in drawing up some practical resolutions to guide us in this work." The seven recommendations in Dr. Allport's paper were evidently not then in a form to secure their adoption by the section. Nothing further reached me on the subject until this letter, dated April 18th, came to hand.

LETTER OF DR. ALLPORT:

"You will doubtless remember that you are a member of a committee whose duty it is to report to the ophthalmological section of the American Medical Association at its next meeting at St. Paul, upon the general subject of what should be the eye and ear requirements of railroad employees, etc."

"The report has been delayed for two years at the suggestion of a member of the Committee (now resigned), pending the report of a similar Committee, which was to have been received at the last International Medical Congress, held in Paris last summer. Although using great diligence in correspondence, both to gentlemen in this country and in Europe, and in scanning all eligible literature of the proceedings of the Congress, I have failed to ascertain whether any such report was submitted or not. It appears to me therefore to be utterly unnecessary for us to further await European edicts upon this important subject, as we certainly are quite as capable of formulating intelligent opinions, as European observers."

"I beg, therefore, to secure your valuable co-operation in framing suitable resolutions to be presented to our Section in St. Paul, and to remind you that, inasmuch as we have waited till the last moment to secure tidings from abroad, our time is limited, and I hope you will at once correspond with me upon this subject, so that we may have something to start with. I beg leave to submit to you a reprint, read by myself at the Section meeting at Atlantic City, embodying certain resolutions, which appeared to me about what was needed. These resolutions may be found upon page 7. If these commend themselves to you, will you please say so? If not, will you kindly make such alterations or additions as seem to you necessary. I would suggest, however, that unless you desire radical changes, it might be well to let these resolutions stand, inasmuch as we as a committee cannot all get together, and alterations require

much correspondence, which will necessarily impede progress, and possibly prevent a unanimous and harmonious report, which is, of course, most undesirable. Do not, however, I beg of you, feel that I am undertaking to dictate in this matter, as this is far from my desire. If you really desire something different, I beg of you to so express yourself, and we will all try, I am sure, to endorse any reasonable opinions. What we desire is a harmonious and unanimous report, that may be endorsed by the Section, and later by the Association, that may be sent to all railroads on this continent.

"I trust that this matter will receive your immediate attention, and beg to remain, etc."

Then follows the report from which I quote. "Your committee, therefore, begs leave to submit to the Section the following resolutions, which have been unanimously adopted and which it is hoped will be adopted by the American Medical Association, and then correctly placed before the proper railroad authorities of North America." He explains that the Section will "superintend" this work, gain the support of the Association, and see that "the necessary literature is placed before the proper railroad authorities." Then the self-same seven resolutions of the year previous follow:

(1). "The essential principle to be advocated is that railroad corporations shall require a scientific and correct entrance examination of the eyes and ears of those employees at all to be concerned with the active operating of trains, or in giving and receiving signals.

(2). Such examinations are best made by regularly appointed eye and ear surgeons. But if such a course is not deemed advisable, the company surgeon, aided by his medical assistants, may conduct them, with the understanding that all doubtful cases shall be sent to a regularly appointed eye and ear surgeon. Non-medical men shall never conduct the examinations.

(3). There shall be two general standards of visual and aural requirements, viz., those for new men hoping to enter the service, and to be actively engaged in the operation of trains, and in giving and receiving signals, and secondly, those men engaged in similar work, who have been uninterruptedly in a company's service for five years, and who have, therefore, a right to be called old employees.

(4). New men shall be required to possess perfect color sense. They shall also have a vision of 20/20 in each eye, without glasses, and have healthy eyes, and not over two diopters of hypermetropia. They shall also hear the whispered voice at 20 feet in a quiet room, and have healthy ears.

(5). For purposes of graduated requirements old employees shall be subdivided into two classes as follows:

Class A.—Engineers, firemen, conductors, brakemen, switchmen, signalmen, switch tenders, and engine dispatchers.

Class B.—Track foremen, bridge foremen, crossing flagmen, bridge tenders, train baggagemen, telegraph operators, stations agents, and station baggagemen.

Employees enumerated in Class A shall not be retained in such position if vision sinks below 20/30 in one eye and 20/40 in the other, or if the whispered voice cannot be heard in a quiet room at 15 feet by one ear, and 10 feet by the other. Employees enumerated in Class B shall not be retained in such positions of vision sinks below 20/40 in one eye and 20/50 in the other, or if the whispered voice cannot be heard in a quiet room at 10 feet by both ears. Employees, and especially engineers and firemen enumerated in Class A, must reach the visual standard without glasses, and will not be allowed to wear distance glasses when on duty. Employees enumerated in Class B may reach the visual standard with glasses, and will be allowed to wear glasses when on duty, and will be required to do so if the wearing of glasses is necessary to bring vision up to the proper standard. All the employees shall have perfect color sense.

(6). Re-examinations shall be made of all men every three years, and after a severe illness, or accident, or any occurrence which seems to cast doubt on the visual or aural capacity of an individual. Re-examinations shall also be made more frequently on men known to be excessive users of tobacco, or to be suffering from syphilis, albuminuria, diabetes, or acute or chronic eye and ear dis-

case. Men shall always be examined before promotion.

(7). Men known to be excessive users of liquors shall not receive employment."

With no evidence, either from railroad officials, or members of our Section acting as their ophthalmic surgeons, that these resolutions if passed would be considered by those officials when enforced, if possible, by the pressure of the entire American Medical Association, I became satisfied that I could not subject my opinions to the authority of the Chairman of the Committee, and that the changes I would desire would be too "radical," and that I would be compelled to take some direct means of voicing my objections to my colleagues of the section. I therefore sent to Dr. Allport a letter, which he says he faintly remembers to have received, as follows:

Dear Doctor Allport:—

I regret that I cannot join you in the wholesale condemnation of examinations made by "non-professional but instructed persons" in your proposed report to the Ophthalmic Section at the meeting at St. Paul.

I am striving to obtain information from railroad officials to guide me in forming my own opinion. Should I attend the meeting I can have the benefit of conferring with your Committee, and with other colleagues from different sections of the country. Should I be prevented from so doing I will content myself with some expression of opinion to the Secretary of our section.

WILLIAM THOMSON.

This disposes of the hint at a want of courage or candor, but it gave notice of the arrival of a minority report under certain circumstances, and of my strong desire to express my opinion without pressure or hindrance. Inasmuch as I had proposed to railroad officers twenty years ago a series of tests for eliminating from their service those defective in sight, color sense and hearing, which had been made efficient by their wise administration, and still preserves their confidence, I felt bound to defend our mutual action against any revolutionary, arbitrary, or autocratic attempt to sweep it away.

Upon these data my minority report was based and sent to St. Paul. Should our Section unanimously adopt these views of Dr. Allport, the vast influence of the entire Medical Association would be brought to bear upon the various methods of testing now in use on our roads, and the proper "literature" would soon be applied to discredit the present tests, to place a seal of condemnation upon the results of years of slow reform; awaken the distrust of railroad officials, and cloud the title to his position of the thousands and thousands of employees, who, having passed these tests, might hope to continue their occupations in peace.

I do not desire to analyze these seven resolutions, but a glance at one section shows the want of co-operation with railroad men. The use of glasses is seldom allowed by Dr. Allport's scheme, whereas we can see by the tables of the 64 roads that there are few exceptions to their use on them. Again we find, speaking of the seventh section, "They will of course exclude a certain portion of the old employees from their accustomed occupation, but this is of small moment compared with hazarding the lives and property of the public by the retention in the service of physically incompetent men. Railroads can always, if they choose, lessen the disappointment of an old employee by transferring him to some other and less hazardous position, with a liberal salary." How do we doctors know anything about this?

My convictions are that we, as scientific men, should limit ourselves to giving our advice and support to railroad officers when they are asked for, or kindly received. Any arbitrary effort to reach them by legislation, or by overwhelming them with "literature," or by the pressure of "associations," would but defeat its object and bring upon us the mortification and disappointment so universally meted out to those injudicious friends who so kindly interfere unasked with the private affairs of others.

My suggestion to the chairman of our Section would be to secure the support of railroad officials before pressing

the conclusions of his committee upon the American Medical Association in 1902, since with the entire weight of the medical profession, it might be found impossible to exercise the least influence over the officials of our great roads against their wishes. They must and will be a party to any system that will ever be largely adopted, and each road must be left free to select the methods which its business needs will demand. Even the employment of ophthalmic and aural surgeons for example, as in the kingdom of Holland, or on any road which can or which prefers to employ them, would be proper. In marked contrast with the dogmatic tone of Dr. Allport's report I would now call attention to the one recently adopted at the annual meeting of the American Ophthalmological Society upon this same subject, which will soon be published in its transactions. I quote from it: "At the meeting of the International Medical Congress at London in 1881, a Committee of the Ophthalmic Section, presided over by Prof. Donders (in which I represented the United States) presented a report, one paragraph of which says: "That the examinations should be conducted by persons of recognized competency, under the direction of a central medical authority in each country."

In 1890, the British Board of Trade induced the Royal Society to make recommendations, the third one of which reads, "That they should be entrusted to examiners certified by the central authority."

The 10th says: "The tests in use and the mode of conducting examinations at the different stations should be inspected periodically by a scientific expert, appointed for that purpose by the central authority. No claim is made for either ophthalmic and aural surgeons or even medical men."

"Your committee feel that no attempt should be made to compel the adoption of any standards or methods of examination by means of legislation; they believe the best results will be obtained by showing the operating officers of our railroads how their service can be improved, by adopting methods of examination which will be reliable, and by maintaining standards which will be high, but not impracticable, for those entering the service, and will be the minimum of safety for old employees on re-examination."

"Railroads are justly skeptical as to the value of certificates issued by physicians not connected with the road, especially when their fee is paid by the man who employs them, and not by the company."

The report concludes with these eight resolutions:

1. That all railroad employees concerned with the movement of trains or reading of signals be carefully examined as to their acuteness of vision, color-perception and hearing.

2. That a trained ophthalmic surgeon be selected by each company, who shall instruct and examine the men selected by the company to make these tests, shall recommend the standards and methods to be used, shall see that the equipment furnished to each examiner is sufficient, that it is kept in proper order and renewed when necessary, and who shall be the authority to whom the doubtful cases shall be referred for final settlement.

3. That the acuteness of vision shall be tested by the test types of Professor Snellen, or those which conform to his standards.

4. That the following minimum requirements be adopted for acuteness of vision.

5. That the color-perception be tested by means of the colored worsteds of Professor Holmgren, preferably with worsteds tagged for purposes of record; also, that in every case an additional test be made with a lantern showing a number of colored lights, which can be varied in their size and intensity.

6. That no one shall be considered to have satisfactory color-perception who calls a red light green, a green light red, a red light white, under any of the varying conditions of the lantern test; or who selects with the green and also with the rose test skeins the characteristic confusion colors.

7. That the hearing be tested by the spoken word of the examiner and by a watch or acoumeter, and that for entrance to the service a candidate be required to repeat correctly words or numbers spoken in an ordinary con-

versational tone at a distance of twenty feet; or, for re-examination, at a distance of ten feet.

8. That re-examinations be made at intervals of three years, also before promotion, and oftener in special cases, where necessary.

9. That a copy of this report be sent to the Secretary of the American Railway Association for transmission to their committee on safety appliances.

The 9th was not approved by the Society, but is given here to show how carefully its members preserve their own dignity, and avoid pressing their opinion upon railroad officials. It was believed that the railroad officers would have knowledge of the Society's action, and would be free to act or not, as they considered best, without any solicitation.

In 1881 the Pennsylvania railroad through the labors of its transportation society, composed of its most able division and other superintendents, in conjunction with the writer, put in force a system with the examiners chosen from employees instructed by the ophthalmic surgeon. It is still in force on 15,000 miles of track with 81,000 employees and has been adopted by many other great roads controlling an estimated mileage of 150,000 miles.

One instance of the evolution of our present method, which I proposed in my first paper as a proper object for any reformer, may be found in the adoption in the report of the lanterns invented by Dr. Williams and myself, which by supplementing the defects of the wool tests, will go far toward rendering them of secondary importance, and making the tests for color defects simple enough for any tyro.

I am advised that the feeling in the section meeting at St. Paul was far from unanimous in favor of Dr. Allport's Committee, and I should think that any persistent effort to suppress debate, keep out information, or bring opponents into disrepute by personal criticism, would be resented as beside the issue, and unworthy of the great interest of a public nature now involved. When the final action is taken at the meeting in 1902 a study of the two rival "recommendations" may after all only illustrate the psychological difference between the Imperialistic and the Democratic temperaments.

Systoscopy in the Study of the Chronic Nephritis of Children.—In *La Presse Medicale* (1901, No. 31) Marfan describes the application of systoscopy to the study of chronic infantile nephritis. It is as yet hard to draw any conclusions from the results. He reports the case of a boy of 8, with a nephritis of unknown origin which has lasted 15 months. Erysipelas, pneumonia, and pleurisy ran their course, yet the nephritis continued unaffected. There was from 2 to 5 g. of albumin to the liter of urine, with the urine reaching 1500 g. daily. Edema persists, while anasarca and ascites appear from time to time. Chronic infantile nephritis generally comes on insidiously, after the age of 6 years. Granular casts are found in varying quantity. Emaciation and pallor become marked. Cardiac and uremic symptoms are generally lacking. These cases usually last years, growing better or worse, yet always showing some albumin in the urine. A cure, while possible, is very rare. Yet most cases live to manhood with exacerbations and remissions. Pathologically but two forms of chronic nephritis exist, primary renal sclerosis, very rare in children, and diffuse parenchymatous nephritis, common before puberty. Neither Bouehard's method of measuring the urinary toxicity nor methylene blue has been a success. Systoscopy, the idea of Raoult, of Grenoble, is the latest method to be tested. It shows, in this case, that the renal permeability is normal. The experiments, which were performed by Léon Bernard, are given in full. He believes that the renal permeability is normal or even increased in the early stages of parenchymatous nephritis. But the kidney probably has other functions, as yet unknown, which, when disturbed, cause the production of uremia. Milk diet should be absolute during the exacerbations, but mixed soft diet is better during the remissions. If the patient can digest it. This will be shown by the amount of albumin in the urine. As diuretics, Marfan advises lactose and theobromin. Should uremia occur, the patient must be bled. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Alvarenga Prize of the College of Physicians, of Philadelphia, for this year has been awarded by the committee to Dr. George W. Crile, of Cleveland, Ohio, for his essay entitled: "An Experimental and Clinical Research Into Certain Problems Relating to Surgical Operations."

Dr. J. L. Forwood, of Chester, Pa., has been reappointed a member of the State Quarantine Board.

Susquehanna County Medical Society.—Following are the newly elected officers of the Susquehanna County Medical Society. President, Clarence N. Vanness, Hallstead; Vice-President, John G. Wilson, Montrose; Secretary, Edward R. Gardner, Montrose; Treasurer, Calvin V. Halsey, Montrose; Censors, Abram E. Snyder, Susquehanna; John G. Wilson, Montrose; Charles A. Johnston, Harford.

The Dissemination of Tubercle Bacilli by Cows in Coughing a Possible Source of Contagion.—As quoted in the *Bulletin of the Bacteriological and Pathological Laboratory of the Delaware State Board of Health*, Newark, Del., Mazilek P. Ravenel (*Univ. Med. Mag.*, Nov. 15, 1900; *Med. Rec.*, Dec., 1900) of Philadelphia, gives the results of numerous experiments relating to this subject. In order to collect the sputum from tuberculous cows he made use of an ordinary nose-bag, near the bottom of which is placed a shelf of soft pine wood, sterilized by steam heat each time before using. The wood catches the smallest particles ejected by the cow during the act of coughing. The more solid particles may be removed by a platinum needle for experiment. Tubercle bacilli have been detected in the bronchial secretions of every tuberculous cow on which the experiment has been tried. Of forty-five guinea pigs inoculated in the peritoneal cavity with the tuberculous mucus, twenty-three died within a few days, most of them with peritonitis, too early for the development of tuberculous lesions. Of the remaining twenty-two, eleven or fifty per cent. became markedly tuberculous. Fourteen guinea-pigs were exposed by means of a special nose-bag directly to the breath of the tuberculous cows, and after several weeks were killed. No evidence of tuberculosis could be detected in any of them.

The Lehigh Valley Medical Association held its mid-summer meeting at Mauch Chunk, July 25, 1901, with about sixty in attendance. Guests present were Prof. Roswell C. Park, of Buffalo, N. Y., and Prof. W. J. Hearn, Dr. Boardman Reed and W. B. Atkinson, of Philadelphia. After some formal work the President read the annual address. Dr. A. A. Seem, of Bangor, delivered the presidential address. He selected **Diagnosis** as his theme, because a physician, to be a good physician, must be a good diagnostician. He who diagnoses well, treats well. The need of proper diagnosis is seen on every side. Cripples, deformities, mounds in the cemeteries are the signs. Tuberculous joint, mistaken for rheumatism known too late. Prof. Da Costa obtained his great reputation by his wonderful power of diagnosis. The essentials are a thorough knowledge of anatomy and pathology. Symptoms are mistaken for the disease itself. Hence the false systems of medicine of the past. Modern pathology has changed all this. Thanks to such men as Koch and his compeers. Clinical experience is demanded. Diagnosis is an art, but is becoming more and more scientific. Recently diagnosis has progressed by leaps and bounds. Careful investigation is demanded into nativity, heredity, environment, habits, etc. An accurate account must be had. Next the evolution of the attack. Cultivate your powers of observation, that they may become acute. Pay attention to little things. Let nothing escape. The careful and painstaking are more sure of success. Bedside observation is our mainstay. Next the importance of laboratory methods, this without prejudice to what has just been said. The microscope and chemical reagents are imperatively needed. Then the nausea, headache, dimness of vision, dyspnea, if due to renal lesion, are recognized, or typhoid with nephritis are ascertained and properly treated. The condition of the blood is fully known, iron is given or withheld scientifically. Bacteriology gives us the Widal test. The sputum shows the condition of lungs, especially in tuberculosis. Also in diphtheria we early know the true

condition. Correct diagnosis at the earliest possible moment is gained to the advantage of the physician, the patient and the community. A corner of the office may do duty as a laboratory. We may call to our aid the services of others if too busy to attend to all these points. Often we may have the aid of a state or local board of health in such work.

Prof. Roswell Park, of Buffalo, read a paper "The Evolution of the Surgeon from the Barber." Nothing in the tomes of the past will be found more curious than the connection between the craft of the barber and that of the surgeon. Even after studying history, the predominant yet concealed reason for this will be missed. Women were licensed to practice surgery in the 14th century, but denied that right in the 19th. Specialties were recognized in the 16th but lost their dignity later. Medical education has wonderfully progressed since the teaching of apprentices who were to be comely, able to read and write, wear no beards and be well punished when at fault. Remember, there was a time when bleeding was deemed necessary for all ailments. After the church condemned the shedding of blood by any of her officials, it was natural to turn to the barbers who were supposed to be dextrous in this way. Added to this was their care of wounds, dressing of fractures, etc. All former military surgeons were from this class. Thomas Gile describes in the armies of Henry VIII these surgeons who made great pretences, but by cross questioning showed how little they knew. The barber surgeon in Germany still is a common figure, also in Russia, where educated surgeons are still few for the vast population. Again the church imbued men's minds with a horror of a dead body and of those who studied anatomy, and dissectors were exposed to insult and even death. Hence only intense desire for knowledge permitted such instruction. In the middle ages, the great school was situated at Salerno near Naples. Among its ordinances one read "That the person examined must be 21 years of age and have studied physic five years. He must agree to be obedient to the society, learn anatomy one year, refuse fees from the poor, and share no gains with apothecaries. These last deserve attention at the present day. Even the site of the building is lost and no one seems to know where it stood. In 1240 Emperor Frederick II was the patron of this college. One of his enactments says: "Since it is possible for a man to understand medical science only if he has previously learned some logic, we ordain that no one shall be permitted to study medicine until he has given attention to logic for at least three years." "No one shall be allowed to practice until he has submitted certificates in writing of the teachers of the faculty of medicine that he has spent at least one year in that part of medical science which gives skill in the practice of surgery, that in the college he has diligently and especially studied the anatomy of the human body, and that he is also thoroughly experienced in the way in which operations are successfully performed and healing afterwards brought about."

In Great Britain medical men were first called leeches, later the clergy introduced books from Rome and almost every monastery had some brother possessed of knowledge in medicine. Salerno gave great impetus to the study of medicine even before William the Conqueror, this was strengthened by the influence from Naples and also from Montpellier. For centuries, the Catholic clergy were almost the only physicians, which became so lucrative that many monks abandoned their monasteries, and applied themselves to medicine. This compelled the decree of the Council of Tours in 1163 prohibiting them remaining away and forbade them to teach the practice of physic. Even bishops, etc. acted as physicians to kings and princes, preaching, practicing, acquiring riches and honor. Pope Boniface early in the 14th century issued decrees, formally separating surgery from physic, and forbidding the priests from practicing the former. This, in spite of the fact that long before Pope Innocent III decreed that no ecclesiastical was to undertake any operation which involved bloodshed. Thus it was that surgery was abandoned to an ignorant laity. The Jews were next in their learning, having intercourse by their nomadic life with all nations, denied to others, many studied medicine and practiced among Moors and their own race. The priests became jealous of Jewish physicians and of lay surgeons, and endeavored to obtain from Rome a law that no such might

give medicine to a Christian. But so celebrated were these Jews that the power of Rome could not exclude them. At first in England the priests were not disposed to practice medicine, though later they became so much interrupted in their duties that the Pope looked upon this as detracting from clerical dignity. To the church then we owe this abandonment to the ignorant. The sway of the church over the barber surgeons long remained. The surgeons and barbers were licensed by the Bishop of London or the Dean of St. Paul's, an acknowledgment that they belonged to a learned profession. In the old London Company of Barbers and Surgeons the division was maintained. As the surgical section became more skilled it tended to become a science and soon the surgeons demanded a separation, giving up all the property and obtaining a separate charter, which led to the incorporation of the Royal College in 1784. In France the hairdressers were formally separated from the barber-surgeons by Louis XIV. In 1308 the London Company of Barbers was formed, in 1462 they received a charter. In 1540 they were united with those who practiced purely as surgeons. Later, they obtained exemption from bearing arms and serving on juries. In 1540 Parliament allowed them yearly four bodies of criminals for dissection, supposed by some to be the first official authorization of provision for dissection. In 1375 the Barbers' Co. was divided into two sections, respectively those who practiced shaving and those who practiced surgery. In 1460 the surgeons became the Guild of Surgeons and became one of the livery companies of London. Similar separation took place in the guild of weavers, into the Woollen Drapers and Linen Armourers, the latter becoming later the wealthy and powerful Company of Merchant Tailors. A statute of Henry VIII enacted that no one shall occult any practice of surgery, letting blood, etc., except drawing of teeth. In Wood's history we read that September 10th, 1348, appeared a number of men named, and with them a whole company of barbers within the precincts of Oxford, intending to bind themselves in unity and love, 'brought with them certain ordinances and statutes in writing for the weal of the craft of barbers, desiring that the chancellor would examine, correct and apply the seal of the University. Thus was formed the corporation of barbers, the surgeons, the wafers and the makers of singing bread. When at last the cappers or knitters of caps were united to them in 1551 the barbers and wafers abrogated their charter and took one in the name of the city till 1675, when they received a charter from the University. He traced in a most interesting way these guilds of barbers in several cities to the 18th century, when medicine and surgery were abruptly separated, the latter being placed entirely in the hands of the barbers. The greatest contempt was shown for one who attempted any surgery, thus, if, while a nobleman was being bled, he received the slightest harm, the barber was heavily fined, and if the gentleman died, the culprit was given to the relatives to be dealt with as they desired. Even while the church did not hesitate to inflict bloody punishments for heresy, the monks were forbidden to perform any surgical operation, since the church had a horror of shedding blood. The truth is, this was the result of superstition and ignorance, the former from tradition and custom, the latter due to the lack of anatomical knowledge, itself due to the denouncement by the church of the profanation of a dead body. For hundreds of years, monks were not allowed to wear a beard, which necessitated the employment of tonsors, who also performed operations as bleeding, bandaging, etc. Such were not eligible to membership in any fraternities. In 1466 the Emperor Wenzel was rescued from prison in Prague by the daughter of a bathkeeper; he made her his mistress and declared both barbers and bathkeepers respectable, but having lost his position, he decreed their profession an art and gave it position above any they really made eligible to the guilds. In 1696 Leopold decreed their profession an art and gave it position above an apothecary and they were elevated to the making of ointments and plasters.

As surgery has as a profession to thank the existence of man with a beard, so the European continent of the 11th century may thank the crusaders for having necessitated the existence of the bathkeeper, because of the leprosy they brought from the East. At this time were founded the three orders for the care of the pilgrims and injured

soldiers, the Knights of St. John, the Knight Templars and the German Order. All this would be very interesting but not appropriate here. These grew into most despotic bodies, and at one time had in Europe 2000 hospitals, and Louis the Saint found one for those blind from Egyptian ophthalmia. Again at this time there was great neglect of cleanliness even among the upper classes. The hospitals for lepers being insufficient, bath houses were built and keepers engaged to prevent the spread of the disease. As bathing became less necessary, the bath-keeper limited the barber, though not till much later was he allowed to treat wounds and chronic diseases. Now he was supposed to be somewhat of a linguist and know a little botany, and he used the bodies of swine on which to learn anatomy. Erhardt said the sixteen virtues of a barber were fear of God, he should be careful, prudent, temperate, ready to use both hands equally; he said arrogance seems most prevalent among barbers, they were proud animals. He was surprised at the envy and malice between bathkeepers and barbers and says both should consult physicians and other masters. The first Master of the London United Company of Barber Surgeons was Thomas Vocary, Sergeant-Chirurgion to Henry VIII, and overseer of all officers within the newly restored hospital of St. Bartholomew. He was author of two works on anatomy, and declares three points very expedient for all men to know who intend to use the mystery of chirurgery: to know what chirurgery is, how to choose a chirurgeon, and what properties a surgeon should be endowed with. St. Cosmo and St. Damien were the saints of the barbers, supposed to be two physicians who practiced in the early part of the 4th century and suffered martyrdom. Among the regulations were that he should not take any child to be an apprentice unless presented to the officers of the craft to examine if he be vexed with gout or leprosy or maimed or disfigured in any part. At this time if a boy could write a little and read a little Latin no one dared refuse him. He went from house to house sharpening knives, spreading plasters, picking lint, caring for children, doing menial work, using the same light as the house-maid, it would have been disrespectful to the wife of the master to use any other. After years of this he was taken to see patients, taught to bleed, cup, leech, extract teeth, administer clysters. Anatomy he did not learn, as his master could not instruct him. He was supposed to pass an examination, but usually his master was too lazy to examine him. He then presented his master with some silver instruments and was dismissed with an injunction to be thankful that such a miserable creature had been taught to shave a beard, etc. He was now a journeyman, living still at the house of the master, not allowed to marry, later receiving a paltry amount, got his dinner free. Study was out of the question, he served the community as a tale-carer. After some years he applied to the authorities for a certificate, passed an examination before the physicians of the district. Prussia first regulated medical practice. Thus no temptation caused many to enter the ranks and hence no good surgeons were found in Germany so late as 1790. It was general lament that German surgeons were educated in barber shops. They could not carry a word nor go in the society of physicians and often were bitterly persecuted. At the beginning of the present century scarcely any physician could diagnose a surgical case. Von Siebold deplored the position of the surgeon, his large military experience had shown him the difficulties before he could enter society, though ambitious, and his high motives were scorned. Even the peasantry were opposed to all operations and often he removed patients to other towns to operate on them. Still it cannot be wondered at, when the barber would drop his knife to treat a fracture, hernia or an obstetric case. He was compelled by the State to call in a physician for complicated cases, hence such consultations resulted in quarrels, etc. In the capital city of Prussia in 1725 only 20 German and 6 French surgeons were allowed to practice. Till 1808 every German surgeon carried on a medico-legal business which was later separated from his surgery. In 1782 there were three classes, from the lower one might be promoted to a higher after an examination. In Austria, in 1805 there were doctors of surgery required to show a general knowledge of medicine who had the same rights as a physician; there were also medical surgeons who practiced under restrictions, and bathkeepers for minor sur-

gery. An official fee bill in Prussia in 1815 shows the highest fee charged was for a lithotomy in adults, about \$35, while the majority of operations ranged from \$5 to \$15. Then money was of greater value than now. The church brought about the separation of surgery from medicine, not a condition of Greece and Rome. Even the University of Paris refused to admit a student who did not foreswear the study of surgery. Many considered surgery too odious a study, others had a prejudice against it, hence they had no social position. In 1774 Mederer was made Professor of Surgery in Freiburg. He delivered his opening address on the wisdom and necessity of combining medicine and surgery. Hence he was insulted by the students, abused by the surgeons, and threatened with personal attacks. He maintained his position, fought the prejudice, and 22 years later left Freiburg with public opinion so changed that he was serenaded and the students apologized for what their predecessors had done. Then the constitution of France contained a clause combining medicine and surgery and the Royal Sanitary Commissioners of Vienna unanimously resolved in favor of such union. This movement was continued by Richter, von Siebold, Loder and others. Only 100 years ago the Electoral Academy of Erfurt offered a prize for the best essay on: "Is it necessary and possible to combine medicine and surgery theoretically as well as practically?" Fourteen papers were submitted, twelve were in favor of union. Yet the Academy awarded the prize to the only writer who had opposed the union. His reasons were puerile. Nevertheless a great step had been taken, the guilds and fraternities of barbers and bathkeepers were abolished and Vienna in 1783 took the lead. It was then declared that shaving was the business of the hairdresser and that barber surgeons must attend lectures in surgery and anatomy. Bavaria followed in 1804 and then Prussia. By 1811 the barber license was no longer essential for the practice of surgery. In the 17th century the German surgeons held simply the position of barbers. They began life by cutting hair, shaving, cupping, bleeding, later they dressed wounds and ulcers and were permitted to treat fractures and dislocations. Dresden and Hanover began to improve the education of the barbers about the middle of the 18th century, while in Berlin in 1713, first was opened an anatomical theatre for instruction of barber surgeons attached to the army. A military medical school, the Josephineum, was opened in Vienna in 1781, but the regular surgical clinic of Vienna was not instituted till 1774, while Germany's greatest teacher of surgery, Richter, did not begin formal clinical instruction in Göttingen till 1781. Thus we see that systematic surgical clinics are institutions a little over one hundred years old.

The election of officers for the ensuing term was made: President, Charles P. Knapp, Wyoming; Vice-Presidents, J. A. Horn, Leighton; H. Reeser, Reading; W. H. Hartzell, Allentown; E. M. Green, Easton; Secretary, Charles McIntire, Easton; Assistant, W. P. Walker, South Bethlehem, and Treasurer, Abraham Stout, Bethlehem, with an Executive board from the several counties.

Vital Statistics of Philadelphia for the week ending July 27, 1901:

Total mortality	461	
	Cases.	Deaths.
Inflammation of the appendix 5,		
bladder 3, brain 11, bronchi 3,		
kidneys 21, tonsils 1, lungs 10,		
peritoneum 1, pleura 2, stomach		
and bowels 30, nerves 1		91
Marasmus 18, inanition 26, debility 6		50
Tuberculosis of the lungs		55
Apoplexy 13, paralysis 7		20
Heart-disease of 22, fatty degeneration of 2		21
Uremia 10, Bright's disease 8		18
Carcinoma of the bowels 1, breast 2, stomach 3, uterus 3, face 2,		
liver 1, rectum 1		13
Diphtheria	31	4
Brain-abscess of 1, disease of 3		4
Typhoid fever	74	7
Old age		10
Scarlet fever	28	2

Cases. Deaths.

Alcoholism 2, asthma 2, burns and scalds 2, casualties 9, child birth 1, cholera infantum 66, cholera morbus 2, cirrhosis of the liver 1, convulsions 11, convulsions, puerperal, 1, cyanosis 3, diarrhea 3, drowned 7, dropsy 1, dysentery 2, epilepsy 1, erysipelas 2, fever, gastric 1, hernia 1, hemorrhage from stomach 2, hemorrhage from uterus 2, homicide 1, intussusception 1, leukemia 1, obstruction of the bowels 1, sclerosis, arterial 1, liver 2, shock, electric 1, septicemia 3, smallpox 1, suicide 2, sunstroke 9, teething 3, tetanus, traumatic 1, ulceration of the stomach 2, unknown coroner case 1, whooping cough 8

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Correction.—We are informed from the Treasury Department that in the Health Reports for the week ending July 15, the 66 cases and 33 deaths of smallpox charged to Nebraska City, Neb., should have been charged to New York City.

NEW JERSEY.

Mercer Hospital, Trenton.—The Board of Managers of the hospital has appointed the following staff: Consulting surgeons, Drs. Samuel W. Latta and Thomas H. Mackenzie; consulting physicians, Drs. William Elmer and Cornelius Shepherd; gynecologist, Dr. Joseph B. Shaw; pathologist, Dr. Irenaeus M. Shepherd; attending surgeons, Drs. John Bruyere, Nelson B. Oliphant, John S. Jamison and William McD. Struble; attending physicians, Drs. Irenaeus M. Shepherd, William A. Clark, Charles J. Craythorne and Charles F. Adams; medical director, Dr. William Elmer; resident physician, Dr. Frank Harris, and registrar, Dr. George H. Parker.

NEW YORK.

A New Aqueduct for New York City.—An aqueduct from Lake George to New York City is contemplated for the purpose of affording a pure water supply to New York City.

Differs from Dr. Koch.—James Law, director of the New York State Veterinary College of Cornell University, does not wholly agree with Prof. Koch in his conclusion that the bacillus tuberculosis which is found in cattle could not be transferred to human kind. While Law admits that the bacillus of tuberculosis when cultivated in the human body and in bovine acquires qualities which are characteristic of different habits, it is nevertheless too early to take the absolute stand attributed to Dr. Koch, that the bacillus in one genus is radically different from that found in the other. He believes that tubercle bacilli simply acquire new habits which vary according to the genus in which they thrive.

Outdoor Treatment for Tuberculous Insane Successful.—A despatch from Albany states that a system of outdoor treatment for insane tuberculous patients has been in operation in the Manhattan State Hospital for the last two months, and that the State Commission reports that it has been attended with gratifying results. About sixty patients have been quartered since July 1 in the wooden floored tents on the hospital grounds. The patients have lived and slept in the tents. The result has been that old and feeble patients are now able to walk and care for themselves.

Bubonic Plague at New York.—It is reported that according to the report of Surgeon-General Wyman, sent from Washington, to Dr. Doty, health officer of this port, the disease from which Rabyana, a British Indian, who was stoker on the steamer Hohenfels, is suffering, is the bubonic plague. When the Hohenfels arrived here from Calcutta, and other Oriental ports, on last Monday, she was detained at Quarantine for the usual examination of the vessel and crew and the disinfection to which all vessels are subject that

arrive from ports liable to cholera and other infectious and contagious diseases. Rabyana, who is 20 years old and married, had a swelling of the glands of the groin. He was removed to Swinburne Island, where Dr. Doty performed an operation to obtain the material necessary for a thorough bacteriological test to discover the nature of the disease. A part of the official statement given out by Dr. Doty as the result of the test was as follows: "Specimens were taken from the gland and examined at the quarantine laboratory, and an organism believed to be the plague bacillus, was found. Upon the discovery, I sent the bacteriologist of this department to Washington with the specimens referred to. After an examination by Drs. Geddings and Rosenau, of the Marine Hospital Service, Surgeon-General Wyman reported to me that the result of the examination confirmed the diagnosis made in the laboratory of this department. The case is a very mild one."

Dr. William Browning, who has served in the capacity of librarian of the Medical Society of the County of Kings for the last ten years has been elected president of the society at the last annual meeting. During the incumbency of Dr. Browning the collection has grown from a scant 4000 volumes to a total of 30,000 bound volumes and 15,000 pamphlets. In the January-February issue of *Medical Libraries* appeared a biographical sketch of Dr. Browning.

North American Indian Obstetrics.—One interesting event of the Pan-American Exposition, states the *Southern Medical Journal*, was the birth of an Indian papoose in the grounds, at which one of the internes of the hospital was present. The squaw squatted on the ground in an upright position, while another, standing behind, kept up an intermittent compression on the uterus in front. On examination the os was found fully dilated, and a few moments later a single pain resulted in the expulsion of the child. The next day the woman was up and engaged in her ordinary occupation. How different from her "pale-faced" sister.

WESTERN STATES.

The Recent Smallpox Epidemic at Garrett, Ind.—Dr. Chas. I. Stewart, health officer at Garrett, Ind., reports that the epidemic of smallpox in his town in May was limited to thirty cases, and that quarantine and vaccination quickly brought the disease under control.

Vaccinated Persons Were Not Attacked.—The *Monthly Bulletin* published by the State Board of Health states that Dr. Cummins, health officer of Jackson County, Ind., has made particular examination in his county of the cases of smallpox, and reports as follows: Smallpox appeared in Jackson county in January, 1900. There were eight cases that month, forty-four in February and seven in March, making fifty-seven cases. There were no deaths and not one of the persons affected was ever vaccinated, while scores of exposures of vaccinated persons never developed a case. In a certain family the father, mother and daughter had been successfully vaccinated, but five grown children had not been. The latter all had smallpox, but the first three nursed them through the attack and remained well.

Donations to the National Jewish Hospital.—The National Jewish Hospital, located in Denver, Col., has been given \$25,000 by W. Guckenhims' Sons, of New York, and \$5,000 by S. Grabfelder, of Louisville, Ky.

The Nebraska State Medical Society has succeeded in getting an appropriation from the Legislature to classify and take care of its library.

SOUTHERN STATES.

The Texas Medical Law.—The new Texas medical law which went into effect July 1 requires examination by the State Board as a condition to practice medicine. Physicians registered in States where the requirements are equivalent to those of Texas may secure a certificate without examination by paying the usual fee.

A Reactionary Dictum.—The *Public Ledger* states that the announcement of Dr. Koch's discovery of the immunity of human beings from infection from the tuberculosis bacillus that infects cattle has been received at the Department of Agriculture as a radical and reactionary dictum which is, as one of the Department officials remarked, "important

if true." The discovery comes as a surprise to the Government scientists and they are all hard at work to get a grasp of Koch's method of determination and master his theory. Thus far none of them has vouchsafed an opinion as to the merit of the alleged discovery. As a matter of fact, the utterances of the Department have been uniformly opposed to Koch in his outgivings on the subject. Yet the Government scientists by no means underrate his eminence and attainments in his special work. All this line of experimentation, so far as it is carried on by the Department, is an industrial question. It is done under the direction of Dr. Salmon, the Chief of the Bureau of Animal Industry, and the policy of the Government is only to keep a sharp control of the avenues by which animals infected may be brought into the country or moved from one section to another to the danger of districts wholly exempt or nearly so from the disease. The Bureau sends out annually from 35,000 to 40,000 doses of tuberculin, and leaves to the State officials largely the matter of discovering and stamping out the disease among cattle.

Dr. Welsh Believes that Dr. Koch's Facts are Antedated.—Dr. William H. Welsh, Professor of Pathology at the Johns Hopkins University is credited with stating that the credit for the discovery of the similarity between the bovine tubercle bacillus and the human tubercle bacillus should be given to Dr. Theobald Smith, of Boston, a member of the Massachusetts State Board of Health and a Professor in Harvard University who published in 1898 an exhaustive paper on this subject in the *Journal of Experimental Medicine*.

CANADA.

(From our Regular Correspondent.)

The Twenty-first Annual Meeting of the New Brunswick Medical Society was held on the 16th and 17th of July at Monckton, the Vice-president, Dr. S. C. Murray, in the chair. The following well-known practitioners of that province contributed papers: Dr. J. H. Ryan, Sussex; A. J. McCully, Monckton; G. A. B. Addy, St. John; J. C. Webster, Chicago; J. R. McIntosh and W. L. Ellis, St. John. The officers elected for the ensuing year are as follows: President, Dr. S. C. Murray, Albert; Vice-President, Dr. G. A. B. Addy, St. John; corresponding secretary, Dr. J. O. Calkins, Sackville; Recording Secretary, Dr. W. L. Ellis, St. John; Trustees, Drs. R. L. Botsford, R. S. Thorne and J. W. Bridges. The next annual meeting will be held at St. John.

A New Hospital is shortly to be erected at St. Stephens, N. B. Lady Tilley, wife of the late Sir Leonard Tilley, at one time governor of the province, is at the head of the movement and is devoting her entire attention and energy to the project. A meeting was lately held at her residence, "The Cedars," when representative citizens of St. Stephens were present. The Chipman heirs devoted their old home to the object, which involves the dedication of the entire property with all fixtures to the purpose of a hospital. It is expected that the equipment will be provided by public subscription, while maintenance will be provided for by a grant from the local government. During the meeting it was announced that already five beds have been endowed and several others practically guaranteed. One of the members of the government who was present assured them that a grant could be relied upon.

A New Hospital for Contagious Diseases has long been desired at the Capital, Ottawa, and it is stated that the recital of the ineffectual attempts to get a pest house for that city would make a fitting companion volume to Eugene Sue's *Wandering Jew*. Some years ago a site was selected on Porter's Island in the Rideau River and a group of cottage hospitals were erected at the cost of \$15,000. No sooner was this accomplished than the provincial health authorities condemned the site on account of liability of inundation through spring freshets. Several sites were chosen in succession, one being in the proximity of the official residence of the Governor-General, but Lord Minto objected so strongly that the City Council gave way in deference to His Excellency's wishes. A few weeks ago the Council suddenly came to a decision to purchase a property in the rear of the Protestant General Hospital and agreed to pay \$31,000 for it, an amount double the assessed value of the property. Rumors were rife on the streets that there was a "deal" on, and that members of

both City Council and the Board of Health were implicated in the transaction. The result is that the Mayor has notified the City Solicitor that an investigation would be the proper thing in order; so another effort will be made by Ottawa to find out where they are at with regard to this very important question. In the meantime there is an alarming prevalence of contagious diseases and a great want of a proper place for isolating these cases.

The Provincial Board of Health of Ontario has made the health of employees in the lumbering and mining camps of the province the subject of a special regulation. In these unorganized districts there is a population of 100,000 scattered over more than four hundred townships, which extend 1200 miles from the Ottawa River to the eastern boundary of the province of Manitoba. According to these regulations, the owners, managers or foremen of these mining camps, lumber camps or other such like places, as sawmills, smelting works, railway construction camps, will be held responsible for the enforcement of all provisions of these regulations which have regard to the sanitation of these places and the health of their inhabitants. Special request is made that prompt notice be given the secretary of the Board of Health at Toronto of any outbreaks of contagious diseases and all unsanitary conditions discovered in these camps. The regulations are the outcome of the expensive outbreak of smallpox which the Board of Health has lately had to contend with in different northern sections of the province.

The Health Department of the City of Montreal had a very busy time of it during the month of June. Infant mortality was exceedingly high, one week running over two hundred in children under five years of age. During the month there were 165 new cases of contagious diseases reported, forty-four of these being only made known to the department at the time of death. Typhoid fever was the most prevalent. There were eighty cases, with fourteen deaths. Measles came next in order with thirteen deaths out of forty cases reported; scarlet fever, thirty-nine cases with eight deaths, diphtheria with five deaths among eighteen cases. Seventy-eight patients were admitted to the Civic Hospitals; twenty-nine were discharged as cured, four died. The question of improving the city's milk supply was taken up recently by the Hygienic Committee; and the Committee will try to institute a new mode of indicating to citizens the best sources for the purchase of milk.

Tuberculous Immigrants Barred.—Immigrants suffering from consumption will be barred from entrance into Canada along similar lines to those inaugurated by the United States Immigration Bureau.

Dr. Thomas H. Lunny, recently graduated from McGill University, and a native of St. John, N. B., has been appointed medical superintendent of the General Hospital of that city in place of Dr. John McCauley, who has resigned.

Dr. A. T. Stanton, late of the house staff of the Toronto General Hospital, has been appointed surgeon of the Canadian Pacific Railway Steamer "Empress of China," of the Pacific fleet.

Dr. Frederick Montizambert, director-general of public health at Ottawa has been delegated by the Canadian Government to attend the conference on tuberculosis in London.

Dr. J. R. Jones, Winnipeg, will deliver the address in surgery at the coming meeting of the Canadian Medical Association in August: Dr. O. H. Jones, Victoria, B. C., the address in medicine, and Dr. Thomas S. Cullen, Johns Hopkins, the address in gynecology.

Dr. Alexander Primrose, professor of anatomy at the University of Toronto, will deliver the address in surgery at the meeting of the Maritime Medical Association at Halifax, N. S., of which Dr. W. S. Muir, of Truro, N. S., is the president.

MISCELLANY.

New Japanese Death Penalty.—The Japanese have suggested an improved method of execution which experiments upon animals seem to show is quite painless. The condemned person is shut in a chamber from which the air is rapidly withdrawn by powerful pumps, death ensuing immediately.

Beri Beri Due to Mouldy Rice. Dr. Charles Hose, of Sarawak, after many experiments, has formed the theory that the disease beri arises in tropical regions from the consumption of mouldy rice. Dr. Strangeways Pigg, of Cambridge, has expounded the theory in England.

Plague Raging in Cape Town.—The bubonic plague is developing seriously in Cape Town. Fifteen new cases were officially reported, and ninety-seven other persons were isolated because of having come in contact with the victims of the disease. Recently two colored persons who had been attacked by the plague died in the streets of Cape Town. A European died while being removed to the hospital. The malady is reaching the more prosperous classes.

Plague in Egypt.—The Agent and Consul-General at Cairo, Egypt, states that the virulent and destructive type of the recent epidemic of bubonic plague had caused general apprehension and alarm throughout Egypt. In the Zagazig and Minieh epidemics, the total number of cases of plague officially reported in these two towns the past week was 23, 21 of which were at Zagazig and 2 at Minieh. Of these cases, 16 were admitted into the hospital and 5 were found dead outside of the hospital at Zagazig. Besides, out of the 15 admitted into the hospital, 6 have died. The town of Zagazig is regarded by the sanitary department of the Egyptian Government as seriously infected and the Caisse de la Dette has granted the plague credit of £20,000, applied for by the sanitary department, which will be drawn from the general reserve fund. According to the investigations made by Major Garner, says Dr. Pinching Bey, head of the sanitary department, in a note to the minister of the interior recently, it would seem that some time before the discovery of the first case, several inhabitants of different quarters of the town had noticed rats in a dazed and dying condition. This mortality among the rats was observed for the first time after a heavy shower of rain.

Plague in Manila Decreasing.—Official reports show that plague in Manila is decreasing, and that during the week ending June 15, 1901, there were reported ten cases with five deaths, eight being Chinese and Filipinos.

Obituary.—Dr. George Schmidt, at Milwaukee, Wis., July 18, aged 53 years—Dr. Charles E. Cooper, at San Francisco, Cal., July 21, aged 40 years—Dr. J. R. Caldwell, at Marcus Hook, Pa., July 23—Dr. L. J. King, at Santa Rosa, Cal., July 22, aged 62 years—Dr. Lawrence Wolff, at Philadelphia, Pa., July, aged 56 years—Dr. I. E. Ross, at Dorrancetown, Pa., July 23—Dr. William A. Watson, at Newport, R. I., July 27, aged 77 years—Dr. M. A. Arnholt, at Pittsburg, Pa., July 25—Dr. Edwin S. Lemoine, at St. Louis, Mo., July 21—Dr. Franklin K. Paddock, at Pittsfield, Mass., July 26.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended July 27, 1901.

SMALLPOX.—United States and Insular.

		Cases.....	Deaths..
ALASKA:	Juneau.....	July 3.....	9
CALIFORNIA:	Los Angeles.....	July 6-12.....	1
	San Francisco.....	July 7-14.....	1
ILLINOIS:	Chicago.....	July 13-20.....	1
LOUISIANA:	New Orleans.....	July 13-20.....	1
MASSACHUSETTS:	Boston.....	July 13-20.....	2
	Fall River.....	July 13-20.....	1
MICHIGAN:	Detroit.....	July 13-20.....	1
MINNESOTA:	Minneapolis.....	July 7-20.....	5
	Winona.....	July 6-13.....	1
NEW JERSEY:	Jersey City.....	July 14-21.....	2
	Newark.....	July 14-20.....	8
NEW YORK:	Elmira.....	July 6-13.....	2
	New York.....	July 13-20.....	36
OHIO:	Cleveland.....	July 13-20.....	1
PENNSYLVANIA:	Lebanon.....	July 13-20.....	1
	Philadelphia.....	July 13-20.....	4
TENNESSEE:	Memphis.....	July 13-20.....	1
TAHITI:	Salt Lake City.....	July 13-20.....	1
WASHINGTON:	Tacoma.....	July 7-14.....	1
WISCONSIN:	Milwaukee.....	July 13-20.....	1
PHILIPPINES:	Manila.....	May 25-June 16.....	8

SMALLPOX—FOREIGN

AUSTRIA:	Prague.....	June 29-July 6.....	1
BELGIUM:	Antwerp.....	June 29-July 6.....	2
CHINA:	Hongkong.....	June 8-22.....	1
COLOMBIA:	Panama.....	July 8-15.....	1
FRANCE:	Paris.....	June 29-July 6.....	10
GREAT BRITAIN:	Glasgow.....	July 5-12.....	1
	Liverpool.....	June 29-July 6.....	1
	London.....	June 29-July 6.....	6
INDIA:	Calcutta.....	June 15-22.....	6
JAPAN:	Nagasaki.....	June 21-29.....	1
	Messina.....	June 29-July 6.....	21
NETHERLANDS:	Rotterdam.....	July 6-12.....	4
RUSSIA:	Moscow.....	June 22-29.....	11
	Odessa.....	June 29-July 6.....	2
	Warsaw.....	June 15-22.....	6
SPAIN:	Corunna.....	June 29-July 6.....	1
STRAITS SETTLEMENTS:	Singapore.....	June 1-8.....	1
SWITZERLAND:	Geneva.....	June 22-29.....	1
TURKEY:	Smyrna.....	June 8-15.....	1
URUGUAY:	Montevideo.....	May 25-June 8.....	49

YELLOW FEVER.

MEXICO:	Vera Cruz.....	July 6-13.....	3
SALVADOR:	San Salvador.....	June 20, present.....	2

CHOLERA.

INDIA:	Bombay.....	June 18-25.....	3
	Calcutta.....	June 15.....	37

PLAGUE—United States and Insular.

CALIFORNIA:	San Francisco.....	July 6-11.....	5
HAWAII:	Honolulu.....	July 6.....	1
PHILIPPINES:	Manila.....	May 25-June 15.....	57

PLAGUE—Foreign.

AFRICA:	Cape Town.....	To June 29.....	749
	Haitland.....	June 9-15.....	2
	Port Elizabeth.....	June 9-15.....	3
	Simonstown.....	June 9-15.....	1
CHINA:	Amoy.....	May 25-June 1.....	700
	Hongkong.....	June 8-22.....	306
INDIA:	Bombay.....	June 18-25.....	62
	Calcutta.....	June 15-22.....	22
JAPAN:	Yamanashi Ken.....	July 5.....	1

Changes in the Medical Corps of the Navy, Week Ended July 27, 1901.

ASSISTANT SURGEON E. O. HUNTINGTON, detached from the Newark, when placed out of commission, and ordered home to wait orders—July 19.

SURGEON C. F. STOKES, ordered to the Oregon, immediately—July 20.

SURGEON P. LEACH, detached from the Oregon, upon reporting of relief, and ordered home to wait orders—July 20.

P. A. SURGEON A. FARENHOLT, detached from the Oregon, and ordered home to wait orders—July 20.

SURGEON G. T. SMITH, detached from the Mayflower, when put out of commission, and ordered home to wait orders—July 24.

P. A. SURGEON D. N. CARPENTER, detached from the Naval Hospital, Chelsea, Mass., and ordered to the Franklin—July 24.

ASSISTANT SURGEON R. R. RICHARDSON, detached from the Naval Hospital, Newport, R. I., and ordered to the Naval Hospital, Chelsea, Mass.—July 24.

ASSISTANT SURGEON J. R. WHITING, resignation accepted to take effect from August 3, 1901—July 24.

Plague in the United States as reported to the Surgeon-General, United States Marine-Hospital Service, from June 28, 1901 to July 19, 1901.

(For reports received from January 1, 1901 to June 28, 1901, see PUBLIC HEALTH REPORTS for June 28, 1901.)

PLAGUE

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
San Francisco.....	July 6.....	1	1	
Do.....	July 9.....	1	1	
Do.....	July 11.....	1	1	

GREAT BRITAIN.

Lord Lister Does Not Agree with Dr. Koch.—It is stated that the *Daily Mail* publishes an interview with Lord Lister in which he said he was absolutely unable to believe the statement of Professor Koch that human beings could not get consumption through drinking the milk of diseased cows, the evidence to the contrary being far too overwhelming.

Koch's Theory to be Investigated.—At the final meeting of the British Congress on Tuberculosis held on July 29, resolutions were adopted favoring the legislation towards suppressing expectoration in public localities. Resolutions were also adopted recommending the notification of cases of tuberculosis and the employment of proper receptacles for the sputum. Furthermore, it has been concluded that these sanitary provisions were indispensable in the crusades against tuberculosis. A resolution was also adopted embodying the opinion of Congress that health authorities should continue their efforts to prevent the spread of tuberculosis through milk and meat, and as the doubts concerning the human immunity from bovine tuberculosis as advanced by Dr. Koch were of the highest interests to the public in general, as well as for agricultural pursuits, the Government should at once institute rigid investigations as to the identity of human and bovine tuberculosis. It was recommended that a permanent national committee be appointed for the purpose of collecting evidence, publishing literature and recommending means for the prevention of this disease.

Mr. Henry Greenway Howse, F.R.C.S., Eng., M.S., and M.B. London, Senior Surgeon, Guy's Hospital, has been elected President, and Mr. Thomas Richard Jessop, F.R.C.S., Eng., J. P., Consulting Surgeon, Leeds General Infirmary, and Mr. F. Howard Marsh, F.R.C.S. Eng., Surgeon to St. Bartholomew's Hospital, have been elected Vice-Presidents of the Royal College of Surgeons of England.

CONTINENTAL EUROPE.

Disagrees with Koch.—Professor Brouardel, dean of the Medical Faculty of Paris, contrary to the recent theory advanced by Dr. Koch, believes that cattle spread tuberculosis. He urges international legislation requiring the notification of the authorities of the existence of tuberculosis, and furthermore urges the disinfection of hotels and public conveyances. He believes that the disease is curable.

Plague at Oporto Denied.—During the past week, according to newspaper reports, official advices received at Madrid positively deny the existence of plague which was rumored to have appeared at Oporto.

Italian Congress of Pediatrics. The fourth congress of pediatrics will convene at Florence, October 15 to 20.

The Utilization of Rejected Diseased Meat.—The Veterinary Society of Moscow is advocating the German plan of dividing the meat in the market into 3 groups: (1) Very good quantity, (2) inferior quality, and (3) bad. The first is sold in a raw state, the second is obtained from animals which suffered from tuberculosis, trichinosis, actinomycosis, inflammation of the lungs and other diseases. This is sold only in the cooked state. The third is obtained from animals which suffered from anthrax and septicemia. This is either destroyed or boiled under pressure of 1½ to 2 atmospheres and sold at the Freibank at a very low price. Thus thousands of dollars are saved, while the poor can get at a low cost meat which has been rendered wholesome by thorough cooking.

Spurious Pregnancy in a Queen.—Professors Snegireff and Gubareff were called to attend the confinement of the queen of Servia. It was found, however, that the royal personage had a spurious pregnancy. The professors departed laden with signs of honor.

Scalded to Death.—In the insane department of the hospital of the government of Kharkoff an insane woman was given a hot bath. The nurse failed to ascertain the temperature of the water, which was boiling hot, and the woman was scalded to death.

Dr. Lindeman, privat docent of the University of Moscow, was elected to the chair of general pathology at the Medical Faculty of Kiöff.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

July 13, 1901.

1. Leucoma or Leucoplakia of the Vulva and Cancer. H. T. BUTLIN.
2. On Fibroids of the Cervix Uteri. ARTHUR H. N. LEWERS.
3. Extra Uterine Fecundation. JOHN D. MALCOLM.
4. The Diagnosis of Cancer of the Womb. FREDERICK J. McCANN.
5. Acute Lead Poisoning in Women Resulting from the Use of Diachylon as an Abortifacient. W. WRANGHAM.
6. A Case of Ruptured Uterus in a Multipara. J. POLLOCK SIMPSON.
7. Infection by the Urine in Convalescence from Typhoid Fever. T. CLIFFORD ALBUTT.
8. On the Evolution of Myelopathic Albumosuria. T. R. BRADSHAW.
9. On Some Cases of Hemorrhage into the Skin and Suprarenal Capsules. PERCY S. BLAKER and BERNARD E. G. BAILEY.
10. Experimental Malaria, Recurrence After Nine Months. P. THURBURN MANSON.

7.—T. Clifford Albutt presents a note upon infection by the urine in convalescence from typhoid fever. A charwoman who had recently recovered from an attack of typhoid fever returned to work upon a farm, and soon afterward an attack of typhoid fever broke out at this place. A short time after this she went to work upon another farm, and typhoid also developed here after her appearance. The woman presented no symptoms of diarrhoea, and Albutt believes that the infected urine was responsible for these outbreaks, and he makes a strong plea for the disinfection of typhoid urine. It has been shown repeatedly that the bacilli are filtered through the kidney in an active state. [T. L. C.]

8.—T. R. Bradshaw presents a further contribution on the evolution of myelopathic albumosuria. A case is mentioned in which albumose was first observed in December, 1899, when the patient, who was then 53 years old, had an attack of mild pneumonia. The quantity was at that time minute, but it had reached a maximum of ten parts per 1,000. Until the middle of May in the present year the patient felt no inconvenience, and was able to follow his profession, but since then he has grown pale and lost flesh and strength. He also found a soft tumor about the size of a hen's egg, in connection with one of his ribs. Bradshaw states that this complete case illustrates two points, one of which is new. First, the presence of albumose in the urine is the earliest symptom of disease, and may be observed for many months before there are any other indications of failing health or any local signs or alterations in the skeleton. Second, the albumose is first excreted in small amounts, but the patient suffers little at this time and is not likely to consult a medical practitioner, and so the urine is not examined until the albumose has risen to a large amount. This early discovery in the memorandum of the case reported was doubtless due to the fact that the onset closely coincided in time with an acute illness, and that the subject of it was a physician. [T. L. C.]

9.—Percy S. Blaker and B. E. G. Bailey report four cases of hemorrhage into the skin and suprarenal capsules. The interesting features of these cases were the sudden onset, rapid course and fatal termination. Not one of the patients was over a year old. The history throws absolutely no light on the causation of the disease; neither does the question of food appear to bear any relation to it. The presence of hemorrhages in the skin and suprarenal capsules would seem to make it more probable that the disease is some form of toxemia. In two cases the blood from the unopened heart was examined bacteriologically with negative results. In its extremely rapid and fatal termination the disease somewhat resembles the epidemic diarrhoea and vomiting of infants. The general condition of the patients was different. They did not present the sunken eyes and the inelastic skin which is frequently met with in the epidemic diarrhoea, and the cyanosis present in these

cases is very rarely, if ever, seen in the skin and suprapubic capsules; the fact that Peyer's patches were much swollen is interesting. The authors believe that these symptoms are the manifestations of a special disease, and that the cause of this disease is a blood poisoning of some form, at present unknown. [T. L. C.]

10.—Dr. P. Thurburn Manson reports the result of a successful experiment of which he was the subject on the production of malarial infection by mosquito bite. As a result of the bite of mosquitoes fed in Rome on a case of benign tertian ague, he developed a double tertian fever. The first symptoms appeared on September 13, 1901, after an incubation period of between ten and sixteen days. The illness lasted from September 13th to September 17th when the presence of the parasite having been fully confirmed, 10 grains of quinine were given. This treatment was followed by 5 grains three times a day for a week, and a subsequent after-treatment of 5 grains three times a day on Sundays for the following three months. There was no recurrence at that time of symptoms of malarial infection after the first dose of quinine, and he kept in normal health until May 30th, 1901, a period of nine months. On this date he began without obvious reason to have symptoms of illness. These were malaise and pain in the splenic region. Two days later a definite malarial paroxysm occurred. This case was one of single benign tertian malaria, the original infection having been the double tertian type.

[T. L. C.]

LANCET.

July 13, 1901.

1. Tumors of the Bladder and Enlarged Prostate.
DAVID WALLACE.
2. Diagnosis and Treatment of Typhoid Fever.
R. W. MARSDEN.
3. The Treatment of Bronchiectasis and of Chronic Bronchial Affections by Posture and by Respiratory Exercises. WILLIAM EWART.
4. An Undescribed Innocent. (?) Growth of the Gall-Bladder. E. STANMORE BISHOP.
5. A Case of Meningitis probably influenzal in Origin.
ARTHUR F. PERIGAL.
6. Three Unusual Cases of Cerebro-Spinal Fever.
W. J. BUCHANAN.
7. A Case of Renal Colic with Unusual Symptoms.
C. CORBEN and J. CROPPER.
8. Puerperal Eclampsia: Four Cases Successfully Treated by Rectal Injections of Chloral Hydrate.
WILLIAM BOURNE HALLOWES.
9. A Case of Intestinal Adhesions Simulating Tumor Formation. JOHN D. MALCOLM.
10. Observations Upon 40 Consecutive Cases of Intubation of the Larynx in Diphtheria.

CONRAD BASAN.

1.—David Wallace speaks of the great difference made in the diagnosis of tumors of the bladder during recent years. The use of the cystoscope in these cases has been of the greatest advantage. Previous to 1888 bladder tumors were considered rare. At the present time, however, they are quite common. This difference is not due to the greater prevalence of bladder growths, but rather to their proper diagnosis. His remarks are confined to primary growths of the bladder wall. Albarran's classification is approved of. Attention is called to the fact that small benign growths may prove fatal, producing, as they do, hemorrhage, cystitis and secondary renal involvement. The most important symptom of bladder tumor is bleeding associated with no pain or other symptom. Occasionally, however, pain and frequent micturition may be present early in the case. The hemorrhage is intermittent, the urine between times being clear. At a later period cystitis develops. Occasionally months, and rarely a year may intervene between the hemorrhages. Tumor cells are rarely found in the urine. The cystoscope is of great value as a diagnostic means. The prognosis depends up-

on the character of the tumor, its extent, site and attachment, and the presence or absence of sepsis. It must be remembered that a tumor with a narrow pedicle may have a deep attachment. This accounts for the occasional recurrence after removal. In operating upon tumors of the bladder the suprapubic route is the one of choice. The vertical incision is as satisfactory as the transverse and is less apt to weaken the abdominal wall. Peterson's bag is not recommended, but the author finds the Trendelenburg position of great advantage. The bleeding after removal usually ceases with the injection of hot water. Where it is possible it would be wise to remove a portion of the whole thickness of the bladder wall. Free access must be had in operations for these tumors, and the urethral or perineal methods are not approved. Drainage by means of Cathcart's adaptation of the Sprengel pump is to be employed after operation. Patients are allowed to sit up within a day or two after operation. The latter part of the author's paper is devoted to the treatment of enlargement of the prostate. The greatest stress is laid upon the necessary asepsis in the employment of the catheter. The varying results following castration and vasectomy are due to the varying pathological conditions of the gland. When the gland is largely composed of erectile tissue the results are most satisfactory. Wallace has never seen a permanent fistula follow a suprapubic prostatectomy when the entire urethral obstruction had been removed. [J. H. G.]

2.—Marsden read a paper before the Manchester Medical Association on the diagnosis and treatment of typhoid fever. The direct diagnosis of typhoid fever may be made either by the physical signs or by specific tests. In regard to the former he states that it depends upon the history of a recent acute illness, the onset being marked by headache, chills, lassitude, epistaxis, splenic enlargements, fever, the appearance of rose spots, absence of leukocytosis, and occasionally by such complications as hemorrhage and intestinal perforations. In regard to the diagnosis by specific tests he believes that the serum reaction may, at times, be as convincing and certain as any imaginable symptom-complex. In a recent series of 200 cases considered by the author, he encountered 12 doubtful reactions. The author thinks that an incomplete serum reaction should be valued about as much as the Ehrlich diazo reaction. By that he means that clinical manifestations should be the guide to the diagnosis. If the blood be examined periodically it is of rare occurrence *not* to obtain the serum reaction in a case of enteric fever, but not infrequently it also occurs in patients suffering from other diseases. He summarizes the diagnostic value of the Widal reaction as follows: At the end of the first week a negative reaction points strongly against the probability of enteric fever, and that each succeeding negative result increases this uncertainty. If a negative reaction is obtained during the convalescence of a disease, the diagnosis of enteric fever should be abandoned, unless the characteristic symptom-complex and physical signs were present during the course of the disease. The diagnosis of enteric fever should always be uncertain during the first week of the illness, unless a well-marked Widal reaction is obtained, or upon the appearance of rose-spots, intestinal hemorrhage, etc. In his own experience he has found that splenic enlargements occur early in the course of the disease. Ehrlich's diazo reaction may be obtained in measles and acute tuberculosis, and he believes that it may also occur in other diseases. For this reason little reliance should be placed upon this test. Special localization of symptoms sometimes gives rise to difficulty in diagnosis, for the symptoms may be those of meningitis, pneumonia, nephritis, and cystitis, until the further development of the disease or the occurrence of the Widal reaction. He emphasizes that clinically the appearance of rose-spots on several consecutive days is the only sign upon which absolute reliance can be placed. In regard to treatment, he maintains that from the earliest possible moment the patient

should be confined to bed. The diet should consist of fluids. Three weeks after the termination of the attack the regular diet may be resumed. During the acute stage of the illness he recommends cold bathing. [F. J. K.]

3.—Ewart reports successful results with the **posture treatment in bronchiectasis and in chronic bronchial affections**. The first case which he reports was one of bronchiectasis which occurred in a girl, 20 years of age, who had been suffering from cough and expectoration, worse during winter, for a number of years. During a violent, painful, orthopneic paroxysm of cough the patient was advised to lie down and the foot of the bed was raised about 14 inches. While she remained under treatment the bed was permanently raised. Improvement immediately followed the elevation of the foot of the bed. The second case was one of bronchitis with violent cough and profuse expectoration, which occurred in a woman 30 years of age. The patient complained of orthopnea, especially during fits of coughing. Immediately after elevation of the foot of the bed the symptoms subsided. The subsequent treatment consisted of elevating the foot of the bed for an hour, two or three times daily, and in the administration of ichthyol. The patient improved rapidly. [F. J. K.]

4.—E. Stanmore Bishop describes an interesting growth of the **gall bladder** which he believes to be unreported to in surgical literature. The growth was of cystic formation and involved the whole of the gall-bladder. Its microscope examination showed that there had been a simple hypertrophy of the mucous lining of the wall with an immense development and extension of the glandular layer. No inflammatory changes are observable, and the author is at loss to account for the condition. [J. H. G.]

5.—Perigal reports a case of **meningitis** which was probably of **influenzal origin**. The patient was 24 years of age. He appeared to be suffering from a severe attack of influenza which began very suddenly. At the time of his illness influenza was prevalent. Well-defined symptoms of meningitis developed, the patient dying of that disease. At the post-mortem examination well-defined anatomical lesions of meningitis were found. [F. J. K.]

6. Buchanan reports **three unusual cases of cerebro-spinal fever**. The first case occurred in a male, 40 years of age. This case was of peculiar interest as it was complicated with arthritis involving both knees, both ankles, and the right wrist. Death occurred on the sixth day. The autopsy presented well-defined signs of meningitis; the joints were swollen, and the serous cavities of the joints were filled with a flaky, yellow, oily fluid. The second case of cerebro-spinal fever occurred in a male 55 years of age. This case was of interest as it was complicated with hemiplegia. At the autopsy a thick fibrinous exudate was found over the upper surface of both hemispheres of the brain. The brain did not reveal a hemorrhage in any part. The third case occurred in a man, 45 years of age, and was an example of the fulminant hemorrhagic type of cerebro-spinal fever. The diagnosis was confirmed by autopsy. [F. J. K.]

7. Corliss and Cropper relate a case of **renal colic** in which none of the characteristic symptoms were present, and the diagnosis only made by the passage of sharp fragments of the stone. [J. H. G.]

8.—Hallowes has met with four cases of **eclampsia** in somewhat over two thousand labors, all of which terminated favorably under rectal injections of chloral hydrate. All four cases were primiparae; two commenced antepartum and two postpartum; one antepartum and one postpartum were illiterate. In all four cases the convulsions were severe and of fairly frequent occurrence. Blood-letting to the extent of 20 oz. was tried in one case, postpartum, but without effect. On the continuance of the convulsions, 60 grs. of chloral hydrate were injected per rectum in one ounce of water. This was repeated on the slightest recurrence of twitching. In another case after the administration of chloroform the convulsions recurred in about

an hour and immediately 60 grs. of chloral were administered per rectum. Injection was repeated three times at intervals of three to four hours. All the cases were at full term. [W. A. N. D.]

9.—J. D. Malcolm describes a case of a woman, 45 years of age, from whose abdomen large quantities of clear fluid had been withdrawn at different times during the previous 18 months. After one of these tapplings the author was enabled to palpate a firm hard mass which appeared to rise out of the pelvis. This was thought to be a malignant growth. Later, when the abdomen was opened this mass appeared to be a cyst, but upon careful examination it proved to be a large mass of adherent intestine. Malcolm says that the appearance and feel of this mass was so like that of a cyst that one might have been tempted to introduce a trocar. He refers to a similar case in which this unfortunate procedure was resorted to. The absence of the intestine above the supposed growth, and resonance upon percussion, are two points which will enable the surgeon to arrive at its true nature. [J. H. G.]

10.—Basan gives a report upon 40 consecutive cases of **intubation of the larynx in diphtheria**. In his experience he found the operation a very easy one to perform. Out of 32 cases in which intubation alone was performed, 28 recovered and four died. Out of 8 cases in which intubation was subsequently followed by tracheotomy, 5 recovered and 3 died. He concludes the article with a report of a number of complicated cases. [F. J. K.]

MEDICAL RECORD.

July 27, 1901.

1. Inebriety. CHARLES L. DANA.
2. Primary Resection of the Intestine for Gangrenous Hernia; Report of Two Cases of Successful Joining by Lateral-Anastomosis, with the Connell Suture. THOMAS H. MANLEY.
3. The Use of Sulphate of Copper in Affections of the Cornea and in Affections of the Lid Other than Trachoma. HERBERT CLAIBORNE.
4. Needed Reforms in the Management of Youthful and Insane Criminals. WILLIAM GLASSELL SOMMERVILLE.

1.—Charles L. Dana studies the causes, duration, prophylaxis and management of inebriety. Among 350 patients he found that drinking habits existed in one or both parents in all but ten. The father was usually the drinker. In another series of 210 cases the percentage was much lower; 25% gave a negative hereditary history. It is not the day laborers, but the mechanics, artisans, and small tradesmen that furnish the greatest proportion of cases. The indoor workman is oftentimes the victim. About one-third of the inebriates are women. Among 30 periodical inebriates, two-thirds began drinking before 20 and all began before 30. Studying the capacity of men for getting drunk, it was found that it was rare to find a man who had been drunk over a thousand times and that two thousand was the maximum in any ordinary inebriate experience. Dana believes that the agencies for preventing and lessening the injury done by alcohol must consist in: 1. Teaching. 2. Control of the sale, making it impossible to secure impure alcohol and difficult to secure even good alcohol, and especially difficult for those whom it is a poison. 3. Avoidance of transmission of degeneration through the marriage of alcoholics. 4. Personal supervision of those who become inebriates. The treatment of all that class known as inebriates is at present of two kinds, the ideal and practical. The ideal treatment is the supervision of the case in an institution, ensuring absolute abstinence from alcohol, in all forms for at least one year, and personal supervision and watchfulness for two years longer. The practical treatment, however, consists in the use of strychnine, atrophine and apomorphine, with these are combined tonics, laxatives, full feeding and physical instruments exercised

on the patient by the persistence of the treatment. Then he suggests that the patient who wishes to undergo treatment, should stop drinking and usually smoking, and take for three weeks a mixture of nux vomica, capsicum, and cinchona. The maximum dose should be continued for a week and then reduced as it was increased. One teaspoonful three times a day, increased by 20 drops daily to half an ounce three times a day. At the same time two drachms of bromide of sodium should be given in cases of nervous irritability and insomnia. The patient should be fed well and very often, and should avoid getting tired or hungry. After two weeks rest from medicine, the course should be repeated. After the second course, a month's interval can be allowed, and repeated again and so on until the end of the year. [T. L. C.]

3.—J. Herbert Clahorne presents a paper on the use of sulphate of copper in affections of the cornea and in affections of the lid other than trachoma. Copper sulphate in the form of the solid stick is indicated in all acute attacks of inflammation of the cornea in which there is a thickening with a succulent velvety appearance of the upper lid; in all recurrent attacks of superficial keratitis in which the same condition of the upper lid prevails; in infiltrations of the cornea which are the results of preceding inflammations, associated with the same condition of the upper lid; in maculae of the cornea in children and adults which have occurred a reasonable time after an inflammation, whether the upper lid presents a characteristic appearance or not; in chronic conjunctivitis attended by thickening of the lid associated with blepharitis; in chronic dacryocystitis particularly in those cases in which the canaliculus has been slit attended by chronic conjunctivitis. [T. L. C.]

4.—W. G. Sommerville discusses **needed reforms in the management of youthful and insane criminals**. He believes that it is detrimental financially as well as socially and morally to release prisoners when there is a probability of them returning to crime. The determinate sentence permits many prisoners to be released, who are morally certain to return to crime. The indeterminate sentence is the best method of affording the prisoner an opportunity to reform. The ground for the imprisonment of the criminal is, that he is dangerous to society. (These are MacDonald's views.) [T. L. C.]

MEDICAL NEWS.

July 27, 1901. (Vol. LXXIX, No. 4.)

1. An Improved Method of Treating High-seated Cancers of the Rectum. ROBERT F. WEIR.
2. A Case of Embolism of One of the Right Lenticulo-Optic Arteries Complicating Pneumonia, with Autopsy. CHARLES J. ALDRICH.
3. An Attempted Investigation of Some Christian Science "Cures." LAWRENCE IRWELL.
4. A Nasal Condition Affecting the Ocular Muscles. HEBER NELSON HOOPLÉ.
5. Criminals and Defectives: How Best to Reduce their Numbers. J. C. McCASSEY.

1.—R. F. Weir's method for treating **High Seated Cancers of the Rectum** is as follows: After opening up the abdomen he takes the finger and freely detaches the divided peritoneum so that the bowel and entire contents of the sacral curve are liberated behind nearly to the tip of the coccyx and in front to the edge of the prostate. This gives room to tie around the bowel some three inches from the anus a couple of iodoform tapes about an inch apart. The intestine is then cut through and being free is readily raised out of the abdominal wound. The lower end of the rectum is then seized by forceps and is drawn down and out of the anus in an everted condition. Untying the tape that closed this everted bowel, its lumen is opened so that a long pair of forceps could be carried through it up into the pelvis, when the end of the upper bowel is brought down

within its clasp and by it the latter is drawn through the lower bowel out. A couple of needles passed through the invaginated ends of the bowels, near their margins, allows easy union by sutures of their edges with their knots inside the bowel, so that the pelvis and general abdominal cavity is separated from one another by the peritoneal shelf. He deems it best to provide drainage from the peritoneal space below by a tube introduced just in front of the coccyx. [T. M. T.]

2.—C. J. Aldrich reports a case of the above condition, and reviews the literature of **cerebral embolism complicating pneumonia**: (1) Da Costa has reported six cases of phlegmasia alba dolens in pneumonia; (2) Anders states that the venous thrombosis is seldom seen and embolism of the large arteries is a rare complication. He also states that the cerebral embolism causing aphasia, and even hemiplegia, has rarely been observed; (3) Loomis says a very rare occurrence is partial paralysis of the muscles which are involved during the convulsive period; such paralysis is often permanent; (4) Osler thinks that embolism of one of the larger arteries is a rare complication. He has seen embolism of the femoral artery at the height of pneumonia. Transient aphasia has been met with in a few instances, setting in abruptly with or without hemiplegia. [T. M. T.]

4.—H. N. Hoople states that **asthenopia of the ciliary and external ocular muscles** is due to pressure in a limited area of the nose. The pressure is chiefly confined to the middle turbinate, but it may extend to the ethmoid cells, especially in cases of great hypertrophy of the middle turbinate. The author wishes to emphasize that without hypertrophy where the middle turbinate is tightly compressed against the septum, or the septum is deflected against the middle turbinate, or the middle turbinate is crowded by a deflected septum against the ethmoid cells, in all these instances we may have, and are almost certain to have sooner or later, muscular asthenopia. [T. M. T.]

5.—J. C. McCassey advises the following remedies for **Diminishing the Number of Criminals and Defectives**: (1) It is more economical to put forth every effort to prevent the formation of bad habits in the young than to try to reform confirmed transgressors; (2) The average length of sentences, including life sentences, is only two years, while the average confinement in insane asylums is four years; (3) The board of pardons should consist of sentencing judges, the warden of the prison, and one of the chief justices of the State. This board should meet quarterly, hear evidence and correct mistakes of sentence; (4) The issuing of marriage licenses should be restricted by a national law requiring medical and other certificates to be filed with the Probate Court, showing that the applicants for marriage licenses are free from insanity, criminality and other hereditary taints. For the cure of the social evil the following prescription is offered: Extension of manual education and industrial schools; improvement in motherhood; stop lease system; extension of reformatory plan; adopt intermediate sentence; improvement in jails; extension of probation system, both for youths and adults, as in Massachusetts; work for prisoners even on short sentences and allowing them a portion of their earnings to be sent to their homes or families. Abolition of spoils system in prison management; higher grade of prison officers; physicians should be wardens of penitentiaries and executive officers of reformatories. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

July 27, 1901. (Vol. LXXIV, No. 4.)

1. The Wesley M. Carpenter Lecture on Conjugation in the Asexual Cycle of the Tertian Malarial Parasite. JAMES EWING.
2. Some of the Conditions Following the Bottini Operation for Prostatic Obstruction. L. BOLTON BANGS.

3. Mental Disturbances in the Course of Cardiac Disease.
A. ZEDERBAUM.
4. The Ophthalmoscopic Examination for Kilday Disease.
EDWARD JACKSON.

1.—J. Ewing, in *Conjugation of the Asexual Cycle of the Tertian Malarial Parasite*, gives the following development: The malarial parasite may be said to begin its existence, in the human host, by a series of generations of amoeboid bodies produced after conjugation of partially differentiated individuals. After the capacities of this method of reproduction have been exhausted, the sexes become separated, the male forms represented by the flagellating bodies, merozoogametes, and the female by the large, pale, hyaline, non-flagellating bodies (macrogametes). These forms are sterile for the human host, but in the mosquito fertilization of the macrogamete by the flagellum or merozoogamete takes place, and the resulting motile form, the zygote, penetrates the tissues of the mosquito and becomes encysted. From this cyst develop the germinal rods which are inoculated into the human host through the salivary glands of the mosquito, to begin anew the pyrogenous or amoeboid cycle. At several points in the series there remain wide gaps in our knowledge. We do not yet know how the germinal rods are transformed into amoeboid bodies. The development of the sexual forms of the tertian parasite can at present only be offered as a probability, not as demonstrated fact, while the origin of the aestivo-autumnal crescents is as yet entirely obscure. At the other end of the series there is possibly an entire new phase of development of the parasite or the production of some "resistant body" in the external world apart from either man or mosquito. [T. M. T.]

2.—L. B. Bangs believes that the spontaneous urination which follows the operation is due, not only to the formation of the grooves, but to contraction of cicatrices and to atrophy of the gland tissue, for the following reasons: (1) Improvement in freedom of urination progresses, so that some of the patients among the number in which improvement only was reported are now able to empty the bladder. This fact, he states, gives him hope of the permanency of results; (2) In two persons he was obliged to open the bladder above the pubes; one, two years, and the other, one year after the Bottini operation, for the removal of stone from diverticula. In each of these cases there had been a shortening of the urethra and a vast improvement of the facility with which instruments could be passed into the bladder, and in one of them there had been such steady improvement in urination that even during the symptoms of a stone it was found that the catheter was needed only for purposes of treatment. At the time of the lithotomy the grooves could be distinctly felt, and the reduction in the size of the intravesical portion of the prostate, which had been ascertained by the searcher, could be verified by sight and touch; (3) A specimen which was removed from a patient who died suddenly from a cerebral clot three months after the operation, who had been entirely dependent upon his catheter, no spontaneous urination having taken place for a year, and who immediately after the operation resumed normal urination and never used his catheter again, shows the atrophy which has taken place in the intravesical portion where the incisions were made by the Bottini operation, whereas the *extravesical* portion shows no change; (4) Two of the author's patients reported to him a few weeks after the operation that, although coitus was possible, there was no ejaculation, which certified to him that the contraction has been sufficient to occlude the ducts, for in neither of these cases was the incision carried so far forward as to affect the veru montanum. [T. M. T.]

3.—A. Zederbaum, in *Mental Disturbances in the Course of Cardiac Disease*, concludes as follows: (1) That the heart in a number of women during pregnancy and puerperium is subject to hypertrophy, which may become permanent and pathologically affect the valves; (2) That

latent cardiac disease of rheumatic and other origin may first come to the front during pregnancy or in and after labor. [T. M. T.]

4.—E. Jackson, in the *Examination of the Eyes for Kidney Disease*, gives as the most constant symptom alteration of the retinal veins. These are dilated and tortuous, especially some of the parts of the small veins which arise about the macula. Other parts of a vein may be hidden in a swollen, hazy retina, so that the dilated part may look unlike a vessel, but like a hemorrhage. Next, hemorrhage may be found anywhere in the retina; it may even extend into the vitreous. The dark red spots that indicate it may be large or small, many or few, or, at times, even quite absent. Swelling and opacity of the retina are usually confined to isolated patches, or to the region surrounding the optic nerve. The color of the patch may vary from a dirty-red to a snow-white, or a gray-blue. The swelling is to be measured by the refraction of its summit. Sometimes it looks like a small detachment of the retina. But actual detachment may also occur. White spots arise from fatty degeneration. These are regarded as most characteristic when arranged in rows, radiating from the center of the macula. Large spots are confined to this part of the fundus or to the neighborhood of the optic disc, but small ones may be scattered in all parts of the eye-ground. White streaks are occasionally seen along the arteries or may wholly replace them. The optic nerve is often reddened and opaque. It may be swollen until it exactly resembles the choked disk of brain disease. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

July 25, 1901.

1. Specialism in Medical Practice; Its Present Status and Tendencies. F. H. DAVENPORT.
2. The After-Treatment of Operation on the Nasal Accessory Sinuses. WALTER A. WELLS.
3. Diphtheria as a Complication of Measles.
DAVID NEWTON BLAKELY.
4. Adhesive Plaster Strapping in Umbilical Hernia.
J. C. HUBBARD.
5. A Case of Nasal Deformity from a Median Furrow,
Corrected by Subcutaneous Implantation of a Portion
of the Septal Cartilage. J. L. GOODALE.
6. Report on Progress in Obstetrics.

FRANK A. HIGGINS.

2.—W. A. Wells presents a paper on the after-treatment of operation on the nasal accessory sinuses. He states that persistence of suppuration after operation is generally due to one or several of the following causes: 1. Syphilis or tuberculosis in the patient; incompleteness of the operation; presence of polyp or other obstructive condition in the nose; an empyema in a neighboring sinus; inadequacy of the local treatment. 2. The after-treatment requires that not merely the antiseptic applications to the sinus, but that the patient's general state of health, must be investigated, and a careful supervision constantly maintained over the condition of the nasal fossa. The latter must be kept free from secretions, and polyp and other obstructing conditions removed whenever found. 3. Empyema in a neighboring sinus, whose ostium is in close relation with the sinus operated on, will maintain the suppuration in the latter, unless cured. The frontal is frequently the cause of antrum disease, and the ethmoid the cause or the effect of disease of both the antrum and the frontal sinus. 4. The cause for the continuance of the suppuration is attributed in many cases to the fact that all diseased tissue was not removed at the time of the operation. The irregularities and anomalies in the form of the sinus are often responsible for the failure to have reached every point where disease was located. In such cases curettage of the sinus must be repeated from time to time according to the indications. 5. The institution of the proper local

after-treatment is a matter of extreme importance. The so-called dry treatment is insufficient and unscientific, because it does not provide for the removal of the products of suppuration; only a mass of powder is superadded to a mass of decomposing debris, whereby an absorbable accumulation results, which may retard recovery and give rise to unpleasant symptoms. 6. Frequent and thorough irrigations constitute the most rational method of treatment. Protargol in 2 to 5% solution has given the most favorable results, especially when alternated with a thorough swabbing of all parts of the inner wall of the sinus with a 20 to 40% solution in water and glycerine. 7. Immediately after operation the sinus should be packed with iodoform gauze, which remains in place for thirty-six to forty-eight hours. Subsequently the sinus is irrigated daily, and later on every other day. A thorough rubbing of the walls of the sinus is made with the solution mentioned every three, four or five days, according to individual requirements. [T. L. C.]

3.—D. N. Blakely and F. G. Burrows discuss diphtheria as a complication of measles. During the period of two and one-half years from February 1, 1898 to July 31, 1900, there were treated at the South Department of the Boston City hospital 150 patients who had measles and diphtheria. Of these, 34% died. The death rate in uncomplicated diphtheria patients for practically this same period was less than 13%. Of the whole number, 82, or 52%, had laryngeal diphtheria, and of these, 36, or 44%, died. In the 82 laryngeal cases there were 47 intubations, with a death-rate of 55%; in the remaining 35 in which intubation was not practiced, the death-rate was 29%. The earlier in the course of measles that diphtheria develops the more serious is the prognosis. These authors believe that the existence of diphtheria or the possibility of its onset should be considered in every case of measles; for the congestion of the mucous membrane and air passages caused by the measles renders it especially fertile for the growth of the organism of diphtheria. [T. L. C.]

4.—J. C. Hubbard reports very satisfactory results from the treatment of umbilical hernia by strapping. This treatment must be persisted in. The younger the child the earlier the cure is to be expected. The fear of recurrence or failure is slight. [T. L. C.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. July 27th, 1901.

1. Empyema of the Frontal Sinus.
E. FLETCHER INGALS.
2. Anomalies of the Frontal Sinus and their Bearing Upon Chronic Suppurative Sinusitis.
REDMOND W. PAYNE.
3. Asthma as a Result of Nasal Conditions.
P. J. H. FARRELL.
4. An Unusual Anomaly of the Faucial Tonsil.
GEORGE L. RICHARDS.
5. The Effects Which the So-called Catarrhal Diseases of the Nose and Throat May Have Upon the General Health. CAROLIUS M. COBB.
6. Changes in the Facial Bones Due to Adenoids.
A. T. MITCHELL.
7. The Diagnosis and Treatment of Mastoiditis.
EDWARD B. DENCH.
8. The Preferable Method of Uretero-Ureteral Anastomosis. J. WESLEY BOVEE.
9. Osmotic Pressure and its Relation to Uremic Manifestations. A Contribution to the Pathogenesis of Uremia and Kindred Affections.
HEINRICH STERN.
10. The Fight Against Tuberculosis in the Light of the Experience Gained in Successful Combat of Other Infectious Diseases. ROBERT KOCH.

1.—E. Fletcher Ingals discusses first, the various anatomical variations and the pathological characteristics of the frontal sinus. The most frequent cause of empyema of the sinus is acute coryza. Infection of the sinus usually follows that of the other sinuses. Chronic empyema

usually results from an acute inflammation of the sinus and is the result of interference with free drainage. Symptoms of the condition usually come on a week or two after the subsidence of the coryza. They are: Photophobia, pain in the eye and supraorbital region, together with free lacrymation. Pain is usually intermittent until the eighth or tenth day, when it becomes constant. Severe symptoms subside with the discharge of pus. In latent empyema, symptoms come on insiduously, the first to be noticed being pain in the supraorbital region, which is not infrequently treated as syphilitic headache. These cases may go on for years undiagnosed. When there is an obstruction to the discharge the condition is manifested by external signs, such as swelling, edema and so forth. Transillumination should always be employed, but is of doubtful value. The use of the probe or canula is of value, but is not without danger. Since tumors of the sinus may be attended by purulent discharge the differential diagnosis is impossible unless the cavity is open. When the sphenoidal sinuses are involved the pain is severe, and usually there is early blindness, whereas in empyema of the frontal sinus, the inflammation will involve the anterior part of the orbit with less serious consequences to the eye. The prognosis of the acute condition is good, but of the more latent cases less favorable. Treatment in acute cases consists in the use of warm soothing detergent and antiseptic sprays. The application of the watery extract of the adrenal glands or the guarded use of cocaine may be employed to keep down the swelling and allow free drainage. These measures failing, it becomes necessary to thoroughly irrigate the frontal sinus and establish free drainage. This may be done through the nose with Palmer's drill or Krause's trocar. The most satisfactory treatment, however, consists in opening the sinus externally and establishing free drainage into the nose. The external opening should be maintained in the majority of cases until all discharge ceases.

[J. H. G.]

2.—R. W. Payne speaks of the difficulties attending the treatment of chronic suppurative inflammation of the frontal sinus. Most of these cases drain rather freely into the nose, producing little disturbance excepting that which accompanies the discharge and the development of polypi. The author makes a strong plea for a thorough opening of the sinus with the removal of all disease from every recess. Attempts to treat these cases through the infundibulum he considers dangerous and unsurgical. It is the author's custom to leave bony bridges across the sinus to support the skin. The cavity is drained externally at its two extremities for five or six days. [J. H. G.]

3.—Farrell contends that asthma is often due to nasal defects, such as a deviated septum, hypertrophied turbinate, septal spur, and polypi. Permanent cure occurs in the majority of cases after operation. The author suggests nothing new in the matter of technique. He employs the spore, the curette, the knife and the saw, but never the galvano-cautery in nasal work. He gives a report of two cases of asthma due to nasal defects, which recovered after operation. [F. J. K.]

4.—Richards reports an unusual anomaly of the faucial tonsil, which occurred in a woman, 60 years of age. She stated that her throat had been paining her for two years, and there was also a sense of discomfort in that region. Upon examination the right tonsil was found to be enlarged. Upon attempting to remove this hypertrophied mass with the tonsillotome, he was unable to cut through it; an examination was then made, and he could distinctly palpate a bony mass. With a stout bone-cutting forceps the mass was removed. The bony substance within the tonsil proved to be a portion of the styloid process. On the left side he also detected the tip of the styloid process.

[F. J. K.]

5.—Cobb discusses the effects produced upon the general health by the so-called catarrhal diseases of the nose and throat, and come to the following conclusions: (1) The general health is affected through diseases of the nose and throat, either by obstructed nasal respiration or by extension of diseases of bacterial origin; (2) The general health is affected by diseases of bacterial origin either by surface extension, extension into deeper tissues, or by the migration of bacteria to distant parts of the body, by swallowing

the exudations which contain bacteria and by absorption of toxins; (3) Bacteria are carried to distant parts of the body either by the lymph or by the blood; (4) Septic infection due to diseases of the throat and nose are similar to infection from other sources; (5) Much of the indigestion from which these patients complain is due to, or exaggerated by the swallowing of the discharges from the throat or nose; (6) A purulent collection in the nasal chambers or accessory sinuses may give rise to chronic sepsis. [F. J. K.]

6.—Mitchell discusses the changes in the facial bones due to adenoids, and contends that an alteration in the development of the superior and inferior maxillaries, palates, vomers, turbinates, ethmoid and sphenoid bones occurs in mouth breathers. There is also a displacement of the front teeth and a prominence of the alveolar processes in these individuals. He emphasizes the necessity of recognizing any evidence of previously existing adenoids, so as to locate sources of ear and throat disturbances. [F. J. K.]

7.—E. B. Dench says that it is a question whether the mastoid is not involved to some extent in every case of acute middle ear disease. This does not mean, however, that surgical interference is indicated in every case. In speaking of the symptoms he says that local tenderness is a most important sign and present in almost every case. The point of maximum tenderness is usually over the antrum. Temperature is of value from a diagnostic point of view in children, but is often entirely absent in adults. Both a profuse discharge and a diminution of discharge are indicative of mastoid involvement. The occurrence of facial paralysis is of no diagnostic value. Any bulging of the upper portion of the tympanic membrane in cases of middle ear suppuration should be looked upon with suspicion. As soon as there is the slightest indication of mastoid disease the patient should be kept absolutely quiet and the bowels freely opened. In addition to this a free incision should be made through the drum membrane. The value of local depletion is underestimated. The author does not favor, however, the abstraction of blood from the external mastoid surface. The application of cold is not applicable to all cases, and should never be kept up longer than 48 hours. It is very apt to mask the symptoms. When once employed it should be employed continuously, and not intermittently. In doubtful cases the author advocates exploratory operation. The author has operated upon 316 mastoid cases with but 14 deaths, and none of these were due to the operation itself. [J. H. G.]

8.—J. W. Boyce discusses at some length the various methods of anastomosis of the ureter, and reports a case in which he resected one inch of the ureter and then performed a successful end-to-end anastomosis. Twelve such operations have been performed with two deaths, neither of which could be attributed to the operation. Reference is made to a patient in whom the author performed an oblique end-to-end anastomosis five years previously, and who at present is in perfect health. There have been 22 cases reported in which the severed urether has been united and in which there followed no urethral incompetency. The author recommends the end-to-end anastomosis. [J. H. G.]

9.—Stern believes that uremia is due to a disturbance of osmotic tension. He maintains that when the excretory activity of the kidneys is interfered with, the blood plasma becomes concentrated and by exerting a high degree of osmotic tension, other body fluids also become inspissated. This high degree of inspissation of the body fluids, which is followed by the symptom-complex called uremia, he has termed mechanical intoxication. Reference is made to the work of Lindermann, who showed that the phenomena of uremia may be brought about by the injection of large amounts of salt solutions into the blood. [F. J. K.]

10.—Koch delivered an address on "The fight against tuberculosis in the light of the experience gained in successful combat with other infectious diseases," before the general meeting of the British Congress on Tuberculosis held in London, July 23, 1901. This author classes tuberculosis in the list of preventable diseases such as plague, cholera and typhus. He believes that the sputum from tuberculous subjects is the main source of infection in human tuberculosis. In this address Koch states that

he feels justified in advancing the view that human tuberculosis differs from bovine tuberculosis, and cannot be transmitted to cattle. He performed a number of experiments on young cattle in order to demonstrate that these animals would not contract human tuberculosis. The animals were inoculated with tubercle bacilli, taken from cases of human tuberculosis, in various ways. All of the animals were absolutely insusceptible to infection by the bacilli obtained from cases of human tuberculosis. Koch further emphasizes that man is probably not susceptible to bovine tuberculosis, and therefore does not deem it necessary that any measures should be taken against the extermination of bovine tuberculosis. In view of the theory that the danger of its being transmitted to man is, at the most, very slight. In this address he also dwells upon the importance of establishing hospitals and sanatoria for consumptives, and urges the adoption of obligatory notification. He also emphasizes the great importance to be gained by educating the public in regard to the infectiousness of tuberculosis and the best way of protecting oneself. [F. J. K.]

AMERICAN MEDICINE.

July 27th, 1901.

1. On the Classification of Intoxications from a Pathologic Standpoint. J. GEORGE ADAMI.
2. Maternal Impressions Do Not Cause the Stigmata of Degeneration. CHARLES E. WOODRUFF.
3. Two Cases of Emphysematous Gangrene, Caused by Bacillus Aerogenes Capsulatus. L. M. LOEB.
4. Cystadenoma of the Pancreas. Extirpation. JOSEPH RANSOHOFF.
5. Lithemic or Recurrent Coryza. B. K. RACHFORD.
6. Early Stages of Extrauterine Pregnancy. E. H. TROWBRIDGE.
7. Inflammation of the Sigmoid and Colon. R. D. MASON.

1.—J. G. Adami contributes a paper on the classification of intoxication from a pathologic standpoint. He mentions the terms "exogenous intoxication" and "endogenous intoxication" as introduced by von Jaksch and observes the caution which should be exercised in the employment of these two terms. Especially should the terms poison and intoxication be clearly differentiated. Adami then goes on to show the confusion which is apt to arise by adopting this classification. Especially objectionable is the term auto-intoxication, which he would define as follows: An auto-intoxication is an intoxication set up by the action of substances formed by or from the cells of the body; that is to say, either by the secretion of these cells, or by the products of disintegration. Such auto-intoxication is endogenous when the poison so formed acts without any preliminary passage out of the system; is exogenous when it is due to reabsorption of the secretions. Adami would suggest the following classification of the intoxications: 1. Exogenous, due to the actions of poisons entering the system from without. I. Exotic or introduced, due to the action of substances foreign to the organism, which gain entrance through the skin, the digestive, the respiratory or the genito-urinary tract. II. Indigenous or excretory. (a) Indirect intoxication, due to the absorption of retained excreta. (b) Disintegrative, due to the absorption of decomposition and fermentation products developed in the external secretions through the action of those secretions. 2. Endogenous. 1. Direct intoxication. (a) Internal secretory, due to the action of excessive or unneutralized or modified discharges from the cells of one or other tissue acting directly upon the other tissues of the body without previous discharge from the system. (b) Disintegrative, due to the action of the products of decomposition and necrosis of one or other tissues acting in a similar manner. II. Parasitic. (a) Microparasitic, the infections. (b) Macroparasitic. [T. L. C.]

2.—Charles E. Woodruff presents a paper on maternal impressions and states that they do not cause the stigmata of degeneration. He believes that none of the other false popular beliefs causes so much worry and distress, nor leads to such absurd conduct on the part of pregnant women, and that much practical good will come from every attack upon this absurd idea. This article contains many references from the literature of the subject which are of general interest. [T. L. C.]

3.—L. M. Loch reports two cases of **emphysematous gangrene caused by the bacillus aerogenes capsulatus**. The second case is peculiar in the absence of the usual traumatic history, and the fact that the patient survived with a useful, although mutilated extremity. [T. L. C.]

4.—Joseph Ransohoff reports a case of **cystadenoma of the pancreas with extirpation**. The patient recovered and left the hospital four weeks after the operation. [T. L. C.]

5.—B. K. Rachford reports a case of **lithemic or recurrent coryza** which condition is sudden in onset, and is characterized by intense photophobia and an irritating hypersecretion from the eyes and nose. The patient is in a state of extreme nervous irritability. The condition disappears within a few days. The exact nature of the coryza was determined in the case reported, by the fact that the urine passed during the attack was scanty, high-colored, strongly acid in reaction with a specific gravity of 1.030, and contained an excess of the alloxuric bodies. [T. L. C.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 63, No. 3).

17. The Pathological Anatomy of Gangrene of the Extremities. BUNGE.
18. The Operative Treatment of Malignant Tumors of the Breast. PAUL ROSENSTEIN.
19. The Operative Treatment of Cancer of the Rectum. W. PRUTZ.
20. The Extirpation of the Lymph-glands in Cancer of the Lower Lip. ALFRED STIEDA.
21. The Function of the Thyroid Gland. C. SULTAN.
22. Radical Operation for Umbilical Hernia. BUSSE.
23. Radical Operation for Fecal Fistula and Artificial Anus. PAUL CLAIRMONT.
24. The Preparation and After-treatment for Operations upon the Stomach. ALFRED STIEDA.
25. The Treatment of Tubercular Coxitis. K. LUDLOFF.
26. Coxa Vara. ALFRED STIEDA.
27. Permanent Extension in Fracture of the Upper Arm. C. SULTAN.
28. Suture of the Scapulae in Progressive Muscular Atrophy. O. EHRLHART.

17.—**Gangrene of the extremity** is the natural consequence of occlusion of the main artery of the extremity. In this article Bunge discusses the **pathological anatomy** only. From a thorough review of the literature, Bunge concludes that the majority of investigators believe that the mass of cells, pigment, and blood-vessels found in the occluded artery with gangrene, is a product of a primary growth of the intima; while a few observers consider this mass an organized thrombus formed by sclerotic change in the arterial walls. In senile gangrene there is a primary sclerotic or atheromatous thickening in the walls of the artery, with secondary thrombosis. Bunge gives in detail, with excellent histological illustrations, the histories of 15 cases from von Eiselberg's practice. Five were senile gangrene, 5 spontaneous, and 5 diabetic. In all cases the lower extremities were affected. From the full descriptions of the histological conditions found, he states that the **pathological product in the intima is sclerotic**. In one case the increase in the intima was due plainly to growth both of the interlamellar and intermediate layers of the intima. Bunge found no thinning of the media, which he believes occurs only secondarily. Elastic fibers are found in sclerosis, with a tendency to increase excessively. In the larger arteries **obliterating endarteritis** occurs. He concludes that diffuse, or oftener circumscribed arterio-sclerotic thickening of the intima, multiple stenosis (rarely solitary), occur in the lumen of the vessel, in one or more of the main arteries of the extremity. These changes may cause occlusion of the vessel. As these changes occur near the branching off of smaller vessels, it is difficult for a collateral circulation to become established. **Thrombosis takes place behind this sclerosis**, completely occluding the vessel. In one case syphilis was the predisposing cause.

[M. O.]

18.—During five years, Rosenstein has collected 192 malignant tumors of the breast which were operated upon by von Eiselberg. One hundred and seventy-six were carcinoma (14 being for recurrence), and 9 sarcoma. The

other six were benign tumors thought to be cancer. Only 135 of the cancer cases were primary. The average age was from 40 to 60, most frequent from 50 to 60. Cancer appears, on an average, 5 years after the menopause. Eighty-five per cent. occurred in married women who had borne children. They came under observation about 10 months after the tumor first became noticeable. The tumor was generally adherent to the skin, muscles, etc., and the axillary glands were involved by that time. Ulceration was also frequently observed. The supra-clavicular glands were affected in 13% of the cases of carcinoma; metastases occurred in 13 cases. Over half of the tumors affected the left breast, most often situated in the middle or the upper outer quadrant of the breast. Eight of the 9 cases of sarcoma were primary. The average age was 41 years. Seven were in unmarried women. These tumors came under treatment about 5 months after they had first been noticed. Adhesions were also noted earlier than in cancer. The axillary glands were enlarged in 5 cases; ulceration occurred in 4. Metastases existed in 2 cases, both of which were inoperable. Five tumors were much larger than the carcinoma. In earlier years, the breast was amputated and the axilla cleared of all lymphatic tissue. Later the pectoral fascia and the greater pectoral muscle were removed. Now the lesser pectoral muscle is also removed. Chloroform is used as the anesthetic. The breast was amputated 145 times, and 30 more operations followed for recurrence. The axilla was cleaned out in every case; the pectoral fascia in 104 cases; the greater pectoral muscle in 68; the lesser in 39; the clavicular lymph-glands in 17; and several ribs in one case. Thirty-two tumors had ulcerated, 7 of which were infected. Three other cases of infection occurred, a total of 10 out of 175 operations. Some fever was seen in 21 cases after operation. Only three cases died after operation. Out of 186 cases, 175 operations were performed. Seventeen were not cured, as three died, three refused operation, and 10 were inoperable. Of the rest only 107 have been heard from lately. Forty-four of them have died, 25 with recurrence. Sixty-three are still living, 54 of them perfectly well. Weakness and swelling of the arm upon the side operated seems more frequent now than it was formerly, when the less radical operation was performed.

[M. O.]

19.—Von Eiselberg saw 75 cases of **cancer of the rectum** during the past five years, 44 of which were in men, 31 in women. One-half of the patients were between 55 and 65 years old. There were, however, three cases in young girls under 20 and three in persons over 70. Forty-five out of 68 operable cases had radical operations performed. Only 5 died. Twenty-nine amputations of the tumor were done, with three deaths; 15 resections, with two deaths; and one excision through the perineum. Twenty-six were in women, 19 in men. Prutz adds to these two amputations for recurrence, with one death. In 38 cases a preparatory operation was made; in 19 resection of the sacrum. In 11 exarticulation of the coccyx, and in eight temporary reduction of the sacrum. Out of four perineal amputations, four vaginal operations, and one excision through the perineum, there were no deaths. Though the abdomen was opened 22 times, peritonitis occurred but twice, one of which cases was due to secondary infection. Infection also caused death from laceration of the intestine. Death resulted once from hemorrhage from the hepatic artery; and once from shock. The mortality for the past three years is four times that of the two years previous. Out of 20 cases operated over three years ago, six have had no recurrence. Eleven cases have died with metastases, over a year after operation. Of the 45 cases operated, 17 are still alive. In 13 patients colostomy was performed, three of whom died, six lived for an average of seven months, and one lived almost two years. Temporary resection of the sacrum Prutz considers dangerous. It is often done unnecessarily. If it must be performed, he prefers Gussenbauer's method. In 13 cases, not including the vaginal operations, part of the posterior wall of the vagina was removed; in four cases, part of the uterus. The ureter was injured twice. But the bladder, prostate and urethra were uninjured. In suturing the intestine, circular sutures were employed. In three cases the upper end of the intestine was invaginated. In 28 cases a sacral anus was left. In 25 cases the intestinal end was twisted

according to Gersuny's method. The histories of some of the cases are given, and the technique of the operations described. Colostomy was done by von Hacker's method, when necessary. [M. O.]

20.—Carcinoma nowadays requires excision of the neighboring lymph-glands. In cases of cancer of the lower lip, both submental and submaxillary lymph-glands, on both sides, are affected. Here a recurrence is often seen after operation. After reviewing the subject, Stieda describes an operation for extirpation of these lymph-glands by cutting a semicircular flap of the skin and platysma, along the under surface of the inferior maxilla. By turning the flap back, as far as the hyoid bone, the glands on either side may be removed. [M. O.]

21.—Sultan describes his experiments upon cats and dogs in a study of the function of the thyroid gland. From these results he concludes that total extirpation of the thyroid gland in dogs and cats causes symptoms of a severe, specific disease, unless accessory glands are present to assume its function. Extirpation of one-half of the thyroid gland is well borne. [M. O.]

22.—During the past five years, von Eiselsberg performed 18 radical operations for umbilical hernia. In all he saw 22 patients, 20 of whom were adults, one a girl of one year, and one a new-born babe. The infant, now a year old, still wears a binder. Of the 20 adults, 4 were incarcerated; of the others, five could be reduced. Seventeen of the 20 were in women. Eleven were between the ages of 30 and 40 when the hernia appeared. The majority of cases had existed five years. In five cases the hernia followed difficult pregnancy. These tumors, which had been reducible, later became irreducible. In the majority of cases there were no symptoms when the hernia appeared. Eleven of the cases had worn some abdominal support until operation. In size the herniae varied from a walnut to a man's head. Busse divides the herniae operated into four classes: the flat, stalkless, herniae, 6; the pedicled herniae, 3; the nodular, omental herniae, 2; and the irregular, mostly reducible herniae, 7. Six cases of the 18 operated were performed by Condamine's method. Of them all only two died. Eight of the others have had no recurrence; six have returned, and the results in two cases are unknown. Those with large herniae had recurrence generally. After a discussion upon the modern operations for umbilical hernia, Busse gives the histories of the 21 other cases reported. [M. O.]

23.—Charmont has collected von Eiselsberg's 29 cases of fecal fistulae and artificial anus. These he divides into 7 groups. In the first group is one case of congenital umbilical fistula, which was cured by excision of the navel. In the second group are 12 cases of fecal fistula and six cases of artificial anus following incarcerated herniae. Following operation in these 18 cases, but three deaths occurred. The next group contains one case of fecal fistula after appendicitis, which recovered. In the fourth group are two cases of tuberculous fistula, and one with typhoid. In the fifth group is one case of fecal fistula following parametritis. In the sixth group are two cases following tumors, with one death, and three cases of artificial anus from unknown cause form the last group. The case histories are given in full with a detailed description of the different operative procedures undertaken. In all, 22 operations were performed for fecal fistula, seven for artificial anus. Fourteen were in men, 13 in women, and two in children. Nineteen fistulae were inguinal, 11 on the right side. The inner opening of the fistula was in the small intestine in 21 cases. Diagnosis was not difficult. Two methods of laparotomy were performed: in nine cases the incision was made from the fistula; in 20 cases an independent incision was made. Resection of the wall of the intestine was done 18 times; wedge-shaped excision four times, and resection of the intestine, 18 times. Anastomosis followed by Woelfler's method of circular sutures 11 times, by the Murphy button twice, and by lateral and axial apposition once. Of the 29 cases, recovery resulted in 23; 4 patients died, and two were unimproved. Only one death was due to operation, a purulent peritonitis resulting. Charmont concludes that radical operation for fecal fistula and artificial anus is easily performed by resection of the intestine followed by sutures, with laparotomy. [M. O.]

24.—In operations upon the stomach there are three great dangers, infection, collapse and the post-operative

stagnation of the gastric contents. To prevent infection the stomach should be washed out once the night before the operation, and again an hour before operation. Finally, just before operation, the secretion of the stomach should be removed with the stomach tube. Fresh ulcerations will contraindicate gastric lavage. After operation, the dressings should be left undisturbed until the stitches are to be removed. To prevent collapse, normal salt solution should be injected subcutaneously; Schleich's infiltration anesthesia should be used whenever possible; and the body heat must be maintained, etc. After operation there is often a loss of motor power in the stomach, a reaction to the operation, with stagnation of the contents of the stomach. The gastric contents can be easily drawn off through a stomach tube on the second day after operation. Inanition and death may follow this gastric atony. Both functional and mechanical disturbances occur, and occasionally hemorrhage. Stieda lays great stress upon the use of the stomach tube before and after gastric operations. [M. O.]

25.—The diagnosis of tuberculous coxitis is no longer difficult, when Röntgen photographs are taken. Ludloff, after discussing the many treatments suggested, concludes that all cases should be put in plaster first, in the pathological position. Only when the contracture is so great that the patient cannot walk should "redressment" by Dollinger's method be done. As soon as the plaster stocking is dry, the patient should stand up and try to walk. If an abscess exists, it should be opened and treated with an injection of iodoform and glycerin before the plaster is applied. The plaster should then not cover the fistulae, but leave windows over them. Should old fistulae and fever exist, the patient must be kept in bed; then, should no improvement appear, resection with removal of the diseased tissue must be performed. The plaster bandage should remain unchanged for months. During this time the condition of the skin and of the general economy must be improved. When all pain has disappeared, a movable apparatus can take the place of the plaster stocking. This treatment should extend over years. If, even then, the position is poor, an osteotomy below the trochanter should be performed. [M. O.]

26.—Stieda reports 5 cases of coxa vara. The first case occurred in a boy of 16, following a fall from his horse. There was traumatic coxa vara, upon the right side. The next two cases were due to separation of the epiphysis of the femur, in girls of 12 and 15, due in the former, to osteomyelitis. The two important symptoms are spasm of the muscles and an increase in the patellar reflex. These are well shown in the last two cases, a boy and a girl of 17. Both cases were complicated by arthritis. The Röntgen photographs are excellent. General tonic is indicated, with extension, massage, and faradic electricity. The results are often excellent when the extension is stopped early. [M. O.]

27.—Sultan describes, with diagrams, an apparatus for applying permanent extension in fracture of the humerus, which he has used with success in the dispensary. It is inexpensive and practical. [M. O.]

28.—Ehrhardt describes two cases, in young people of 20, with progressive muscular atrophy, in whom von Eiselsberg sutured the two scapulae together. There had been great weakness in the shoulders and arms. Silver wire was used, and a process of the bone grew out, joining the two shoulder-blades. The improvement in power in the arms was striking. Ehrhardt describes the technique of the operation in full. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

May 28, 1901. (No. 22.)

1. Experimental and Clinical Contribution to the Vaporization of the Uterus. H. FUCHS.
2. The Vaporization of the Uterus. S. LACHMANN.
3. Amputation of the Portio Vaginalis. Particularly its Injurious Consequences. M. GRAEFE.
4. The Causes and Treatment of Menstrual Colic (Dysmenorrhea.) A. THEILHABER.
5. Prolapse of the Urethra in Women. GLAEVECKE.
6. Instrumental Perforation of the Uterus. F. SCHENK.
7. Agnathia, and the Condition of the Tongue that Occurs in Connection with it. KUSE.

8. Speech upon the Commencement of the Clinical Activity of the Clinic for Womens' Diseases in the University of Strassburg. H. FEHLING.

1.—Fuchs has employed vaporization of the uterus for various forms of endometritis, and particularly for profuse menstruation. He has performed a series of experiments upon uteri removed post mortem, in which he has found that the temperature rarely exceeds 100° C., but that it is exceedingly important that the cavity of the uterus should be of uniform diameter throughout. The action he considers, consists essentially in a burning of the mucous membrane of the uterus to the first or second degree, and as a result there is usually a sloughing and discharge of the mucous membrane at some time after the application. In cases of myoma, particularly the submucoid and polypoid varieties, the method should not be used. He reports a few cases and then gives a table and some figures showing the results of 22 cases treated by this method. In many of these curettment had been performed without result. In the majority of these cases the uterus was enlarged, and after the operation it became smaller in 9 of the 13 cases that could be carefully examined. In one case it is possible that a synechia formed in the upper portion of the cavity. [J. S.]

2.—Lachman reports the results of 33 cases in which cauterization of the uterus with super-heated steam, was employed. Atmocauterization is capable of producing bad as well as good results. Sometimes the hemorrhage stops, in other cases it continues or the patient grows worse. The conditions for which it was employed were polypoid endometritis, suppurative dysmenorrhea, inoperable carcinoma of the body of the uterus, climacteric dysmenorrhea, flooding, etc. The paper is still unfinished. [J. S.]

3.—Von Graefe approves strongly of the wedge-shaped incision of a portion of the cervix in cases of descent of the uterus, with hypertrophy of that part. The operation frequently gives excellent results. He reports in particular, the case of a woman in whom it was performed, and who was able subsequently, to accomplish the severest forms of daily labor. In another case, a woman suffering from hysteria, her condition was made worse by the operation. He therefore does not approve of this operation in hysterical and neurasthenic cases. It is important to prevent any severe work during the period of subsequent treatment. There does not appear to be any favorable influence upon chronic hyperemia and enlargement of the body of the uterus. Conical enlargements are distinct indications for its employment. [J. S.]

4.—Theilhaber discusses the various theories that have been suggested to explain the occurrence of dysmenorrhea. He defines this condition as that in which actual colic pains occur in the course of menstruation. These usually occur in the sacral region and radiate forward. From time to time there are severe exacerbations. He does not agree with Möricke that the condition is always, or usually associated with actual disease of the sexual organs, because 1st, it occurs most frequently in young women and maidens who have never borne children, and have no anatomical changes. 2d, it varies in degree from period to period. 3d, it may disappear entirely as the result of change of residence, and 4th, it may or may not be present when there is distinct local disease. However, certain forms of uterine colic may be produced by diseased conditions such as the polypoid and submucous myomata, or perimetritis. Among the favorite theories are: 1st antifixion, but there is much reason to believe that during the congestion that occurs during menstruation the uterus is straightened. 2d, stenosis of the cervix or of the inner os. As a matter of fact stenosis almost never occurs unless some operative interference has been undertaken. Others believe that endometritis and metritis are active factors, but Theilhaber has treated cases of extreme endometritis in which menstruation was painless. The ovaries and tubes have also been accused, and it is not entirely impossible that spasms of the tubes might actually produce pain,

although this seems *a priori* unlikely. Finally such remote things as movable kidneys, and parovarian varicocele have been considered active agents. Fliess has suggested that the pain is entirely due to reflex irritation from the sexual spot on the inferior turbinated bone of the nose, and he claims that he is able to relieve it entirely by painting the spot with cocaine. It is possible that any relief that is produced by this treatment is due to the influence upon internal circulation. The paper is still unfinished. [J. S.]

5.—Glaevecke reports the case of a girl of 11 suffering from bronchiectasis which was associated with severe paroxysms of coughing. She was weakened and rachitic, and suddenly developed prolapse of the mucous membrane of the urethra. An attempt to cure this by reposition having failed, the prolapsed part was amputated, and the mucous membranes attached to the skin by sutures. The result was perfect. He has studied the literature of this condition, and as a result draws the following picture of it. The etiology is rather indefinite. The old theory that it was due to local irritation appears to be disproved by the fact that the majority of cases occur in young children; 66% of all recorded cases in girls under 14 years of age, and 22% in women who have passed the climacteric. The majority of patients are weak and debilitated. The symptoms are usually very slight. There is usually slight hemorrhage, sometimes pain, and occasionally, if gangrene of the prolapsed part occurs, fever. The most important symptom is difficulty in micturition. The condition can readily be recognized by inspection. The prognosis is favorable. The treatment consists in attempts at reposition, or if these fail, as they almost always do, in amputation by various methods of the prolapsed mucous membranes. Of all hitherto suggested, he prefers the method of Kleinwächter, which was the one he employed. [J. S.]

6.—Schenk, as a result of 2 cases reported by Beutner, in which in attempts to sound the uterus, extraordinary lengths were obtained, (in one case a dilator entered for 14 cm., and in another, the sound, for 20 cm.) gives a brief summary of the discussion aroused by these reports, and mentions some cases in which similar extraordinary results were obtained. He then reports the case occurring in the Clinic of Saenger, of a woman, 38 years of age, who had had 9 children. When examined it was found that the uterus was slightly enlarged, and that there was severe laceration of the cervix. In the preparation for operation the sound was introduced and found to pass without resistance for 20 cm. A diagnosis of perforation was made; immediate laparotomy performed, and 3 perforations actually found at the fundus of the uterus. The substance of the uterus was extremely friable. The patient recovered completely, and was discharged cured. Schenk suggests that the repeated births had brought about a peculiar pathological condition of the uterine muscle. [J. S.]

7.—As a result of Von Winkel's article upon agnathia Kuse has undertaken at Ort's suggestion, a careful study of 5 cases of this condition, in the museum at Göttingen, in order to determine whether any fragments could be discovered that resembled the lower jaw. The first case exhibited a great variety of malformations. A very minute fragment was found that was possibly the inferior maxilla. In the second case, also very greatly deformed, a distinct fragment was detected that was unquestionably the undeveloped lower jaw. In the third and fourth cases rudimentary lower jaws were also found. Finally in the 5th case, a monstrous lamb, the relic of the lower jaw was not found. He concludes that in his four human cases the rudimentary lower jaw was present. In 2 of these cases there was a rudimentary condition of the hyoid bone, but in all of them the horns of the hyoid bone and the larynx were well formed. The cause of the condition is difficult to determine, but was probably not due to pressure by amniotic folds. The thyroid glands are frequently well formed. [J. S.]

8.—Fehling gives a brief historical description of the obstetrical clinic in Strassburg, and calls attention to the great importance of a complete study of the normal cases. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

May 9, 1901. (XIV Jahrgang, No. 19).

1. The Clinical Diagnosis of Renal Infarct and Renal Colic. RUDOLF SCHMIDT.
2. The Effect of Suprarenal Extract upon the Nasal and Laryngeal Mucous Membrane. L. HARMER.
3. Lacerations of the Vaginal Vault During Labor. II. LUDWIG.

1.—Will be abstracted when concluded.

2.—After the internal use of extracts of the ductless glands had become general, ophthalmologists and laryngologists began to employ them locally. This is especially the case for suprarenal extract, which is a powerful vaso-constrictor. The rich literature of the subject has been fully reviewed. Harmer has used suprarenal extract upon 32 patients, 22 of whom had hypertrophic rhinitis. The inferior turbinal became paler and decreased in size after the application of a 10% solution of suprarenal extract. The effect was noticeable in two minutes. With true hypertrophy, several applications were necessary to cause any change, some cases remaining unaffected. As a local anesthetic it had no effect in the nose. In the larynx he used a 50% solution, upon 9 patients. Four of these cases are reported, in which the suprarenal extract with cocaine had a decided anesthetic effect. The last case was one of edema over the right arytenoid cartilage, which diminished with the application of the suprarenal solution. Harmer concludes from his experience that it decreases swelling of the mucous membrane, and aids cocaine in producing anesthesia. Experimentally it has been shown that extirpation of both suprarenal capsules is followed by a decided decrease in the blood pressure; and that intravenous injection of suprarenal extract markedly increases the blood pressure. There is no doubt that it exerts an influence upon the peripheral blood vessels. This vaso-constriction explains the anesthesia also. Harmer advises its use in hyperemia of the mucous membrane, and in the larynx, whenever long treatment must be given. To lessen the amount of cocaine needed to produce local anesthesia, it is of great assistance. It should be used in people who cannot stand cocaine. As an hemostatic Harmer considers it as dangerous as cocaine. [M. O.]

3.—Injury to the uterus or to the vaginal vault during child-birth may be accompanied with dangerous hemorrhage or laceration of the perineum with infection following. Laceration of the vaginal vault by itself is rare, as it is generally combined with laceration of the cervix. After a review of the literature, Ludwig has tabulated 73 cases, some of which are his own observations. In 45 of these, spontaneous rupture of uterus and vagina occurred; 13 were due to injury; in 15, rupture of the vagina occurred alone, probably due to violence; and in 5, rupture occurred in the vagina primarily, but was continued into the cervix. Lacerations occur spontaneously when a great disproportion in size exists between the child and the maternal tissues. This occurs in a narrow pelvis, in pendulous abdomen or when the uterus has been sutured in place by a previous operation. Other causes are very large fetal head, abnormal position, very strong labor pains, great abdominal pressure, a fall, an accident, abnormally small or undeveloped vagina, pathological changes in the elastic fibers of the vagina, carcinoma, etc. Spontaneous lacerations may occur with injury from the hand, instrument, forceps, etc. These lacerations are not seldom seen in multiparae, because pendulous abdomen and abnormal position are commoner, later children are larger, and scars or other anomalies of the vagina exist. The position of the laceration depends upon the cause; with pendulous abdomen it is in the posterior or lateral wall of the vagina. The posterior vaginal wall is most frequently lacerated because it is least protected. Uterus, peritoneum, and bladder may also be extensively torn. The intestines and omentum generally protrude through the laceration. Before rupture there are few symptoms, when rupture occurs the pain is severe. After rupture there may be but few subjective symptoms,

but there are hemorrhage, cessation of the labor pains, disappearance of the fetus, and all the signs of beginning peritonitis. The diagnosis of laceration of the vaginal vault is probable when rupture of the uterus has occurred. The prognosis is always grave. The treatment consists of delivery of the child and attention to the laceration. Hemorrhage must be stopped, and infection prevented. Laparotomy is generally necessary. Prophylactically a woman with a large abdomen should wear a binder during pregnancy. Care must be taken when labor occurs, especially should any operation be needed. Ludwig adds the histories of two more cases, recently reported, and a long bibliography. [M. O.]

May 16, 1901. (XIV Jahrgang, No. 20).

1. The Influence of Alcohol upon the Course of the Infectious Diseases. MAX GRUBER.
2. Further Research upon the Etiology of Acute Rheumatism. GUSTAV SINGER.
3. The Clinical Diagnosis of Renal Infarct and Renal Colic. RUDOLF SCHMIDT.

1.—From a careful collection of the many experiments made upon the various animals to show the effect of alcohol in the infectious diseases, Gruber concludes that it should never be given unless the patient is near collapse. For all the experiments prove that alcohol, even in small doses, weakens the resistance of the organism, and so favors the action of the invading microbe. In collapse, alone, was life prolonged by the use of alcohol. Beside this unfavorable effect in disease, experience also shows its dangerous effect upon posterity, as it is the cause of still born infants, with more or less widespread fatty degeneration. [M. O.]

2.—Singer reports five new cases of acute articular rheumatism and two cases of rheumatic chorea, in five of which streptococci were found, in the two others, staphylococci. Drawings of the microscopical pictures are given. After reviewing the later literature upon the subject, Singer reiterates his conclusion that the streptococcus is the cause of acute articular rheumatism, though it has only been found in the heart and lungs, never in the joints. [M. O.]

3.—Emboli in the kidney are frequent, yet the diagnosis is rarely made clinically. Schmidt, after quoting what little he could find in the literature upon the diagnosis of renal infarct, reports 7 such cases in detail. Two of the cases were under his own observation. From these cases it is evident that pain occurs in the kidney region, with disturbance in the secretion of urine, and changes in the urine. There is oliguria, albuminuria, but rarely hematuria. The pain, which may be intense, varies in character and location. Pressure increases the pain. The pain gradually decreases in intensity. Many constitutional symptoms are also present. When renal colic occurs, the physician must determine whether the cause is intrarenal, when the pain is circumscribed, the kidney is sensitive to pressure, and the pain is constant; or whether it is extrarenal or ureteral, when the pain radiates down the ureter, is intermittent in character, with tenderness along the ureter. The cause of intrarenal colic may be torsion of the pedicle of a floating kidney, sudden congestion of a tumor, acute exacerbation of a chronic nephritis, or a renal infarct. Pain upon pressure over the kidney is more often seen in renal infarct than in chronic nephritis. A high pulse tension speaks against renal infarct. The colic in renal infarct will disappear with rest in bed. Apoplectic form pain is peculiar to renal infarct, and severe hematuria is rare. Besides, intense albuminuria, without casts, appears and disappears suddenly with renal infarct. The presence of enteroptosis with renal infarct is unfavorable. Lying upon the healthy side will increase the pain in renal infarct. Should the renal artery be occluded, urinary symptoms may be absent. Oliguria or anuria appears when both kidneys contain infarcts. Then the desire to urinate will also be absent. [M. O.]

ANNALES DE GYNECOLOGIE ET D'OBSTETRIQUE.

March, 1901.

1. On the Recurrence of Ectopic Pregnancy. (A Critical Study of 96 Cases). II. VARNIER and C. SENS.
2. Polycystic Liver a Cause of Dystocia. Association of Cystic Degeneration of the Liver and Kidneys in a Fetus Affected with Multiple Malformations.

PORAK and COUVELAIRE.

1.—Varnier and Sens have made a most extensive study of extrauterine pregnancy, 96 cases of which have been reported in the literature. They conclude from their investigations that recurrence of extrauterine pregnancy is much more frequent than has been imagined. This recurrence has habitually taken place in the tube of the opposite side. Of the 43 cases of recurrent pregnancy in which the side occupied by the pregnancy is noted, in 16 cases did it occur on the left side, and in 27 cases on the right. The time which had elapsed between the first and second pregnancy varied from one month to 12 years. In six cases only did a normal intrauterine pregnancy occur between the first and second ectopic pregnancies. There seems to be some tendency on the part of the second pregnancy to develop along the same line as the first. The authors have grouped the cases in tabular form according as to whether or not the diagnosis has been proved absolutely for each pregnancy. [W. A. N. D.]

2.—Porak and Couvelaire report an exceedingly interesting case of dystocia due to oversize of the fetal abdomen. The cause of this excessive size of the fetal body was a polycystic liver, containing 350 grams of liquid, associated with a cystic degeneration of both kidneys and multiple malformations (encephalia, achondroplasia, supernumerary fingers and ears, rudimentary external genitalia). He remarks that cystic liver as a cause of dystocia is exceptional. There are but few cases recorded of liver tumors in most of which the tumor was solid. He can find but four cases of cystic liver, namely, those of Witsel, Guéniot, Bagot and his own. He presents a short review of these cases. [W. A. N. D.]

April, 1901.

1. The Treatment of Complete Uterine Rupture by Total Abdominal Hysterectomy with Three Cases. CORNELIUS CRISTEANU.

1.—Christeanu during the last three months had occasion to observe three cases of uterine rupture produced at the time of delivery. From a study of the symptoms and the results of intervention, he has arrived at conclusions which do not quite conform to those given in the classical treatises. The mortality of the accident will diminish with the rapidity of intervention. According to most authors, the first indication, save when the fetus has passed into the abdominal cavity, is immediate extraction by version, forceps or basiotripsy. After rupture the uterus normally contracts upon itself, and the traumatic orifice becomes so small as scarcely to permit the introduction of the hand. The author is certain that in every case, even in those in which the fetus has not escaped into the peritoneal cavity, the proper treatment is to perform a laparotomy. In other words, a rupture of the uterine tissues is an absolute indication for a laparotomy, with extraction of the fetus through the abdominal wound, after which the patient, in the Trendelenburg posture, a total abdominal hysterectomy should be performed and the peritoneum sutured and hemostasis made perfect. Toilet of the peritoneal cavity should then be made, together with vaginal drainage, followed by absolute closure of the abdominal wall by two varieties of stitches, cat-gut and silk. If needed, an injection of serum during and after intervention may be made. [W. A. N. D.]

BOLNITCHNAIA GAZETA BOTKINA.

May 30, 1901. (Vol. XII, No. 22).

1. A Milky Non-chylous Transudate. V. V. ZAVIALOFF
2. On the Albuminous Substances and Capsules of Bacteria and Fungi. K. I. IVANOFF.
3. A Case of Priapism. P. I. GUNDEGGER.
4. Ruptures and Traumatism of the Thoracic Duct.

B. K. FINKELSTEIN.

1.—Zavialoff made a careful study of a specimen of ascitic fluid obtained from a patient suffering from chronic nephritis. It belonged to the group of exudates first classified by Lion in 1893 as "ascites laiteuses non chyleuses." These effusions are milky in appearance, closely resembling chyle, from which, however, they differ, microscopically, by the absence of fat globules or granules, and, chemically, by not being cleared up by ether. In all 16 cases of such transudates are recorded in the literature.

Various theories have been advanced as to the cause of the opalescence of the fluid, but so far opinions are divided. The specimen studied by the author was strongly opalescent, closely resembling an alkaline solution of glycogen. The latter, however, was found absent. The opalescence could not be removed by filtration, ether or potassium hydrate. On boiling no coagulation took place. The addition of acetic acid to the cold fluid produced no precipitate, but on boiling a fine flocculent precipitate occurred which gradually settled to the bottom of the tube, leaving a clear supernatant fluid which gave a slight biuret reaction. A similar precipitate was obtained by the addition of an equal volume of a saturated solution of ammonium sulphate. The precipitate could be readily removed by filtration, and when dissolved in water produced an opalescence similar to the original fluid. That this substance was not globulin is proven by the fact that it was not coagulated by heat. Furthermore, by the addition of a 5% solution of hydrochloric acid and boiling, a substance reducing Fehling's solution was obtained. This reaction places the substance among the glycoproteids; and inasmuch as it was not precipitated by acetic acid, thus differing from mucin, it belongs to the group of mucoids. To this group, according to the latest researches of Leven, belong also the amyloids. The latter, as shown by Kravkoff, possess also a form which is soluble, and could therefore be circulating in the blood. These facts lead the author to the conclusion that the presence of mucoid in the ascitic fluid may indicate amyloid degeneration of the organs. [A. R.]

2.—Ivanoff demonstrated the presence of typical nucleoproteids in the protoplasm of bacteria and fungi, while the capsules of bacteria were found to contain a substance identical in its composition to chitine. In his analysis he employed Kravkoff's method, which consists in the precipitation of the bodies of the bacteria or crushed fungi by a solution of acetate of copper and subsequent treatment with a weak (not over 1%) solution of caustic alkali, which extracts all the albuminous substances. The washing with alkali should be continued until the disappearance of the biuret action. The residue contains the capsules, hemicellulose and carbohydrates of the types of glycogen and starch. On the addition of weak hydrochloric acid everything is dissolved, except the capsules. The latter are washed carefully in water, alcohol and ether, and are analyzed. To obtain the albuminoid substances the first three alkali washings are treated with an excess of acetic acid, and the sediment washed in water, alcohol and ether. [A. R.]

3.—Will be abstracted when concluded.

4.—Finkelstein reports the case of a peasant who, during an assault by unknown persons, received two wounds in the chest, one at the presternal notch, the other on a level with the fourth rib. As a result of these injuries the man developed what was diagnosed and proved to be a chylothorax. 2000 c.c. of fluid (chyle) were evacuated from the pleural cavity on each of two occasions. There was no temperature elevation, except on the ninth day after the first aspiration, when the temperature rose to 38.5. The man made a good recovery. An extensive bibliography is given, including a tabulation of 22 cases of injury to the thoracic duct, recorded in the literature. As to treatment, the author recommends simple plugging of the wound. In uncomplicated chylothorax aspiration is sufficient. Forced nourishment and perfect rest will hasten recovery. [A. R.]

The Sedimentation of Sputum.—Finck, in the *Revue Médicale de l'Est*, May, 1901, No. 9), reviews the subject of sedimentation of sputum. When the number of bacilli is small and the amount of expectoration large, some method must be employed to reduce the quantity of sputum. In 1886, the subject was first approached by Philip, who left the sputum a day in a moist warm atmosphere. The addition of many substances, boiling, etc., have been suggested. The best method is that devised by Spangler, who adds distilled water to separate the masses. Concentrated soda solution is added, then pancreatin. This is then kept in the oven at 37°C. for two hours, when a few drops of carbolic acid are added. After 16 hours, the liquid is poured off and the sediment examined. Centrifugation may be added to this. It is then easy to find bacilli among quarts of sputum. [M.O.]

Special Article.

HUMAN AND BOVINE TUBERCULOSIS.

By LEONARD PEARSON, B. S., V. M. D.

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Professor Koch's address at the recent British Congress on Tuberculosis has excited considerable interest on account of his statement that we have little to fear from the use of tubercle bacilli bearing food products of tuberculous cattle. Fortunately, his reasons for this opinion are fully stated, so we are able to examine the ground upon which this new theory rests.

Koch has observed that human tuberculosis is not readily inoculable in cattle and concludes that it differs from cattle tuberculosis. This in itself is not construed to show that men are not susceptible to bovine tuberculosis, although it is implied that if the disease will not pass in one direction it will not pass in the other.

The real argument for the new theory is stated in the following sentences: "That a case of tuberculosis has been caused by alimenta can be assumed with certainty only when the intestine suffers first—that is, only when a so-called primary tuberculosis of intestine is found. But such cases are extremely rare."

This claim deserves the most careful consideration, on account of the commanding position of its author and also from the fact that considerable effort is being made to exclude from the market tubercle bacilli bearing meat and milk; effort wasted if the claim is true.

But it is erroneous to assume that the solution of this question can be found in the distribution of the lesions of tuberculosis in the body. It has been shown in the most unmistakable way by many feeding experiments conducted under the auspices of the Pennsylvania State Live Stock Sanitary Board, that, contrary to the early belief, animals fed tubercular materials may develop primary tuberculosis and, in some instances, fail to show lesions in any other organ. It is strange that Prof. Koch failed to observe the importance of this point, for in his address he says: "Among the animals (swine) that have been fed with sputum no trace of tuberculosis was found, except here and there little nodules in the lymphatic glands of the neck and, in one case, a few grey nodules in the lungs. In these cases the animals were infected by feeding, but did not develop tuberculosis in the intestines first, or at all." A little later he says: "The animals that had eaten bacilli of bovine tuberculosis have without exception (just as in the cattle experiment) severe tubercular diseases, especially of the lymphatic glands of the neck and of the mesenteric glands, and also *extensive tuberculosis of the lungs and spleen*." Here, again, is pulmonary tuberculosis from feeding, complicated, it is true, by disease in other organs; but who could say, without knowledge of the history, by what channel the bacilli entered?

The whole question, therefore, is strictly bacteriological, the question being: Is the bovine tubercle bacillus virulent for man?

It is interesting to note that Dr. Theobald Smith, of Harvard University, was the first to discover and report upon certain cultural, morphological and

pathogenic differences between human and bovine tubercle bacilli, and that since 1898 investigations have been conducted under the auspices of the State Live Stock Sanitary Board for the purpose of comparing tubercle bacilli from human and bovine sources. The comparisons that have been made were reported in part at the recent Congress on Tuberculosis in London by Dr. M. P. Ravenel, whose paper will appear in the *Philadelphia Medical Journal*. Dr. R. R. Dinwiddie, of the Agricultural Experiment Station of Arkansas, has also reported his extended studies of the same problem. It thus appears that this question of the relationship between human and bovine tubercle has received more attention in this country than in any other. The work that has been done here shows very clearly that for experimental animals tubercle bacilli from cattle are in all cases as virulent and usually very much more virulent than tubercle bacilli from man. The animals used in these comparisons include herbivora and carnivora and species that are resistant as the horse, goat, rabbit and dog, and species that are vulnerable as the guinea pig, cat, swine and cattle.

In the face of the fact that the bovine bacillus is so constantly more virulent than the human bacillus for experimental animals of so widely different species and habits of life, it does not seem safe to conclude because the human bacillus is not especially virulent for cattle that the bovine bacillus is nonvirulent for man. Koch has said that this question could be settled positively only by the impossible expedient of inoculating a person with bovine tubercle bacilli. But it has happened that such inoculation has already occurred accidentally in several instances. A number of men have contracted tuberculosis and several have died from infections sustained in making postmortem examinations on tubercular cattle. These accidental cases show beyond peradventure that the bovine tubercle bacilli may under some conditions be virulent for man.

With evidence of this sort before it, the British Congress could do little else than it did in recommending the continuance of all official and private efforts to repress tuberculosis of cattle and the institution of a thorough scientific inquiry into this whole subject of the relation of human and bovine tuberculosis.

Retained Placenta.—It is rare for the placenta to be retained in a cavity, like a bursal sac, the after-birth not being able to pass the constricted outlet. This pocket is formed below by the greatly contracted cervix uteri, and above by the less contracted uterus, about the insertion of the placenta. In discussing this variety of retained placenta, called in French, "*enchâtonnement*" of the placenta, in the *Journal des Sciences Médicales de Lille*, (1901, No. 19) Dervaux states that it is due, in a normal uterus, to too early contraction of the uterus after child birth, or to "hour-glass" contraction of the uterus, caused by retained or adherent placenta. Encysted placenta follows. It should be treated with anti-spasmodics and uterine dilatation. It is also seen in an irregular, coralloid or double uterus. Dervaux reports a case of coralloid uterus in a girl of 22, in whom the placenta was retained. Under an anesthetic, the hand, introduced, found a second, upper, cavity, from which the placenta was slowly detached. In this variety, artificial delivery of the placenta will be necessary, though a difficult proceeding. [M. O.]

*Dr. Ravenel's paper will be published in THE PHILADELPHIA MEDICAL JOURNAL synchronously with its appearance in the *University of Pennsylvania Medical Bulletin* in September.

Original Articles.

THE IMPORTANCE OF A MORE GENERAL STUDY OF
DISEASES OF THE NERVOUS SYSTEM.*

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Forty years ago but little interest was taken in diseases of the nervous system, and, in fact, at that time but little was known of them. It is true that at about the middle of the nineteenth century some earnest workers in neurology made discoveries in connection with the pathology and physiology of the nervous system, which aroused the world to the fact that there was something worth knowing in nervous diseases, but it was not until the latter half of the century that real progress began to be made in these disorders. In 1863, Broca made the first contribution of real importance in cerebral localization when he announced the fact that the cerebral seat of spoken language was in the third frontal gyrus, and this convulsion has been known by his name to the present day. In 1858 Duchene published his classic paper on a form of paraplegia, which he called "Locomotor Ataxy;" and Trousseau, by his reference to this communication in his famous lectures, gave it a widespread reputation. We must give credit, however, for the actual discovery of the disease to Todd, an English physician, who accurately described the symptoms in 1847, and expressed his belief that the pathological lesions were located in the posterior columns of the cord. Romberg, in 1851, also wrote of locomotor ataxy, and pointed out a symptom which is an early and important feature—namely, the inability of a patient suffering from this disease to stand with the eyes closed; hence the name "Romberg's sign," which is still in use. Duchene thought the pathological anatomy of locomotor ataxia was to be found in the cerebellum, but Charcot, Vulpian, Leyden, Lockhart, Clark and others demonstrated his error and showed that the original idea of Todd was the correct one—namely, that the earliest lesions of the disease are to be found in the posterior columns.

The true progress in our better understanding of nervous diseases has been undoubtedly due to the study of the localization of the lesion. This has given a strong impulse to the thorough and intelligent investigation of diseases of the nervous system, and has placed on a firm and scientific basis the study and diagnosis of all these affections. Probably no one has added more of value to the subject of localization of nervous diseases than Hughlings Jackson. His papers on this subject began to attract attention in 1863, and from that time until the present he has been a constant and brilliant contributor to the subject. Ferrier, through a series of experiments on the lower animals, especially the monkey, has demonstrated the functions of different areas of the brain. His first paper was published about 1876. It would be invidious to mention other names, because since the time of

Broca so many have contributed to this subject that one could not undertake to say whose work has been of most importance.

In 1865 no medical schools in this country gave a course of lectures on nervous diseases, nor was any special attention paid to the subject clinically or otherwise by the teachers. About this time, however, an interest began to be awakened in this country, due, to some extent, to a consequence of the large number of nervous diseases which resulted from the war, either from wounds or otherwise, and probably the researches of Weir Mitchell and W. A. Hammond had much to do with creating this new interest. In 1871 the New York Neurological Society was organized, and in 1875 the American Neurological Association, and a few years later the Philadelphia Neurological Society came into existence; and now in Chicago, Boston, Baltimore and several other of the larger cities there are societies devoted to the scientific study of nervous diseases. In nearly all of the prominent medical schools there have been established in the past few years Chairs of Neurology, or courses of clinical lectures are regularly given on this subject. The growth of the study of nervous diseases has been somewhat slower in the South, but here its importance is being recognized. Some of the schools are giving courses on nervous diseases, and in every city of the South men are to be found with greater or less experience in nervous diseases. This is particularly notable in the asylums for the insane, which are in charge of men who are making scientific study of mental diseases, and many valuable papers on mental and nervous diseases have been contributed within the past few years by the medical superintendents of asylums in the South. Nevertheless, even now the general practitioner has not had forced upon him the necessity for a thorough acquaintance with nervous diseases. This is probably because they are not yet sufficiently studied, and other special subjects, notably gynecology, laryngology and ophthalmology seem to have attracted the attention of the general practitioner to a greater extent.

Another reason for the want of familiarity with the subject is, that there is a general impression that nervous diseases are obscure and difficult of comprehension. This is not the case. If one will only remember his anatomy and physiology, the diagnosis and localization of diseases of the nervous system become easy. It is of the utmost consequence that the practitioner should have a good acquaintance with neurology, for it is he and not the specialist who first sees the patient who is suffering from some nervous trouble in its incipency. The early recognition of all disorders of the nervous system is absolutely necessary, for it is in the prodromal stages of these affections that it is possible to arrest the onset of a disease, which, when once established, is irresistible. It is like the spadeful of earth which will stop the little stream in a crevasse which is the forerunner of a break in the levee, but in a few hours thousands of carloads will have no effect in controlling the raging torrent which rushes through the embankment.

There is probably no disease in which it is of more consequence to recognize the first symptoms

*The annual address read before the South Carolina Medical Association April 18, 1901.

than in paresis. The earliest symptoms are not conspicuous and are often transitory. The patient may seem somewhat erratic, and his actions and language may be little more than exaggeration of what is natural to him; but close observation will show that there is undue enthusiasm or excitability in regard to matters of individual interest; that there is some failure in memory, and that he has a less high ethical sense than formerly. Careful physical examination shows some changes in the pupils, probably a slight tremor of the lips in speaking, and a tendency to slurring of syllables and words in speaking may be noticed. These points should excite the suspicion of the observer and make further study of the case imperative. Paresis is most insidious in its onset, and it is only by careful study that the early diagnosis can be made. In its earliest stage it may be mistaken for neurasthenia combined with hysteria, for there are many symptoms common to both. The patient often suffers from headaches, insomnia, attacks of migraine, digestive disorders, which are attributed to nervous dyspepsia, and hypochondriacal depression. As the disease progresses faults of memory appear; words are misused in speaking or writing; the speech is affected, becoming hesitating and jerky, and certain words are pronounced imperfectly. For example, in saying a long word like "intelligence," some syllables are left out and the word elided, or sometimes the syllables are repeated. Then certain mental peculiarities appear; the patient's moral sense becomes blunted and the proprieties of life are not observed keenly; interest in important affairs gives way to inordinate enthusiasm about trifles; the patient gets careless about business; he constantly loses or mislays things, makes mistakes in money matters and business affairs; he confuses people with each other; he loses his way; he becomes extravagant in his purchases, believing that he has endless wealth, and is excitable, being easily angered and pugnacious, and exhibits tendencies to alcoholic and sexual excesses. At first the patient seems conscious of his not being in a normal condition, but later he is entirely oblivious of his changed state. After a period varying from a few months to several years, the prodromal stage is passed and the symptoms become more pronounced.

Physically, certain important symptoms are not conspicuous, namely, the articulation and handwriting. Marked tremor of the lips, tongue and facial muscles appear, and later there is general tremor, especially of the hands. Myosis, or pin-point pupils are frequently present; the pupils may be unequal, one being much larger than the other, or there may be irregularity in the shape of the pupil. The Argyll-Robertson pupil is also present in some cases. There is entire loss, or there may be exaggeration of the tendon reflexes; then comes muscular weakness, apoplectic or epileptic seizures take place, and finally the patient becomes emaciated and has various muscular disorders. Mentally, the symptoms become equally characteristic as the disease advances. Weakening of memory and judgment are noticeable; the patient becomes possessed of delusions of enormous proportions, either of an exalted or depressed nature. Hallucinations and illusions of various kinds are present.

Sometimes the patient is in a state of great exhilaration with the happiest ideas, and at other times he may be in a condition of the deepest melancholy. In the terminal stages there is a condition of dementia; the patient is unconscious of his surroundings, recognizes no one and is entirely imbecile.

As sixty to seventy per cent. of the cases of paresis have a history of syphilis, it is obviously important to begin with constitutional treatment as soon as the disease is recognized. Some writers allege that, if taken in the beginning, the disease may be arrested, but even if this be not true, and most neurologists take this view, it is often possible to delay the progress of the disease by appropriate treatment. Unfortunately, paresis is incurable, and sooner or later characteristic symptoms become established and the case terminates fatally. Nevertheless, even if no permanent good is done by treatment, the value of distinguishing the affection early is great. It enables the physician to so direct and order the life of the patient that he may be prevented from committing acts which would be distressing or humiliating to himself or to his family, and measures may be taken to preserve his estate from being squandered.

Paresis was formerly unknown among negroes, but since the war it is comparatively common. Berkley refers to this as "one of the results of Civilization and Syphilization" in that race.

Locomotor ataxia is another common neurosis the onset of which is often gradual and insidious. It is a disease which the general practitioner often fails to understand. I have been asked to see cases in consultation with the family physician, who informs me that he has already made a diagnosis of locomotor ataxia, and on examination I find grossly exaggerated reflexes and spastic gait. It is true that the patient has ataxia of station and gait, and that his disease is quite as incurable as tabes, but he has not the clinical features of the latter malady. Ocular symptoms are early in locomotor ataxia; quite often the first thing wrong which is observed is diplopia from paralysis of the sixth nerve. This may not last for more than a few weeks or months and usually disappears not to return. The pupillary reflexes may be lost before any other symptom is present, and there may also be myosis. If one sees a patient with pin-point pupils, it is always wise to examine for other symptoms of tabes. The deep reflexes are lost early, and severe attacks of neuralgia in the extremities may be a forerunner of the disease. In some cases the first thing noticed by the patient is inability to stand while his eyes are shut, while washing his face. Hammond relates the case of a man who found that, when mounting his horse, he could not put his foot into the stirrup without keeping his eyes upon it. When the disease is established, there is an array of symptoms which are distinctive, and should not be confounded with any other neurosis. The patient's walk is peculiar; he keeps his eye on the ground in front of him to preserve his equilibrium; his heels meet the ground first, and there is a general unsteadiness and inordination of the movements of the legs. The gait reminds one of a blind horse who steps high to avoid unseen objects. Inability to stand with the eyes closed for the shortest space

of time is present. The knee-jerks and other deep reflexes are abolished, but the plantar reflexes may be preserved. The pupils are often contracted and do not respond to light, but do contract and dilate in accommodating for distance, the so-called "Argyll-Robertson" pupil. The arms may be ataxic, and there is great awkwardness in the use of the hands, and if the eyes are shut the patient cannot employ the fingers for the simplest acts; for example, buttoning or unbuttoning the clothing. Sensation is greatly impaired and localization and tactile sense are poor. The slowness in the conduction of a touch from the extremities to the brain is characteristic. Gastric crises occur, characterized by violent attacks of vomiting and epigastric pain; and pain crises are frequent and distressing, the pain being lightning-like, shooting or darting through the limbs, or it may be boring in character and confined to a small area, no bigger than a fifty-cent piece. Usually the attacks of pain are most severe in damp weather, and are often barometer-like in foretelling a storm.

The disease progresses steadily from bad to worse; in some cases the advance is much slower than in others, and sometimes it may be arrested or greatly ameliorated, but it is never cured. If treated early much can be done. The patient can be taught how to take care of himself in the way of suitable clothing, and in the selection of a residence in a climate in which no violent changes of temperature occur. Medication is of but little service, but hygienic measures are of the utmost importance.

Another disease in which early diagnosis makes the difference between recovery and an incurable condition is Multiple Neuritis, which has of recent years become a recognized entity. Formerly it was confounded with tabes, myelitis and progressive muscular atrophy. I have been surprised, however, to find that even now it is not generally understood. In the past few months I have had two cases of complete and extensive multiple neuritis sent to me by excellent general practitioners, in both of which the diagnosis of hysteria had been made. One was alcoholic multiple neuritis and the other a remarkable case of general neuritis following an uncomplicated labor. One of the commonest causes of multiple neuritis is excess in the use of alcohol. The foot and wrist drop, hyperesthesia and tenderness of the nerve trunks and the mental disturbance are typical. If recognized early, and all alcoholic drinks are immediately withdrawn, the disease is soon cured, but if the patient is allowed to continue the use of stimulants in any form, the disease steadily becomes worse and ultimately reaches a fatal termination. I recall a case of alcoholic neuritis in which a correct diagnosis was not made, and the patient was allowed to take quite a considerable amount of whiskey, because it was felt that he needed it for its strengthening effect. The patient grew progressively worse and finally died.

Other forms of multiple neuritis are met with, and are usually toxic or of infectious origin. Thus diphtheria, typhoid fever or puerperal infection, and diabetes not uncommonly cause multiple neuritis. Certain drugs or metals absorbed into the system will also produce the disease. Lead mul-

tiple neuritis is quite common among painters and others who handle white lead. I have seen one extreme case in a young girl who used powdered white lead as a cosmetic. Arsenic may be a cause, and several cases are on record, and I have seen two myself, in which the administration of Fowler's Solution in the treatment of chorea has produced general peripheral neuritis. The prompt and early diagnosis of the case is essential, because then the removal of the exciting cause places the patient in a position where he can be cured.

The advances of modern surgery have enabled us to open the skull and remove new growths from the brain with comparatively little danger to life. The success of the operation depends to a great extent upon its early performance, and therefore early diagnosis and localization of a cerebral tumor enables the surgeon to do his part well. If the existence of the growth is not discovered until it has attained a large size, and when it has infiltrated the brain substance, and the patient is exhausted by long suffering, the risk of the operation is far greater and the chances of successful extirpation of the growth are smaller. The outcome of brain surgery is not invariably good enough to make one enthusiastic, for the number of tumors which are removable is comparatively small. We must remember, however, that occasionally we do get brilliant results, and that even if the growth cannot be removed, the patient seldom dies as a result of an exploratory operation, and there is always relief to pain and other distressing symptoms. If the diagnosis of brain tumor is established, and no relief is afforded by the free and judicious use of alteratives, an operation should be done at once, provided, of course, that the growth can be accurately localized. If the neoplasm is in the motor area, localization is generally simple. Knowing, as we do now, the functions of the greater part of the cerebral cortex, one should be able to fix the position of a tumor with reasonable accuracy, provided that it is not in one of the silent regions of the brain; for example, the frontal lobe.

Tumors of the spinal cord have been successfully located and operated upon. Horsley first removed a tumor of the cord in 1887 and MacEwen shortly after was successful in similar operations. Operations upon the spine are more difficult and hazardous to life than those upon the brain.

A better understanding of hysteria enables us to distinguish that disorder from organic disease, but sometimes even the elect are deceived. It often happens that organic diseases, especially tumors of the brain, have associated with them various stigmata of hysteria. Not long ago I saw in consultation a married woman of thirty years of age, in whom there were many symptoms of hysteria. She was emotional and had had mild religious melancholia for several months. Then came convulsive seizures, which seemed to be under the control of the patient when she was spoken to in a positive and authoritative way by her physician. I found, however, on examination, that there was paresis of the left arm and leg; that the leg was spastic in attempts to walk, and what was very diagnostic, that there was violent patella tendon reflex, and strong ankle clonus on the left side, while on the right these reflexes

were normal. This convinced me that there was present a tumor of the brain, and an examination of the eyes by an oculist revealed optic neuritis and choked disk, thus confirming my opinion. The convulsive attacks of the left leg and arm, with absence of face involvement, and no loss of sensation, made me locate the growth in the upper portion of the right motor area. An operation was done, and a growth springing from the dura, the size of a duck egg, and dipping down into the fissure of Rolando, was removed. Owing to an unusually thick skull and extreme vascularity of all the tissues, there was great loss of blood, and the patient unfortunately died a few hours later from hemorrhage and shock.

Neurasthenia is a disease which is still a stumbling block to many. If we regard it as a condition of malnutrition, and as a fatigue neurosis, with irritable weakness of the nervous system, we will understand it better. The manifestations of neurasthenia are manifold. They are headache, backache, general lassitude, insomnia and weakness of the digestive and sexual apparatus. Probably no one of these symptoms is more constant or gives rise to more annoyance than the digestive disorder or "nervous dyspepsia," as it is so often called. We must realize that the gastric symptoms are of two kinds, those which precede the neurasthenia for months or even years, and which may be regarded as causative, and those which arise as a result of neurasthenia, and in which the gastric indigestion is due to defective nerve force. I believe that the latter form is most common, and the only way to cure it is to cure the neurasthenia. Build up the system, repair the nerve force and renew the quality of the nerve cells, and the dyspepsia will yield to appropriate treatment and often will disappear without any special treatment. By far the most successful method of treatment in neurasthenia is the "rest treatment," and isolation is the keystone of that treatment in most cases.

The fuller understanding of nervous diseases has led to better results in their treatment. Many diseases which used to be considered the opprobria of medicine are now more or less amenable to remedies and are greatly benefited by modern methods. Take epilepsy for example: This disease, which was formerly considered insusceptible of relief, is, in many instances, greatly ameliorated by suitable methods and is sometimes apparently cured. It is not at all uncommon to see cases of epilepsy, in which long remissions varying from months to several years occur as the result of properly applied measures, both hygienic and therapeutic. The judicious and careful use of the bromides certainly keeps the attacks under control in many instances, but the remedy must be kept up continuously and its effects carefully observed. A plan of giving bromide in epilepsy, which has been recently advocated by Gilles de la Tourette, seems the most methodical and scientific yet devised. It is what is called "the adequate dosage method." This plan is based on the determination of the actual individual tolerance of each patient by watching for certain physical signs peculiar to the drug, indicating the approach of tolerance. The individual "adequate dose" thus established is maintained for a length of time sufficient to completely abolish the

hyper-excitability of the brain cortex in epilepsy, and with it all tendency to seizures. The method is well worth further study and investigation. Other diseases have been successfully treated in this way, such as migraine, Meniere's vertigo and tic douloureux.

Perhaps the greatest advance which has been made in the treatment of epilepsy has been in the general care which has been bestowed upon the unfortunate class who suffer from this disease. An effort has been made to take from the almshouses and insane asylums the indigent epileptics who have been sent to these institutions as the only resource, and colonizing them in farms and rural districts. Special institutions for the care of epileptics have been established within recent years in Europe and in different parts of this country. The first attempt at anything like establishing an institution for the special care of epileptics was made as long ago as 1773, by the Bishop of Würzburg, Germany, by providing a home in connection with the Julius Hospital; and in 1845 a separate building was erected for forty-eight patients. The most important step in the direction of a colony for epileptics, however, was taken at Laforce, France, in 1848, when John Bost, a clergyman, with the aid of his parishioners, opened a cottage for the accommodation of fifty homeless epileptic girls. The growth of the institution has been quite remarkable. In 1862 another cottage was opened for boys, and additional cottages have been added, until now there is a large village entirely occupied by epileptics. In 1867 the celebrated colony of Bethel, near Bielefeld, was founded by another minister, Pastor von Bodelschwingh. The development of this colony has been extraordinary. The number of patients there in 1897 was 1441. There were 663 women, 550 men and 228 children under fifteen years of age. During the year 1897, 250 patients were received and 109 were discharged. The entire number of patients received in the colony since its establishment until January 1, 1898 was 5028. Of these, 388 or 7.7-10% were discharged as cured; 1009 or 21% improved; 1058 as not cured and 991 or 19.1-10% died.

The examples of these institutions led to the establishment of several others in Europe, and within the past ten years similar institutions have been organized in this country. The first State farm for epileptics in this country was established in Ohio in 1893, and this institution seems to be in a flourishing condition. In 1894 the State of New York appropriated \$115,000 for the purchase of a farm in the Genesee Valley, which had formerly been occupied by a Shaker community, to be used for the establishment of a Colony for Epileptics. This is a splendid tract of land in the most beautiful and picturesque part of New York State. The colony consists of about 1900 acres, most of which is fertile and arable land. It was opened in January, 1896, and it now contains between five and six hundred patients. These patients are employed in working on the farm, caring for live stock and performing all manner of manual labor. In the winter they are employed in the workshops and are kept usefully occupied.

In several other states there are similar institutions. In the State of Pennsylvania there is a col-

ony farm which has been organized and equipped with fine buildings by private enterprise. This institution was opened in February, 1868, and is conducted on the same principles as the Craige Colony Farm in New York. In other states efforts are being made to establish similar institutions. My friend, Dr. Drewry, of the Central State Asylum of Virginia, has been greatly interested in this subject, and has succeeded in interesting the Legislature for the establishment of a colony farm for epileptics. It is to be hoped that in every state in the country there will be similar institutions established. The results of the care and treatment of epileptics in institutions like these mentioned are most encouraging. The number of fits lessens to an extraordinary degree, simply as a result of the carefully regulated life and close attention to hygienic rules, and the amount of drugs which is required is reduced to a minimum.

I might go on indefinitely citing cases to prove my original statement that early recognition of nervous diseases is essential to their successful treatment, but it would exhaust your already sorely taxed patience. I cannot refrain, however, from giving one more illustration, and that is myxedema and sporadic cretinism. Osler, in a recent paper, says: "It is astonishing with how little reading a doctor can practice medicine, but it is astonishing how badly he can do it. Not three months ago, a physician living within an hour's ride of the Surgeon General's Library, brought his little girl, aged 12, to see me. The diagnosis of infantile myxedema required only half a glance. In placid contentment he had been practicing for twenty years in Sleepy Hollow, and not even when his own flesh and blood was touched did he rise from an apathy as deep as Rip Van Winkle's sleep. He had never heard of myxedema or cretinism." There is nothing in modern medicine which is more marvelous than the influence of thyroid therapy in myxedema. A flaccid, stunted dwarf, with pendulous abdomen, bowed legs and puffy and bloated countenance, and a tongue so large that it cannot be retained in the mouth, and possessing no more sense than an idiot, after a few months of thyroid feeding becomes a straight, active and intelligent being. The dropical puffiness disappears, the tongue is held in the mouth, and what is most remarkable, several inches are often added to the height even after the age of thirty years.

And now, gentlemen, I trust from what I have said, that I have made it clear of how great importance a more extended study of nervous diseases would be for the general practitioner and family doctor. The next question is, what facilities and opportunities are available for this study? It seems to me that every doctor throughout the country ought to refresh his mind by taking, from time to time, a course in special subjects. He should go to the larger cities, where there are great opportunities for the study of all specialties, particularly nervous diseases. It is only by the study of disease, by the investigation of large groups of cases, that the best results can be obtained. In the great cities like New York, Chicago, Philadelphia and Baltimore, there are many post-graduate schools of medicine, and here neurology can be best studied in a

comparatively short time. Every physician should use his influence for promoting the teaching of nervous diseases in the medical schools in his own state. He should insist that a special course on neurology should be given, and more particularly that Chairs of clinical neurology should be established, so that students will have the opportunity of seeing and personally studying the various forms of nervous diseases. The study of the anatomy of the nervous system is a necessary preparation to the clinical observation of neurology, and there is nothing of greater value than the work done in the laboratory devoted to the pathology of the nervous system. The foundation must be first laid upon a thorough comprehension of the normal histology of the nervous system: then the student will be able to appreciate the pathological changes which take place, and with this preparation the study and treatment of nervous diseases becomes a matter of actual pleasure and deep interest to the general practitioner.

THE MOSQUITO AN INSIGNIFICANT FACTOR IN THE PROPAGATION OF YELLOW FEVER.

By JOHN H. PURNELL, M. D.,

of Vicksburg, Miss.

State Health Officer in charge of the Epidemics at Edwards, Miss., 1897 and Jackson, Miss., 1898.

Since the first observance of yellow fever there have been controversies constantly occurring relative to its mode of transmission and propagation; but the fomites theory has always been maintained in the lay, as well as medical world. La Roche made a most masterly onslaught on this theory, and dealt a staggering blow, but practical experience in the epidemical field by men of observation, restored its equilibrium, and until the meeting of the Pan-American Medical Congress in Havana, Cuba, in February last, its acceptance was universal, with possibly a few dissenting voices. The sudden announcement that the whole Medical World was entirely wrong, and had been pursuing an "Ignis Fatuus" was startling indeed; and the further claim that the mosquito, alone and unaided, was solely responsible for the distress, desolation and death, resulting from epidemics, seemed a little less than marvelous.

Many—and some in high places—in the Medical World, accepted the new dictum without a word of protest, and have already advised the abandonment of the protective measures now in vogue against the introduction of the yellow fever germ, and declare them to be unnecessary and unscientific. Others cling to the old customs, and marvel at the complete annihilation of the accepted theories of years, by a series of experiments conducted in a camp, on eighteen or twenty subjects, in the winter season, when the virulence of the yellow fever germ is on the wane.

Ordinarily, in mid-summer, we can control an epidemic if the people can be moved to a camp; Fortress Monroe, 1899, for example. As to the soiled material which was introduced into the little cabin being sufficient upon which to base an absolute conclusion, is concerned, I point to the fact that in nearly every epidemic analogous instances

may be found—La Roche teems with them—and cases of fever do not occur simply because the *infect* is absent. Stench and filth are incapable of producing infection. What does, is shrouded in mystery. The germs, as they are discharged from the human body, do not at first seem capable of infecting, but must remain for a time in an undisturbed atmospheric area which is suitable to their evolution before infection is possible. Unless the proper meteorological conditions prevail, the poison seems to be inert.

An illustration of the conditions not being present, is found in Keating's History of the Epidemic of 1878, in speaking of Camp Joe Williams, which was located near Memphis, and was peopled by a thousand or more refugees from the city. A number of persons who had become infected before leaving the city developed the disease after reaching the camp, but from such cases there was no spread. Surgeon R. B. Nall, who was in charge of the camp, says: "The remarkable and favorable feature of Camp Joe Williams, was that the disease did not spread amongst its inhabitants, nor did those who visited the camp from the surrounding country contract the disease. * * * *

"On the arrival of the refugees, every article of bedding and clothing which favored the propagation of the disease was destroyed by fire. * * *

Five of the eight male nurses employed in the hospital, after nursing for three or four weeks fifteen or twenty patients in all stages of the fever, thinking themselves proof against the disease, went to the city to offer themselves to the Howard Association as nurses because of the higher prices paid. They found the sick bountifully supplied with nurses from elsewhere, and were unable to obtain positions, and returned to camp. Four of these men died in the hospital in which they had nursed—the fifth was found dead between the city and camp. The other three nurses did not visit the city, but remained in the hospital during the epidemic (seventy-two days), nursed and buried their comrades, but were not attacked themselves."

The foregoing is a plain unembellished statement of a reputable physician, and contains several points of interest in connection with the recent investigations carried on in Cuba.

1st: If the bedding and clothing in the hospital at Camp Joe Williams during the *summer* weather did not become infected, is there not good reason to suppose that the material taken from Las Animas Hospital and Quemados in November and December escaped likewise? The non-immune physicians and nurses who attended yellow fever patients in Las Animas in 1899 failed to develop the disease while there, but did develop it afterwards from an infected center. (Information from Surgeon H. R. Carter)

2nd: All bedding and clothing coming from the infected city was burned, and while yellow fever cases developed in those who had become infected before leaving the city, none occurred in any other—is it not reasonable to suppose that the precautionary measures were responsible for the immunity?

3d: Since it is known that mosquitoes plentifully

abound around the suburbs, as well as in the City of Memphis, and as no measures were adopted looking to the destruction of the pests, is it reasonable to suppose they would have confined their stings to the inhabitants of the city and permitted the camp to remain unmolested?

The mosquito's capability of conveying the yellow fever poison from man to man seems proven—that is—twelve days after its having been infected, its sting may produce yellow fever in the human. From the clinical histories of the cases reported as resulting from the mosquito stings, the impression is gained that the attacks were extremely mild. Is it not possible that after passing through the organism of the mosquito, the poison is so attenuated that immunity may thus be gained with but a small risk to life? Be that as it may, it is agreed that the mosquito, acting as a host, produces yellow fever, and that its supply of poison is obtained by stinging a person suffering with the disease. Where did the primary infection come from? If from a source independent of the mosquito—then it is reasonable to suppose that it may still be so obtained. If the mosquito is infected in other ways, than by stinging a yellow fever subject, then we should have epidemics with the advent of the mosquitoes. It is assumed, however, that the mosquito is infected solely from cases of yellow fever, and it is necessary that twelve days should elapse after the contaminating sting before infection is possible. Such being a fact, any cases developing earlier than the twelfth day must depend on some other agent. The history of the beginning of the epidemic at Edwards, Miss., in 1897, furnishes an illustration of such a condition.

On August 8th Mrs. A. returned to her home near Edwards from a visit to her daughter in Ocean Springs, Miss. At the time of her visit a sickness was prevailing, the nature of which had not then been determined, but shortly afterwards it was declared to be yellow fever; upon reaching home Mrs. A. was taken ill, and within two weeks her entire family of eight suffered attacks similar to her own. On August 25th, Mr. C., who resided in the neighborhood, visited the house, and on the 28th he visited the town of Edwards, and while there he was taken ill at the residence of his father-in-law, Col. M., where he remained until his death, which occurred on September 6th. He was buried on September 7th. On the night of Sept. 8th, Mrs. M. was taken ill. On Sept. 9th, midday, Col. M. was taken ill, and the evening of the same day, a young son of Col. M. also sickened. These cases were quickly followed by a number of others, occurring in persons who attended the funeral, amongst the number being two from a distance who are reported in Surgeon H. R. Carter's article on "The Period of Incubation of Yellow Fever." (*Medical Record*, March 9, 1901.) His report was as follows:

1st. L. M. W. went from Clinton to C.'s funeral, at Edwards, Miss., Sept. 7th, 1897; arrived about 11.30 A. M., and left that afternoon. She developed Yellow Fever at Clinton, Sept. 10th, at night.

2nd. M. C. went to C.'s funeral at Edwards, Miss., Sept. 7th, 11.30 A. M., and left that afternoon for Nitta Yuma, Miss., and developed Yellow Fever, Sept. 11th, night.

There was no question as to the C. case being the center of infection. What, then, was the agent of distribution? If the mosquito conveyed the poison,

the sting of contamination must have occurred on or after August 28th. The first case noted was Mrs. M., taken ill on the night of Sept. 8th, eleven days from the beginning of C's illness, and since the period of incubation seems to be about three days, then there remain only eight days from the first possible exposure.

Case 2nd and 3d gives us nine days, while cases reported by Surgeon Carter were only exposed once—ten days after primary case was taken sick.

If conclusion No. 3 of investigator is correct, then these cases could not possibly have developed through the sting of the mosquito. The rapidity with which cases developed after the 15th of September was truly marvelous. The population was composed of 325 whites and about 600 colored, and by the 1st of November—60 days after the first case—there had occurred 290 white, and 427 negro cases. Is it reasonable to suppose that each case was the result of a sting delivered by a mosquito who had stung a case of yellow fever twelve days previously? In this connection, dwell for a moment on the Epidemic of 1878, extending from the Gulf of Mexico, throughout the Mississippi Valley to Gallipolis, Ohio, and resulting in 72,000 cases, with 16,000 deaths. Is it reasonable to suppose it was accomplished by the Mosquito?

In yellow fever literature quite a number of instances are recorded where the introduction of infection is attributed to fomites, and I believe those who reported the instances were impressed with the correctness and authenticity of the circumstances.

The following case fell under my observation:

On Sept. 14th, 1897, Mr. and Mrs. B. refuged to their home seven miles from Edwards, Miss. A number of people were in the house at the time of their arrival, but all left with the exception of Mr. and Mrs. H., (daughter and son-in-law of Mr. and Mrs. B.) and three servants. Mr. B. developed yellow fever on September 15th and died on the 17th. He was buried on the same day and everything was destroyed that had been in the room. The room was disinfected and sealed up. The portion of the house in which the case occurred was separated from the other rooms by a twelve foot hall in which sulphur was kept burning for two weeks. Mrs. B. had all of her clothing destroyed with the exception of a cashmere shawl, and this she was desirous of keeping; so it was placed in an upstairs room close to the eaves. On October 5th, thinking all danger of a recurrence of the disease past, preparations were made for the return of the family. Mr. H. visited the upstairs room and finding the shawl, threw it down stairs and called to some one to remove it out-doors. His wife responded and as she started out, met her mother, who attempted to rescue her property. Further than this I was not told, but two days after the episode, Mrs. H. developed yellow fever, followed by Mr. H. one day later, and Mrs. B. developed a case on the fourth day. Ten days subsequently two of the servants suffered attacks, presumably from a second infection of the house.

In Dr. Matas' article in the October, 1897, issue of the *New Orleans Medical and Surgical Journal*, he quotes an illustration of conveyance by fomites. The facts, he says, were furnished by Dr. Shannon, of Ocean Springs, Miss., in a letter to Dr. Bemiss:

On the 14th of October, 1883, Maj. J. B. D. died of yellow fever in Ocean Springs. I moved the family to a healthy locality where you saw Miss B., not allowing them to take any article from the room where the husband and father had died. The children applied to me for a lock of their father's hair, which I refused, but the older daughter, now dead, prevailed upon the nurse to give it to her. She placed it in an old envelop that had been torn

open at the end, and carefully folded the torn end down, thus practically sealing it, and laid it away among other old letters. On Sunday, the 4th of November, at 12.30 P. M., she brought this envelope out upon the gallery and opened it for the first time to examine the lock of hair, and to show it to her aunt, Miss S., who was visiting her, and upon inhaling the concentrated poison confined in the envelope and emanating from the hair, exclaimed: "O! what a peculiar smell." She then handed the envelope to Miss S., who unconscious of danger, also inhaled the "messenger of death" with a similar exclamation. When Mrs. B., who was standing near, reached out her hand for the envelope, but was prevented by the entreaties of a fretful child to be taken up in arms. This gave time for reflection, and she admonished the young ladies of the possible danger. The envelop was carefully folded and with its fatal contents replaced in the drawer, where it has been since the 14th of October. This drawer has been almost daily opened. On the following Saturday, November 10th, at 9 P. M., Miss S. was taken sick with a chill, and Miss B. at about 2 A. M., some five hours later, the period of incubation being less than seven days in both cases. No other person handled the fatal envelope or in any way came in contact with it, and there is after the most careful inquiry, no suspicion of any other source of infection in these two cases. Miss S. died on November 14th; Miss B. on November 16th.

In this case there was an interval of twenty-seven days between the death of a single case of yellow fever and the development of a second. It is presumable that in the removal from the house the mosquitoes were left behind. If, however, one or two had been carried from the house, it would have been a strange coincidence indeed for them to have selected these two young ladies, who had been in contact with the hair, for victims.

Dr. J. A. K. Birchett, State Health Officer, at Taylor, and Orwood, Miss., during the 1898 epidemic, reports the two following cases of infection by fomites as having fallen under his observation:

1st: "On September 7th, I visited the Gray House midway between Taylor and Orwood, and found Mr. McC. confined to his bed with an attack of yellow fever. About September 15th he packed the clothing worn at the Gray House in a valise and proceeded to his home, about ten or twelve miles distant in an isolated spot. On October 13th his wife removed the articles from the valise and hung them out for an airing. On October 16th, at 3 P. M., she sickened with an attack of yellow fever."

2nd. "Miss A. B. attended the funerals of Dr. G. and H. W., on August 10th and 11th, at which time she was clad in a woolen dress, which she took off and placed away in a closet on her return home. She was exposed to a case of yellow fever at 7 P. M., August 25th, which was positively the last exposure to yellow fever. About September 20th she was renovating the house and removed the clothing (the woolen dress amongst other things) from the closet to air them. She was taken with yellow fever at 7 P. M., September 25th. The isolation of these premises had been perfect, it being dangerous to attempt an approach to the house, as my driver can testify; he was shot while attempting to cross a portion of the place."

In the History of the Yellow Fever Epidemic in 1878, by J. M. Keating, are mentioned a good many instances of fomites infection, several of which will bear relation:

1st.—At a meeting of the Davidson Co. Medical Association, Dr. Drake, of Nashville, reported the following case:

"At Jacksonville, Tenn., in 1878, a gentleman returned from Memphis, and upon reaching home hung his clothes in a wardrobe. After several days his wife took the clothing out. We would suppose that in a close hot room the poison would multiply itself in this time until the air would be heavy with it; and so it seemed in this case, for the lady took the yellow fever and died, followed in due

time by the rest of the family. The husband developed the disease only when confined to the house ministering unto the sick."

2nd.—Dr. T. J. Heard, of Galveston, Texas, is quoted as follows:

"About December 1st, 1864, Mrs. Vincent, sister of Ex-Lieut. Governor Anderson, fled from Houston on account of yellow fever. A negro left behind took the disease, and as there was great lack of blankets, an old carpet was used instead. Six weeks afterwards Mrs. Vincent returned, and going in the garret took the carpet out to air it. Four days after this she had a most violent attack."

3rd.—Dr. Jacob S. West, of Texas, is quoted as reporting two instances where coffee introduced infection. Both occurred in 1867, and are related as follows:

"At Liberty, Texas, a sack of coffee landed two miles below town from the steamboat Ruthven, which coming from Galveston, was refused permission to land at the wharf. This sack was taken on a dray to Liberty. All who shared the coffee were stricken with fever, which spread with disastrous effects."

"The second case was that of a sack of coffee which was hauled fifteen miles in an open wagon from Corpus Christi, where fever prevailed, to a point near Meansville, where it was divided among the purchasers. No one of them escaped and many of them died; but those who did not so share, singularly enough, escaped."

4th.—Keating reports on the source of infection at Covington, Tenn., as follows:

"The only person who had the fever at Covington, Tenn., in 1878, was the Post Master, who received and opened a heavy mail that had been detained in the Memphis Post Office for some time. In three days he died of yellow fever."

The foregoing reported instances of fomites conveyance, I think, are sufficiently authentic to demand a careful consideration before discarding the theory that has been uppermost in medical minds during the past century. * * * At the present time few, if any, medical men seriously believe in the origin of yellow fever in the States, but a recrudescence has been occasionally noted. It can scarcely be conceived that the mosquito could harbor the germ for such a time as marks the period between the last appearance of the disease and its recurrence. Consider the epidemics of 1878 and '79 in Memphis. An extremely cold weather followed the '78 epidemic, and in the early part of July, 1879, cases appeared in several portions of the city simultaneously, and in different strata of society, proving that each case developed independently. On July 9th the Mulbrannon case was reported from the eastern part of the city; on the 10th Judge Ray's family (several cases) was reported from the western, and the Tobin family was reported from the northern part. After ten days or two weeks had elapsed an epidemic prevailed.

Edwards, Miss., is another illustration of a recrudescence—a few cases occurring in September, 1868, following the epidemic of the year before. The recurrence of the disease on the Plymouth is a striking illustration of a recrudescence. The reappearance of yellow fever on her as the tropical seas were approached, after disinfection and a subjection to freezing weather for three or four months, certainly indicates that the morbid principles of the disease were hidden away in some of the nooks or niches of the hold. The history of the old "Jamestown," in 1858, is even a stronger argument against the

mosquito than the "Plymouth." It is related by Dr. Nelson in the Twentieth Century Practice as follows:

"It (the fever) duly appeared on the United States Steamship "Jamestown," on which as many as eighty officers and men died. A crew took her North to San Francisco. She was kept in the Northern Pacific for a period of two years, when she was ordered to the Hawaiian Islands. Upon getting into the Warm Belt, yellow fever reappeared. Had she been sent to a yellow fever port, and had the disease appeared, the claim might have been made, and with great propriety, that the vessel had been infected *de novo*; but this is clear and emphatic evidence to the student of yellow fever of the vitality of the poison of the disease. In Hawaii yellow fever is unknown."

The following is from the same author:

"I will cite another case illustrating the vitality of the poison of the disease. A small vessel in the tropics had had yellow fever on board. She was sent North in the fall of the year and sunk in a northern river. When the winter came on the vessel was frozen in, or submerged in icy cold water all winter. In the spring she was pumped out and raised, after a time put in commission, and sent again to a warm climate. Upon getting into the warm belt, and before making a port, the disease reappeared."

It does not require a very close scrutiny of the foregoing to cause us to conclude that there must have been some other agency at work than the "Culex Fasciatus." From a recrudescence of the disease, we will pass to another phase. If the absolute absence of mosquitoes, would prove the development of a case of yellow fever dependent upon some other agency, then the development of a case a week or more (I say a week because the period of incubation is placed at from 41 hours to 5 days) after the termination of a possibly infected mosquito's life, would also fix the agency elsewhere. Frequently have been found cases developing on ships one or two months after having sailed from an infected port; and such case or cases are usually associated with the disturbance of the cargo, ballast or something on shipboard. In the Medical and Surgical Memoirs of Dr. Joseph Jones is to be found the following illustration:

"The bark "Excelsior" sailed from Rio on May 10th, 1880, with a cargo of 3600 sacks of coffee. Crew consisted of three officers and nine men. They arrived at Mississippi Quarantine Station on June 24th, having been on the voyage about 46 days. She was released from quarantine and reached New Orleans on July 5th. No case of fever occurred on the voyage or at the quarantine station. About sixty hours after reaching New Orleans, and after discharging her cargo, James Kinney, one of her crew, was attacked with yellow fever and died in the Touro Infirmary, after throwing up black vomit. The first case was not reported to the Board of Health until July 10th, when the crew were mustered and ordered to stay on board. The bark was forcibly returned to the Mississippi Quarantine Station by order of the Board of Health. Cases of yellow fever occurred on board of the Excelsior on the 12th, 13th and 14th of July and deaths occurred in the Quarantine Hospital on the 17th and 18th of July."

In the article by Surgeon H. R. Carter, appearing in the April issue of the Philadelphia Medical Journal, appeared the following instances of long retained infection:

"British ship Avon, rock ballast, 22 in crew, all except four non immune, left Rio Janeiro April 20th, 1900. All well in port and en route until the thirty-ninth day out, when entering Ship Island, a boy sickened with yellow fever and died; one other man, a quarantine employee, who assisted in cleaning up the room where the boy was treated aboard ship, sickened fourteen days after."

"British ship Curlew, from Rio, in rock ballast, crew mainly non immune. All well in port en route, and on arrival. After cleaning ship, one man sickened with yellow fever, 64 days from Rio."

"British ship Chippewa, from Rio, rock ballast; all save 3 men and master non immune to yellow fever. All well in port, en route and on arrival. After cleaning ship, one man sickened with yellow fever, 68 days from Rio."

It seems to me to be utterly impossible to reconcile the mosquito theory with any of the above recitals; while the life of the mosquito has not been determined, the shortest period mentioned above certainly exceeds a mosquito's existence.

Among the many sanitary measures adopted, looking to the control of yellow fever epidemics, and to the complete eradication of the disease, no exertions were ever directed toward the mosquito's extermination, until the onslaught was made on the hatcheries around the suburbs of Havana within the last four months. Other islands besides Cuba, in the same vicinity, suffered from the ravages of yellow fever, and succeeded in freeing themselves from it, but not by the use of coal oil, insect powder and mosquito bars! Several instances, within the last few years, in the South have occurred where yellow fever has been completely stamped out, without, so far as is known, the killing of a mosquito. In 1899 the disease appeared in the Soldiers' Home at Fortress Monroe, and by establishing camps, and prosecuting sanitary measures, the epidemic was promptly checked. No effort was directed toward mosquito extermination, nor was there in the control of the fever at McHenry, Miss., by the Marine Hospital Service and the Mississippi State Board of Health.

The prompt measures adopted by the Mississippi State Board of Health, at Clinton, Miss., in 1897, confined the fever to one portion of the town, but their method did not molest the mosquito. * * * If the combating of yellow fever has been accomplished by controlling and destroying other agents than the mosquito—under conditions where the mosquito has been absolutely ignored and permitted to pursue his own sweet way, then it seems the mosquito has not been proven guilty of being the sole conveyor of the yellow fever germ, and we will do well to continue our search before crying "Eureka."

In presenting the foregoing data, I am aware that many will criticize it as being imperfectly exact. It is not offered, however, as conclusions based upon a scientific experimental research, but as facts as observed and related by men laboring in the field of yellow fever, which were not told for the purpose of proving a theory, but simply to chronicle happenings as they occurred, and as such demand attention. From my own experience, I am forced to the conclusion that the mosquito has been, and will continue to be, but a limited factor in the spread of yellow fever, and I have no hesitancy in predicting that future observation and study will convince the profession that fomites cannot be ignored.

TYPHOID FEVER WITH PERFORATION OF THE COLON AND GALL-BLADDER; OPERATION; DEATH; AUTOPSY.

By HERMAN B. ALLYN, M. D.,

of Philadelphia.

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Statistics that have been compiled in recent years show that it is possible to reduce the mortality from typhoid fever to seven per cent. Such a result can be achieved only in hospitals which are exceptionally well conducted; I might say, only in hospitals in which the treatment of typhoid fever is given special attention. Osler, from the Johns Hopkins Hospital, Baltimore; J. C. Wilson, from the German Hospital, Philadelphia; and F. E. Hare, from the Brisbane Hospital, Queensland, Australia, have reported a mortality ranging from seven to eight per cent. in large series of cases, all treated by the Brand method. We may regard seven per cent., therefore, as the best that can be achieved by the medical treatment of typhoid fever. It is well known that in most hospitals the mortality is higher, ranging from eight to eighteen per cent., depending largely upon the class of cases treated. The problem now is to reduce still further the number of deaths from this scourge of modern civilized life. Osler states that among 100 fatal cases, 50 die of the progressive asthenia; 30 of perforation, and 20 of other complications. Of 63 deaths in the first ten years of the work of the Johns Hopkins Hospital, nearly one-third were due to perforation. In 4,680 cases collected by Fitz, the mortality from perforation was 6.58 per cent. The mortality from progressive asthenia may be overcome by early recognition of the disease, prompt confinement to bed, and by the most zealous care of the patient throughout his illness, particularly with reference to feeding and to saving the patient's strength. The mortality from perforation must be overcome by early recognition of the accident and by immediate operation. This subject has recently secured the attention of some of our most skilful clinicians and surgeons: R. H. Fitz, W. W. Keen, William Osler, J. M. T. Finney, and H. W. Cushing. Finney has collected 112 cases of perforating typhoid ulcer which were operated on; 23 recovered, 20 per cent. This means that the lives of 23 patients have been saved by surgical interference, for practically no case of perforation recovers without operation. The following case is reported as a contribution to the statistics of perforating typhoid ulcer. The special difficulties in diagnosis which were encountered at the time of operation make the case of unusual interest:

W. C., colored, 19 years old, a native of Virginia, laborer by occupation, was admitted to the Philadelphia Hospital June 16th, 1901, complaining of pain in the left chest, headache, and pain in the abdomen; he was mildly delirious. The family and previous history of the patient could not be elicited from the patient owing to his delirium. From his appearance he was thought to be in the second week of typhoid fever. The ambulance history says: "The attack began six days ago with severe headache, and some pain in the stomach. There were no chills or chilly feelings. He says he was very hot. At present the headache is not so severe, but he complains of pain in the back and left side which is increased by deep inspiration. The bowels are constipated, but laxatives produced thin greenish

stools. The tongue is extremely coated and furrowed, red at tip. There is tenderness in the right iliac fossa. There is a dry hacking cough. No nose bleed. Pulse 128, tremulous; respiration 40, but quiet.

The patient was a mulatto, apparently about of age, fairly well nourished. The pupils were equal, slightly dilated, reacted to light and accommodation. The tongue was coated on the dorsum with a dry crust, the edges were indented by the teeth. The appetite was poor; the bowels were constipated up to admission, or until laxatives were given. The pulse was regular, soft, small, slightly tremulous. Respiration was increased in frequency and largely abdominal. The heart was normal in size, the sounds at the apex strong, the aortic and pulmonary sounds accentuated. There were no murmurs. The right lung was normal; the left lower lobe was dull on percussion, with bronchial breathing. The abdomen was distended and tympanitic, but there was neither gurgling nor tenderness. The spleen was not demonstrably enlarged. The liver was normal in size. There were a few pigmented spots on the chest. The extremities were negative.

After admission the patient's delirium at first increased. He lay with his eyes open, and while he could be roused to talk a little, he did not answer questions intelligently. He muttered to himself at times.

June 18th. Gurgling in the right iliac fossa. Left lung posteriorly shows bronchophony and tubular breathing. The patient is delirious and very nervous. General condition fair.

June 20th. Delirium greater. Patient has not slept since admission. The signs of consolidation at left base show improvement. In the evening the patient was wildly delirious; temperature 104. Saline solution was given by hypodermoclysis by Dr. Behrend, with much benefit to the patient. The urine contained albumin and numerous granular casts. Diazo reaction positive. The Widal reaction was also obtained.

June 22d. Patient has had some sleep and seems better. Delirium no longer present. Kernig's sign absent. He talks and mutters in sleep. The tympany is less; the abdomen flaccid. Tongue is fissured and thickly coated with white fur.

June 24th. Tympanites again marked this morning; abdomen drum like; liver comes to costal margin; spleen apparently normal. Bowels moved three times. In the evening the abdomen became much softer.

June 25th. The temperature dropped to 97° after a tub bath. The patient complained of pain in the abdomen. He was very uncomfortable in the night. After another bath the temperature dropped to 98°. At 10.30 P. M. the temperature was 104.1° F. The right side of the lower jaw was swollen. The patient was very uncomfortable, complaining of pain in the abdomen. The temperature without a bath dropped steadily from 11.30 P. M. to 2.30 A. M. (June 26th) when it reached 97°. There was a profuse sweat. Dr. Behrend, the resident physician in charge, saw the patient at this time. The abdomen was very hard. The liver was pushed up about one and a half inch above the costal border. There was pain in the right iliac fossa, and the patient was in collapse. The patient was transferred to the operating ward and Dr. J. Chalmers Da Costa performed a laparotomy about 4 A. M. He found peritonitis and considerable straw colored fluid in the abdomen, but no perforation nor any thickening of the coat. A few dark areas were found on the surface of the gut ranging from a pin-head to a small pea in size. The patient lived three days after the operation. The temperature became more remittent in type and at death was 107°.

The autopsy was performed the following day by Dr. W. F. Hendrickson. The following is an abstract of the autopsy notes: Pathological diagnosis: Typhoid ulceration of intestines; general fibrinous peritonitis; enlarged mesenteric lymph nodes; acute splenic tumor; acute double lobar pneumonia; fatty degeneration of liver; acute cholecystitis; parenchymatous degeneration of kidneys; chronic pleurisy; aortic sclerosis. About 250-300 cc. of dark brown fluid, of fecal odor, was found in dependent portions and pelvis. Adhesions were found between gall-bladder and hepatic flexure of colon. No escape of intestinal contents found at this point. Separation

of adhesions reveals opening in the gall-bladder 1 cm. in diameter communicating with a small opening into the gut 5 mm. in diameter. Entire surface of gall-bladder considerably injected. About the opening in the intestinal wall corresponding to opening in gall-bladder at this point are a few superficial areas of ulceration of small size.

The location of the perforation in this case is the feature of special interest. At the time of operation peritonitis existed, and fluid was found in the abdomen. Dr. DaCosta examined several feet of the intestine in the neighborhood of the ileocecal valve, and while the intestine was found intensely congested, neither perforation nor any area of thickening of the coat was found. The gall-bladder region was examined digitally, but nothing suspicious detected. Even at the autopsy the pathologist did not suspect perforation in the colon beneath the gall-bladder, and it was discovered only after adhesions between the two organs had been separated. Dr. Hendrickson concluded that ulceration of the colon had been primary, and that of the gall-bladder secondary. The presence in the abdominal cavity of fluid of fecal odor justifies this belief. The gall-bladder was, however, empty and the seat of inflammation and ulceration. Typhoid bacilli were obtained from a culture from the mesenteric glands.

Of the 112 cases operated on for perforating typhoid ulcer of the intestines, collected by Finney, in not one was the large intestine involved. Almost always the perforation was in a thickened and inflamed Peyer's patch in the ileum, varying from 2 cm. to 1 meter above the ileocecal valve. In Fitz's tables, however, in 167 cases the large intestine was the seat of perforation in 20; while in Hawkins' series of 72 cases, the perforation was found in the ileum in 61, in the cecum in 3, in the appendix in 3, and in the colon in 5.

Perforation generally occurs in severe cases during the second or third week, and in patients who have or have had diarrhea, tympany or hemorrhage. The symptoms indicating perforation of the intestine are pain, nausea and vomiting, collapse, fall of temperature, diminution or obliteration of liver flatness, leukocytosis. According to Finney's analysis of 112 cases, pain occurred in 58, nausea and vomiting in 26, collapse in 15; a fall of temperature in 14. In 9 cases the symptoms were not marked and came on gradually. In 5 cases only was absence of liver dulness noted. In 9 cases a wrong diagnosis was made. In our patient the symptoms were pain in the abdomen, a fall in temperature, accompanied by a profuse sweat, and later a state of collapse. The abdomen was rigid and the area of liver flatness in midclavicular line diminished. The blood was not examined for leukocytosis. It is noteworthy that during the entire day of June 25th the tub baths produced a much greater effect on the temperature than usual, reducing it twice to or below normal, and that the patient was very uncomfortable. Unfortunately, the leukocytes were not counted. Cushing thinks a sudden decrease in the number of leukocytes a worse sign than an increase. Perforation probably occurred about 11.30 P. M., June 25th. The operation therefore was about 4½ hours after perforation.

Typhoid affections of the gall-bladder are not

very uncommon. Mason and Osler have written valuable papers on the subject. Westcott (Keen's monograph) has tabulated 74 cases; 30 resulted in perforation; 4 were operated on, and of these 3 recovered. The remaining 27 died. In 19 of the cases the onset was in the third week or later. Seven had gall-stones, and in 16 none indicating cholecystitis were found. In our case there were no symptoms.

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POST-TYPHOID CASE IN WHICH DURING FOUR MONTHS THE FOLLOWING OPERATIONS WERE PERFORMED.

1. Fixation of a mobile painful kidney with subcapsular hemorrhagic effusion.
2. Removal of a large gastric ulcer by a new method and pyloroplasty.
3. Opening of a large rectal abscess.
4. Appendectomy by electric forceps and invagination of portion of the cecum.

By ANDREW J. DOWNES, A. M., M. D.,

of Philadelphia.

Gynecologist to St. Mary's Hospital.

Miss J. S., aged 27 years, Norwegian, had been healthy until the fall of 1897, when she was ill for thirteen weeks with a severe attack of typhoid fever. While convalescing she began to have pain in the left side and back, generally dull, occasionally acute and accompanied with headache. Pain in the left renal region and headache have been constant ever since. A year after typhoid she had very severe cutting pain in this region, was in bed two weeks and was given several hypodermics of morphia. She has occasionally had several severe acute exacerbations since but has never at any time when conscious been entirely free from pain in the left side. The pain shoots down from the left renal region along the course of the left ureter. At times urine becomes scanty along the course of the left ureter. At times urine becomes scanty with increase in renal pain, at times it flows freely and the pain improves. The scanty flow continues for two or three days at a time and is attended with the sensation of swelling of the side. The feeling of distention and pain abates with the establishment of the urinary flow. Occasionally vomiting was not very noticeable until a year after the typhoid, when it occurred not less than every two or three days. In the spring of 1899 the gastric symptoms had so increased that vomiting was constant and always followed the ingestion of food or liquids. On many occasions the vomit was bloody. A few severe hemorrhages occurred. There was pain slightly to the right of the mid-epigastrium immediately aggravated when anything was swallowed. Vomiting increased the pain in the stomach and so the left renal pain. The patient was in the Methodist Episcopal Hospital for nine weeks during the summer of 1899. She was vomiting constantly and had one very severe gastric hemorrhage. Under lavage, milk diet and medicine there was some improvement. She was out of the hospital five weeks when she was admitted to the surgical wards of the German Hospital, suffering with acute abdominal pain in the region of the stomach, duodenum and lower right quadrant. She became very tympanitic, had severe and constant pain, had high fever and delirium, constantly vomited, her abdomen was covered

with ice bags and she was considered inoperable. Nothing was given by the mouth for the first six weeks. She had several gastric hemorrhages. She rallied from this attack and was able to leave the hospital January 3d, 1900, after a stay of thirteen weeks.

She was admitted to St. Mary's Hospital, December 4th, 1900. Her gastric symptoms as above detailed, which had predominated for two years, had during the last two months been overshadowed by the renal, although she had constantly vomited all but enough to keep her living. Examination revealed a tangible left-kidney, exceedingly tender on manipulation. By pressure on it pain shoots down the course of the ureter. The stomach is tender to the right of the midline. The pain in this region seems to extend as far as the head of the cecum. There is slight puffiness of the eyelids and the feet and legs are swollen. There is palpitation of the heart and nervousness. The urine is scanty. December 5th, the day after admission, my separate urines siphon was used for one hour, obtaining very little from either kidney but a little more from the right. The right urine was clear, amber, acid, containing two per cent. urea, a trace of albumen, hyaline casts, and no uric acid. The left urine was pale, cloudy, acid, contained one and one-quarter per cent. urea, a few pus cells, hyaline casts, kidney epithelial cells and uric acid.

Urine passed in 24 hours:

December 7 to December 84 oz.
" 8 " " 94½ oz.
" 9 " " 109½ oz.

Nitroglycerine hypodermically (1-100 gr. every 3 hrs.) and normal salt solution (6 oz. every 6 hrs. by rectum) were begun December ninth and the urine gradually increased in amount so that by December 13th it was thirty-eight ounces in twenty-four hours, was clear and contained no albumen or casts. The pain in the kidney, however, persisted.

Operation, December 14th, 1900. Ether anesthesia, incision downward and slightly forward from the end of the twelfth rib. The kidney appeared in the lower end of the incision and descended quite below its normal position. The fatty capsule was absent, its transparent membrane replacing it. This was incised and the kidney brought out of the wound. The capsule was loose and separated from the kidney structure by a fluid which on section of the capsule was found to be fully a half-ounce in quantity, blood-stained and of a urinous odor. The capsule was entirely free from the kidney to its hilum. The middle two-thirds of the kidney were mottled, whitish and soft; the poles were firm and of proper color. The kidney was explored to the pelvis by needling but no concretions detected. The capsule was split its entire length, reflected back and the kidney suspended by the bipolar gauze suspension method.

Notes following the operation. Very severe retching and vomiting were constant until the next afternoon, when the stomach was irrigated with sodium bicarbonate solution (dr. j to 0 j) and vomiting ceased for eight hours. On the third day the dressings were found soaked with a dark, foul-smelling exudate of urinous odor and were removed without disturbing the suspending gauze. On subsequent dressings the urinous odor was not detected. The suspending gauze was removed on the tenth day. All renal symptoms disappeared immediately after operation.

About the middle of January, a month after the kidney fixation, the vomiting and the pain in the stomach which had persisted, began to increase in frequency and severity. The vomit was bloody on several occasions. Even a very small quantity of water was ejected. Various procedures were tried for relief and finally complete rest was given to the stomach and rectal alimentation adopted and operation decided upon. Lavage of sodium bicarbonate solution for three days and on the morning of operation prepared the stomach which was found to have a capacity of three pints.

Operation: February 13th, 1901. Chloroform anesthesia. Incision from ensiform to umbilicus in the mid-line. Stomach and pyloric end of the duodenum were brought out of the wound. The pylorus was thickened and a few enlarged glands were felt. The upper anterior part of the stomach wall just above the pylorus was bulged, sacculated and thin. A number of weak gray perigastric adhesions were present in this vicinity merging into the gastro-hepatic omentum. An incision over two inches in length was made, beginning in the stomach, continuing through

the pylorus and extending into the duodenum. The pylorus was found constricted. I inserted a finger into the peritoneal surface of the sacculated portion of the stomach above the pylorus and brought it out of the incision in the pylorus, thus exposing the mucous surface of the sacculus. A large, round ulcer with a thin base and with a diameter just less than an inch was thus discovered, although I had already fixed on the sacculus as the location of the ulcer. The mucous edge of the ulcer was trimmed all around with pointed scissors and the base curetted with a sharp curette until a fresh healthy surface was obtained. A No. 5 chromicized catgut purse-string suture was passed one-eighth of an inch from the trimmed edge around the ulcer. It was passed deep enough to include the submucosa in such a manner that little or no catgut was visible on the mucous surface. The base was sterilized and the purse-string tied. The catgut including the knot was practically concealed beneath the puckered mucous membrane and all evidence of ulcer and catgut thus obliterated. Before tying the suture I had applied a hemostatic forceps to mark the center of the peritoneal surface of the ulcer. With this as a center another purse-string suture of heavy catgut was applied around the peritoneal surface to include a little larger circle than that included in the purse-string around the mucous edge of the ulcer. This was tied. A little of the gastro-hepatic omentum beneath which the ulcer extended was torn through in applying the last suture and this tear was closed by catgut. The first half inch of the duodenal incision was closed by catgut suture applied close to the edges and including all the coats. The remainder of the incision through the pylorus into the stomach was united reversely to the incision to perform pyloroplasty. The first line of suture was of catgut applied close to the edges, to be approximated and through all the coats. Fine silk mattress sutures were now passed after the manner of Halstead to the submucosa approximating the serous surfaces over the thus inverted edges of the pyloroplasty. The abdomen was closed in an hour and a half from the beginning of the operation and during that time nine drachms only of chloroform were used under the careful administration of the resident. Severe acid vomiting occurred after the operation, followed in two days by emesis of large quantities of bile. Solution of sodium bicarbonate finally relieved the bilious vomiting and the stomach became retentive. Solid food was given after two weeks and retained. She did very well until about March 6th, when her rectum began to distress her and to which various enemata and suppositories gave little relief. Finally, March 13th, four weeks after the gastric operation, I examined her rectum and found a large bulging abscess behind the right rectal wall three inches from the anus, which I succeeded in opening without an anesthetic by guiding a straight bistoury along two fingers inserted deep into the rectum. It contained three ounces of flaky pus. The rectal condition was relieved but there supervened a condition of diarrhea which seemed to debilitate her in spite of the fact that she was taking nourishment freely. Slight diarrhea had been noticed, soon after she had resumed solid diet, which disappeared during the development of the rectal abscess. It recurred now quite severely and I soon detected a connection between it and some tenderness and distention in the cecal region. Sunday, April 14th. She was confined to bed with pain in this location. On examination the abdomen to the right of the umbilicus was found decidedly swollen and tympanitic. There was severe pain increased on pressure over the head of the cecum and the right rectus was tense. Her temperature and respiration were nearly normal as for three weeks. The pain continued to increase during the night. The following morning there was a temperature of 103 at eight in the morning, with extreme tenderness over the cecum and appendix. I saw her at noon and immediately operated.

Operation: A three inch incision in the right semilunar line was made so as to control if necessary the right pelvic region. A distended congested cecum with loose unattached edematous adhesions on its presenting surface, was found. The appendix was lightly adherent, its middle third much swollen, covered with large tortuous blood-vessels and containing concretions. Its cecal end was contracted and its distal end looked as if formerly it had ruptured and been covered by adhesions. The villous edematous fringe from the cecum was unusual. The wall of the cecum was thickened, inflammatory in color, except

for an occasional whitish mottling, giving it a tubercular appearance. Near its head opposite the insertion of the appendix, the cecum was distended into a pouch, spherical in shape, the diameter of that portion of the sphere in junction with the cecum proper was smaller than the greater diameter of the pouch. The patient was only lightly under anesthesia and this condition was very apparent in the distended cecum out of the incision during the strain incident to emesis. Old strong adhesions incidental to the development of this condition were found and evidenced a former severe appendicitis and cecitis. The appendix was removed by a thirty seconds application of my electro-thermic forceps and section made within the compressed and agglutinated area. The meso-appendix was hemostased by the same means in twenty seconds. A purse-string suture of catgut was placed above the head of the appendix in the cecum and tied over the thus invaginated stump. A purse string suture was placed around the pouch in the cecum and the pouch turned in restoring the cecum to its normal shape. The abdominal wound was closed after a rapid operation, during which anesthesia was effected by chloroform (dr. 1 2 j) followed by ether (oz. li 3 j). The following morning the patient was free from pain in this region than just before the beginning of the diarrhea a few weeks previously. Since this final operation the diarrhea has ceased and the patient bids fair to be restored to a condition of health she was in before the occurrence of typhoid fever in 1897, when she was robust, florid and quite fat.

NOTE.—June 21, 1901. The patient has gained marvelously in health and is nearly as heavy as in 1897. She has, however, lately developed some pain in left kidney, which may be due to disease, as found at operation, or be due to the fact that her kidney was too firmly fixed.

Remarks.—There can be little question but that the first two conditions operated upon were caused by typhoid fever. During the last two weeks of her attack, while in bed, and for the following month, very frequent and painful urination occurred as is occasionally found due to the infection of the urinary tract by the bacillus of Eberth. The patient cannot now remember if her urine contained pus, and I cannot ascertain. On segregating her urines before the kidney operation I found a few pus-cells in the secretion of the left kidney. Whether this condition could be found earlier during the three years elapsing since the attack of typhoid is questionable. The mobility of the kidney was incident to a great decrease in weight during and after the fever and absorption of the perirenal fat. The subcapsular hemorrhagic effusion with complete dissection of the capsule propria is rare and indicates a condition of the kidney in which great tension existed. It is worthy of note that the effusion under the capsule had the odor of urine.

The large gastric ulcer was undoubtedly post-typhoidal. We know that typhoid ulcers may occur anywhere in the intestinal tract, they have been found in the stomach and even in the lower portion of the esophagus. Occasional vomiting following typhoid and its frequent occurrence later when the stomach became taxed by a more liberal diet shows a causative connection.

The perigastric adhesions found at the second operation and the character of the attack of peritonitis the patient had while in the German Hospital over a year before would indicate a minute perforation at that time. It is possible even that an attack of appendicitis was coincident. The operative features of interest in this case are: first, the method of fixing the kidney by a procedure original with me which I have named the "Bi-polar gauze suspension method," a description of which may be found in *The American Gynecological and Obstetrical*

Journal for December, 1900. Second, the method of dealing with the gastric ulcer, which is new. I can find reference to no case where the mucous surface of the ulcer has been so handled. By this method there is less hemorrhage and interference with the circulation of the stomach wall than when complete resection of the ulcer, including its peritoneal surface, is accomplished. There is some question about the too early digestion and absorption of the catgut used to close the freshened and sterilized base of the ulcer; but if it is placed properly it should hold long enough—besides the outer purse-string suture on the peritoneal surface fortifies it and holds without question.

A third surgical feature was the removal of the appendix during a severe attack by electric forceps. It is one of a number of cases of unperforated appendicitis so treated, all of which had this in common that the appendix was removed without any possible contact with its central infectious canal. The stump is sterile white fibrous tissue with no remaining mucous membrane. In this case the patient who went on the operating table in severe acute pain in six hours was free from pain. This method of removing the appendix by electro thermic pressure has much to do with the lessened post-operative pain.

TYPHOID FEVER OCCURRING IN A TUBERCULOUS PATIENT, AND THE INFLUENCE OF TUBERCULIN ON THIS CONDITION.

By ERWIN FISCHER, M. D.,
of Pittsburg.

A civil engineer, tall and well built, 35 years of age, formerly healthy, but with tubercular tendencies inherited from his father, was taken ill with bronchitis during the summer of 1897, when on a business journey in South Africa. The sputum at that time contained tubercle bacilli in large numbers, but no mixed infection, as was shown by microscopical examination. The attending physician began treatment with Koch's new tuberculin, which was continued by the patient himself, up to doses of 20 mg. of the solid substance, in combination with the internal administration of the various derivatives of creosote. In March, 1898, the expectoration amounted to 60 cc. per day and contained a few elastic fibers, numerous tubercle bacilli, and other microorganisms, but in such a small amount that it did not justify one to speak of a mixed infection. The patient complained of shortness of breath and sharp pains in different parts of the chest. Over the right and upper lobe dulness was present, and upon auscultation rales and crepitation were found, the rales being fine, dry and moist, sharp expiration and inspiration, partly bronchial. In the right middle and left lower lobes there was but slight evidence of rales and crepitation. With the continuance of creosote and new tuberculin (T. R.), the latter from 2 to 15 mg. of the solid substance, until the end of May the subjective symptoms showed improvement, and the condition of the lungs and sputum showed slow, but an unquestionable change for the better, and the amount of expectoration was slightly decreased. At this time he was compelled to leave Pittsburg on business. On his return, July 2d, his temperature was 105°F., pulse 110, respiration 30 and labored. He was suffering from dyspnea. Upon examination absolute dulness, bronchial breathing, and metallic rales were found over the right upper lobe. Rales of various character were found over both lungs, crepitation and sharp expiration in the lower right lung posteriorly. After two days beginning meteorism was noticed, pulse dropped to 100 and was stronger but dicrotic; respiration about 25. The fear that the symptoms in question favored an acute tubercular process yielded to the hope that they nevertheless belonged to enteric fever in con-

sideration of the improvements of pulse and respiration, whereas the temperature remained unchanged. Two days later enlargement of the spleen was noticed upon percussion; Gruber's test positive (Bacteriological Laboratory of Pittsburg, Bureau of Health). Severe abdominal typhus now set in. From July 9th to 29th the patient suffered from intestinal hemorrhage almost daily, which were sometimes quite abundant. His pulse, which was 120, and frequently higher, was feeble and associated with an obstinate high temperature. The number of respirations was in proportion to the pulse rate. Regular injections of camphorated oil became necessary. Several critical collapses were combated with ether, caffeine and nitro-glycerine. The hemorrhages which occurred in spite of scrupulous care in the administration of food, together with the extreme weakness of the heart, greatly handicapped the treatment of the fever by cold water; the cautious application of cool sponge baths excepted. At the end of July the temperature occasionally dropped to 101°F., only to rise soon again. Early in August thrombosis of the left popliteal developed. A definite decrease of temperature was noticed after the middle of August. The stage of steep curves was drawn out over a period of three weeks, always giving rise to the fear of a tubercular lesion. Quinine seemed to exert a favorable influence. The condition of the lungs had already showed some improvement during the period of hemorrhages, and offered a more favorable prognosis. The patient was in bed until September 23d. On October 10th he took his first drive. On October 12th examination showed dulness with a slight tympanic sound over the right upper lobe anteriorly, and posteriorly sharp respiration, rales and crepitation. There were no metallic rales. In the lower left lung posteriorly, slight dulness, rough respiration, a few rales and slight crepitation were found. The pulse was 80, respiration 18 to 20. The patient complained of shortness of breath. Expectoration amounted to 50 to 60 cc., and upon examination was found to be unchanged. October 15th I again took up T. R. injections, starting with 1/500 mg. of the solid substance and gradually increased the dose to 5 mg. by the middle of November. At this time the respiration on the right side was less sharp and on the left side vesicular. There was a decrease in the number of rales, dulness was much less marked, and there was now but 30 cc. of sputum. The subjective symptoms were markedly improved, and the patient was gaining weight. At this time he departed for Pasadena, Cal. and returned in the spring of 1899. At this time the shortness of breath was insignificant. Percussion showed less dulness, and the sputum had dropped to 20 cc. and contained few tubercle bacilli and no elastic fibers. Within four weeks after he commenced work he lost 14 pounds, but this was made up again in the course of time. The dose of tuberculin was gradually increased to 20 mg. in intervals of 4 to 6 weeks. The sputum eight weeks ago amounted to 5 cc. and contained so few tubercle bacilli that great pains had to be taken when searching for them to avoid overlooking them, in spite of centrifugation. The patient had gained considerable weight and complained that his clothes were too small. Gruber's test, which Dr. Matson had the kindness to repeat, was negative. As no sputum was obtainable at this time an examination could not be made. Another course of tuberculin (T. R.) treatment, probably a few consecutive series of it, may be required, and if lack of sputum and physical symptoms should give no evidence of its necessity, test injections will be employed.

The interesting and important question is: did the patient's decided improvement from tuberculosis occur in spite of the typhoid fever, or on account of it? He had given alarming evidence of tuberculosis a year previously, and had been treated with tuberculin and various creosote preparations. His health had improved steadily. On a business journey, in spite of the fact that he was at that time taking creosote, he was taken with typhoid fever of an extraordinarily severe character. In the area of least resistance, that is the most predisposed part, inflammation and destruction took place. What caused the latter, and what arrested it? Con-

cerning the relation of the Eberth bacillus to the respiratory tract, I would, among the publications of later date, especially refer to the one by Fränkel, which does not leave any doubt of its ability to invade the lungs. At the same time pneumococci and other germs are liable to cause such complications. It is possible, also, that it was the tubercle bacillus which destroyed the tissue, weakened beforehand, and more so by the bronchial disturbance always combined with typhus abdominalis. I did not make a bacteriological examination because the sputum could not be obtained, and there were many other things to be thought of. The acute infiltration of the right upper lobe, originally the site of the most pronounced tubercular symptoms, set in when the typhoid infection had brought on the stage of continuous fever. It gave rise to the fear of rapid acute tuberculosis, and after definite confirmation of the diagnosis there seemed to be plenty of reason to be afraid of the tubercle bacilli overflowing the prepared ground, no matter what germs had put it in a suitable condition. What prevented them from doing so? Not likely any property belonging to the patient's constitution, which, in spite of its remarkable vigor and strength of resistance, had previously proved its inherited lack of power against tuberculosis. What extraneous agents could have done the work? Nobody will imagine that creosote was the healing factor. It was not even taken regularly during the critical period. Could it have been the typhoid antitoxins? They had been formed, agglutination took place readily in Gruber's test, which some prefer to call Vidal's, but it does not seem probable that they should have been the superior fighters of the enemy not specific to them, while they were not yet able to put a stop to the one to which they are especially detrimental. Or did the typhoid bacilli, exhibiting surpassing qualities in the struggle for life, destroy those of tuberculosis, or did they create conditions whereby their toxins were pernicious to the latter and in the favor of the patient? Professor Klebs, our great authority on tuberculosis, with whom I had a consultation regarding this case, and also many others, has with much kindness informed me of his experience and studies, showing that the products of certain typhus bacteria have a deleterious influence on the bacillus of tuberculosis, and he has founded favorable results in the treatment of tuberculosis upon those interesting and valuable experiments. But as a disease, typhoid fever has always been considered very dangerous to those suffering from pulmonary tuberculosis, and in the statistics it even maintains a momentous rôle as one of the starting causes of consumption. The most convincing deductions, being based on an equal and strictly observed material, are those from the army reports, as a result of which this statement has been derived. These conclusions, of course, are not antagonistic to the investigations of Professor Klebs concerning the therapeutic use of the former disease's specific bacterial products in conquering the latter, there being a radical difference in the methodical application of precise preparations in carefully calculated doses. It is a widely acknowledged fact that the building up of the body has made the dreaded disease the fountain of unexpected strength to many

frail patients. This influence is not to be considered here, where the perilous condition of the lung and its relative improvement coincided with the acme of fever, hemorrhages and extreme restriction of food. The pulmonary complication ceased contrary to my expectations, as I, and also other physicians, felt positive the termination would be fatal, if the typhoid fever was not. There was something which did not allow the tubercle bacilli, which were undoubtedly liberated in great numbers, to take possession of other parts, although the typhoid infection spread all over the bronchial system in the customary manner. That agent was the immunization which had taken place, thanks to the previous application of tuberculin. Nothing else was in favor of the patient, neither family nor present history nor present condition. The tuberculin had already exerted its power and improved the patient's condition, and I feel fully justified in claiming for it the confinement of the disease to a limited territory and the consequent recovery. I should consider it a neglect of duty to close this communication without heartily recommending the use of Robert Koch's discovery for treatment, not less for diagnosis. It is, as Behring has said, the foundation of the whole modern serum therapy. In disagreement with the master's intention, and own publication, its efficiency was injudiciously exaggerated, and after the disappointments which followed its wrong application, it was condemned in the same manner. Its value is founded upon immunization against the tubercle bacillus and no other. Keeping this in mind, and criticising ourselves first and not the method in case of failure, we will be aware of its limits, avoid harm, and do a great deal of good.

Diagnostic Significance of the Reaction for Sulphocyanates in the Saliva in Diseases of the Ear. E. Urgens (*Wochenmedicinischer Journal*, February, 1901; *Medicinskoje Obosrenie*, April, 1901) found that potassium or sodium sulphocyanate, normally present in saliva, is as a rule absent in suppurative chronic affections of the ear. If the reaction, therefore, is absent or weak, middle-ear disease should be strongly suspected. Likewise, the progress of a case may be determined by the presence and degree of the reaction. The method of testing for the sulphocyanates is as follows: The saliva is collected in test-tubes or on small cotton swabs applied to the ends of the salivary ducts. To this saliva is added a saturated solution of hydriodic acid and starch-paste (in proportion of 1:5). In the presence of sulphocyanates a blue color develops. [A. R.]

Cerebrospinal Meningitis of Influenza Origin Complicated with Acute Anterior Poliomyelitis.—Rendu recently reported a case of cerebrospinal meningitis in a child five years old, before the Medical Society of the Paris Hospitals. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, 1901, No. 4). Five days after influenza had begun, stiffness was noted in the neck, the head being retracted. Opisthotonos and Kernig's sign were present the next day. Five days later the fever had disappeared, but there was paralysis of both legs, with absent knee jerks and suppressed faradic contractility. Lumbar puncture was performed, and baths at 97°F. given twice daily. The child recovered gradually, the right leg quickly, the left slowly. Two months later the left leg dragged slightly as the child walked. As his brother had an outspoken case of influenza, Rendu assumes that the bacillus was present, entering by the naso-pharynx. It is interesting to note a cerebrospinal meningitis with a co-existing diffuse anterior poliomyelitis. The cerebrospinal fluid was clear, with increased albumin; and no cultures grew. [M. O.]

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The Summer Complaints of Children.—With the long continuance of the intense heat of the summer the death records are swollen principally by the heavy mortality among children and feeble persons who are unable to resist the depressing influence of the high temperature and the accompanying humidity. This is especially true in the great cities where the heat is aggravated by the improved pavements, and access to the fields and parks is difficult. There is a factor, also, which is frequently overlooked, but which, we believe, is potent in swelling the ranks of the suffering and dying children in the summer season, namely, the inability to obtain relief at night. Those who have entered the homes of the poor of the city at night have been impressed with the almost stifling heat of the rooms. The lack of ventilation due to the crowding of many individuals into a limited space and the retention of heat by the tin roofing, produce an atmosphere that is most oppressive to the strong, not to mention the little children and those who are weakened by ill nutrition and disease. It is not at all improbable that the depressing environment is the most powerful element in the production of the summer complaint of infants as met with in large cities. Acting upon systems thus depressed and deteriorated, the unclean bottle and rubber nipple find most suitable soil for their deplorable work. The acute diarrheas of infancy quickly follow, and notwithstanding the truly noble and well-directed efforts of the district and dispensary physicians to combat the ravages of disease, their labors are too often ineffectual. Their task is truly that of Sisyphus. As long as the unfavorable surroundings continue it is an almost impossible task to relieve the drooping infants. There are, however, some measures that may be adopted whereby the chances of recovery will be materially increased. Primarily among these should be mentioned the observance of absolute cleanliness of the nursing-bottle and its appurtenances. The use of a bottle which can be cleansed in every portion by the direct application of the finger and the plentiful use of a solution of sodium bicarbonate will do much to hinder the fermentative processes which,

once inaugurated, result disastrously. When not in use both bottle and nipple should be well cleansed and kept immersed in the bicarbonate solution until the subsequent feeding. Careful selection of the milk or artificial preparations, together with pasteurization of each feeding, is next important in the prophylaxis of the intestinal disorders of infancy. Whenever feasible the child should be kept for as many hours as possible in the open air and preferably in the parks and squares of the vicinity or on the trolley cars or local steamboats. The clothing should be light and clean and every effort should be made to keep the child cool while avoiding chilling from draughts. If, notwithstanding these efforts, the bowels become inflamed, frequent intestinal douching with normal saline solution will be found both grateful and healing, and a valuable adjuvant to the medical treatment which may be prescribed. It is not our intention to lay down any hard and fast rules for the management of these cases. The text-books and current literature teem with valuable suggestions. Whatever course may appeal to the physician as most suitable in the given case, an observance of the foregoing suggestions will be found to materially aid the efforts taken, and will, we believe, lessen the frequency of a fatal termination. The diseases arise from a combination of heat and uncleanness, producing lessened body-vitality, and while it is necessary to institute a course of systematic treatment the main attention should be given to correcting the causative conditions.

Zomotherapy in Tuberculosis.—The precipitous quest for specifics in the treatment of disease sometimes prevents us from giving due attention to more simple but not less important therapeutic procedures. In no disease is this more true than in tuberculosis, for, with the exception of the constructive remedies, the therapy of this affection is practically still in a chaotic condition. A form of therapy, although still in an experimental condition, but nevertheless deserving of recognition, is that known as "zomotherapy," which may be broadly defined as the administration of raw meat or its active ingredients. The word itself is derived from a Greek

word signifying broth, and will be recalled by students of Greek as appearing in the description of the "black broth" of the Spartans. The word was first proposed by Richet and Hericourt. (*Semaine med.*, 1890, p. 404.) These observers stated, as a result of their experiments upon dogs, that when these animals were fed with raw meat the development of experimental tuberculosis was somewhat retarded, while on the other hand, animals kept for purposes of control and who were fed upon ordinary diet, quickly succumbed to the experimental inoculation of tubercle bacilli. Henry Harper (*Lancet*, March 9, 1901, p. 694) claims to have obtained good results from the administration of pure urea in human tuberculosis, and his experiments even show that the addition of urica to culture media inhibits the growth of tubercle bacilli. The most recent observations on this subject, however, appear to be of quite a dissenting character as evidenced by the researches of C. Fränkel and G. Sobernheim, of Halle, Germany (*Berliner klin. W'och.*, July 15, 1901, No. 28), who claimed to have found so little difference in the ultimate condition of animals that had, and those that had not, been fed with raw meat, that they discarded the matter as unworthy of further experimentation. This controversy should all the more awaken the interest and stimulate the zeal of investigators, inasmuch as several imperfectly recognized factors seem to show that this form of therapy has for its basis several well authenticated facts. It will occur to every observer that the negro, whose proneness to tuberculosis is so well known that it need not be discussed, partakes of but little food that is rich in urea; and the southern portion of the United States, where he lives practically in the open, still is ravaged to an appalling degree by tuberculosis. Another point of considerable importance, but one still unsupported by definite statistics, is the question whether individuals with a uric acid diathesis are not less affected by tuberculosis than others. If zomotherapy proves clinically successful, it still remains for biologists and chemists to show whether the action of raw meat is simply to be attributed to its stomacheic properties, in that it increases the assimilation of nourishment, as claimed by Chantemesse (*Sem. med.*, 1900, p. 203), or whether, as Richet believes, substances are present in meat juice which retard the development of tubercular granulations, or, finally, whether, as Maragliano believes, the meat juice acts as an irritant, thus giving rise to the formation of antitoxic materials in the organism.

Medical Representation in Hospital Management.—The agitation that has been aroused by the action of the over-zealous secretary of the lay board of managers of the National Hospital for the

Paralyzed and Epileptic in London in virtually proclaiming independence of, if not contempt for, the medical profession, has called acute attention to the paradoxical tendency manifest in certain quarters to eliminate medical men from the control and management of hospitals. The specious plea has been made that the presence of medical men on such boards of management is likely to give the former a preponderating influence, which it is feared will not be exercised impartially or judiciously, or to the best interests of the patients, but that it may result in unjustifiable therapeutic experimentation, or what not. Further, the charge is usually made that medical men are deficient in business qualifications, that hospital management is a business and should be conducted on business principles.

At the outset it is to be feared that those who hold such narrow views are beyond the influence of argument.

In the first place, medical men generally are, by very reason of their training and their profession, most tolerant, most broad-minded, and most judicial in their judgments, and they will yield to none a sense of greater humane consideration for the well-being of those entrusted to their care. While it is true that the physician is, largely in consequence of more important demands on his time and energy, disinclined for the details of business matters, he is often possessed of a fine and ethical business judgment; and, of course, none can take his place in dealing with matters appertaining to the professional aspects of hospital government. For these reasons any steps looking to the exclusion of the medical man from the boards of government of hospitals, or calculated to restrict his influence in this connection, must eventually result in serious injury to such institutions. That this is so would seem to be the consensus of opinion held by those—both lay and medical—best fitted to form a judgment on the subject, as exhibited in a symposium on hospital management prepared by the enterprising and versatile editor of the *Practitioner*, and presented in the June number of that journal.

To the question as to whether hospitals should be wholly under lay control, or whether the medical staff should have a voice in the management of their affairs, there is practically unanimity of answer that the medical staff should have some kind of representation on the governing body in order that such management shall be in the fullest measure successful. This opinion is expressed not less emphatically by laymen than by medical men. The symposium is a most valuable one and should receive the careful perusal of all who are interested in hospital work.

Pathological Dreaming.—Students of psychiatry have long recognized the similarity which dreams bear to the delusions of the insane. The subject is a deep one—not easy to grasp or to illumine. It is somewhat subliminal, and only too likely to excite the scoffs of the uninformed. And yet, although this subject pertains to dreams, it is a very real one. Dreams may not only have a pathological significance—they may be pathogenic. Here is the important point. Dreams may constitute a fruitful night-soil out of which may grow a crop of poisonous weeds. This is true of the neurasthenic, the hysteric and the insane. The French (Gilles de la Tourette, Janet and others) have shown that in hysteria there is a form of reverie or delirium (which is practically the same as dreaming) in which the patient seems to herself to lead such a vivid and real existence that thenceforth the contents of the dream are an actuality to her. From this morbid state arise questions of medico-legal importance. The false witness sometimes borne by hysterical patients comes from this sort of mental perversion. Character has been jeopardized by it. This has been called "pathological lying," or, as it was named by Delbrück, *pseudologia phantastica*. This term is not intended as a mere euphemism for calling a person a liar. It describes, on the contrary, a genuine psychiatric fact.

We are reminded of this subject by an interesting paper by Professor Pick, of Prague, a translation of which appears in the July number of the *Journal of Mental Science*. Pick deals with a rather different phase of the subject—one which is more nearly related to day-dreaming. It is odd that no one has yet, so far as we know, completely explored the psychiatric architecture of castles in the air. Professor Pick has taken a class of patients who are evidently neurasthenic rather than hysterical, and whose psychiatric life is curiously dominated by a succession of dream-pictures. The patients, while fully conscious of the unreality of these reveries (in which respect they differ from patients with delusions), yet react in various ways to them, even to the extent of talking aloud and gesticulating, and are in various ways incapacitated by them. Hence these day-dreams, or reveries, are distinctly pathological; in fact, their pathological character was recognized by the patients themselves, who sought medical advice. These dreams have sometimes, although by no means always, an erotic tinge, even associated with onanism. This is the "auto-crotism" of Havelock Ellis. Professor Pick describes his cases in detail, giving interesting autobiographical notes. It is a characteristic Teutonic paper—minute, exact and instructive.

More Plague in San Francisco.—There is good reason to feel satisfied that the slight recrudescence of plague in San Francisco finds the local and national health authorities in harmony as regards both the diagnosis and the treatment. This is as it should be and will inspire the rest of the country with confidence. The situation has its special difficulties because of the characteristics of the oriental population to which the disease has thus far been limited, but the latest reports indicate that this situation is held well in hand. Dr. Kellogg and Dr. Ryfkogel, experts of the city health office, have had experience, and they also have candor and fearlessness in meeting the exigencies. Assistant Surgeon Rupert Blue, of the Marine Hospital Service, sent his official report to the Surgeon General under date of July 20th.

From this report we learn that up to that date five new cases had occurred. One of these was in a Chinaman who had only just come to the city on July 1st, and who died four days later. This case appears to have had no relation to the four other cases, which occurred in one house among some Japanese prostitutes. These women had lived in this house for some months at least, and the origin of the infection seems to be a mystery. Two foci of infection thus appear to have existed. Of the four cases that occurred in this brothel, three were fatal, but one girl at last reports was recovering. This is the only case of recovery from plague that has yet occurred in San Francisco. Dr. Blue says that the Japanese are not so secretive as the Chinese, and have more confidence in scientific medicine. Hence these cases were studied without much difficulty. Blood specimens were obtained before death, and a diagnosis made. The pathological and bacteriological findings were all confirmatory of the diagnosis. Now that we are once more positively assured that plague has secured a foothold in the United States, we need to be all the more alert. Of a few things also we may be assured. First, secrecy will not secrete the plague; and, second, the prevalence of this disease at any particular spot whatsoever in this country is a matter not of mere local interest, but of general importance. The whole country is interested and has a right to be interested. Experience in other countries, notably England and Australia, has proved that an energetic administration can do much to control this formidable disease.

Milk-borne Scarlet Fever.—Dr. D. S. Davies reports (*Journal of Hygiene*, July, 1901) the statistics of an epidemic of scarlet fever in Clifton, a sub district of Bristol, England, containing about 47,000 people. A certain dairy, designated X, was suspected, because at the time of the outbreak a boy who had

access to the milk vessels there was sick with what seemed to be an ambulant case of scarlet fever, and a week later two of his brothers were seized with typical forms of the disease. Two dealers in Clifton served milk from this dairy, and some milk was sent directly from it to the city. The milk from X was distributed to 200 houses, in 42 of which cases (66 in all) of the disease occurred. During the same period, 85 other dealers not receiving any milk from X, served 6922 houses, among which 9 cases occurred. One of two dealers mentioned above also obtained milk from another dairy, but two dealers who obtained milk from this dairy and none from X had absolutely no cases on their routes. The distribution of the infection is vividly exhibited by a colored chart of ingenious form.

The Obstetrical Stigmata of Degeneracy.—While both the physical and the moral stigmata of degeneracy have for some time been well recognized, R. and H. Larger were the first to state, in their thesis on the subject (quoted in the *Bulletin Medical*, July 6, 1901, No. 53) that they consider all variations from the physiological type in conception, in pregnancy, and in labor, to be obstetrical stigmata. Among the anomalies of conception they place sterility, twin-pregnancy, and ectopic gestation; among those of pregnancy, hemorrhage, placenta previa, adherent placenta, premature rupture of the membranes, hydatidiform mole, velamentous insertion, etc.; among those of labor, abortion, premature delivery, prolonged labor, and all presentations other than the usual L. O. A. When any of these conditions occur, one or both of the parents are degenerates, either hereditary or acquired. Besides, the authors consider puerperal infections, such as eclampsia or phlegmasia alba dolens, also signs of degeneracy. They have collected material from private practice, from the clinics of Baudelocque and Tarnier, and from a number of physicians. Statistics of over 600 women and 2000 obstetrical anomalies have been tabulated. In every case antecedents showing degeneracy were secured. Anomalies may be due to plainly marked degeneracy in the husband, the wife, or both; and it seems probable for anomalies of presentation to be hereditary through the male as well as through the female. In some cases the only sign of degeneracy may be the series of abnormal presentations; especially when the husband and wife are closely related. The acquired causes of degeneracy, such as epilepsy, alcoholism, syphilis, tuberculosis, etc., have the same result upon the offspring. The subject matter of the thesis is excellently expressed, and forms absorbing reading. As a final result, sterility occurs in the individual, forecasting the extinction of the race.

We quote from this paper merely as a matter of

interest, for we do not mean to endorse its conclusions. These seem to us in many respects to be extravagant and far-fetched.

The Nerve to Run a Locomotive.—A prominent railroad official has recently portrayed, in rather vivid colors, the disastrous effects on the human system caused by running a fast locomotive. He is quoted as saying that this occupation breaks down a man's nerve. The engineer is depicted as descending from his cab, after a long and fast run, "with the heavy step of exhaustion; the elasticity and agility of the start all gone." It is upon the nervous system that the work of running a "flyer" bears heavily. The engineer becomes timorous; he can no longer hold his engine to its work; he falls behind his schedule time, and always brings his train in late. This loss of nerve, it is said, is suffered by the stoutest heart, but the length of service varies. Some men will last for twenty or thirty years, while others give out much sooner. All this applies to running fast trains. On the two Atlantic City lines, to which reference was especially made, a speed of more than a mile a minute has come to be the usual thing.

Although somewhat overcolored, this description is not altogether inaccurate. We imagine, however, that many an old engineer would laugh at being told that after every run "he had the heavy step of exhaustion." He might confess to being a trifle stiff after two or three hours in the cab, but he would probably deny that his nerves were in any way shattered. Any casual observer in Broad Street Station can see for himself that the engineers have not the appearance of being neurasthenics. As long as everything goes well we doubt whether it is any greater trial to the nerves to run a fast train than it is to run a slow one. It is only when accidents occur that an engineer is likely to become profoundly neurasthenic, and to be ever after unfitted for his work. This may be so, even though the man is physically uninjured. Old railroad men can tell of plenty of such instances. We knew recently of an engineer who had run fast trains on the Pennsylvania Railroad for thirty years without an accident, but who finally ran into a little "smash-up" in which he himself was not at all badly injured; and yet he could not return to his cab for more than a year. He had a fine case of traumatic neurasthenia. We refer to this subject as an illustration of the diseases of occupation.

An Increased Number of Eosinophiles in the Blood a Sign of Appendicitis.—Laignel-Lavastine reported four mild cases of appendicitis in which he found that the eosinophilic cells in the blood increased to 3, 4, 5, and even 9% from the fourth to the eighth day of the acute attack, to return again later to 1%. He considers this a pathognomonic sign of catarrhal appendicitis. This increase of the eosinophiles is also seen in Duhring's disease and urticaria. It is an aid in the differential diagnosis of mild appendicitis. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, April 25, 1901, No. 13). [M. O.]

Reviews.

Oral Sepsis as a Cause of Septic Gastritis, Toxic Neuritis and other Septic Conditions, With Illustrative Cases. By William Hunter, M. D., F. R. C. P., Senior Assistant Physician, the London Fever Hospital; Physician to the Electrical Department, Joint Lecturer on Practical Medicine and Pathological Curator, late Pathologist, Charing Cross Hospital. London, Paris, New York and Melbourne. Cassell & Company, Limited 1901.

From an esthetic viewpoint a mouth full of decayed teeth and old stumps is repulsive, and many mechanical appliances have been devised by the prosthetic dentists to supply a deficient dentition. Plates, bridges, crowns and fillings are of extensive use among the upper and middle classes.

The book before us for review shows, first, the evil effects of necrosed and carious teeth and roots on the mouth and on the general health; and second, the manner in which the appliances of the dentists, by collecting food particles, assist in producing local and general septic conditions in the gastrointestinal tract, and thence in the entire system.

It is a well known fact that wounds in the mouth heal rapidly and yet, the sepsis connected with diseased teeth is of a peculiarly virulent character, much more so than the pus derived from the soft tissues. In 95.3% of cases of dental caries the offending organism is the bacillus gangrenæ pulpæ, which is capable of producing its effects in an alkaline medium. The author believes that for every case of gastric affection traceable to pyorrhea alveolaris, a hundred cases no less marked are daily met with associated with other septic inflammatory conditions of the gums so commonly met with around necrosed carious teeth and roots. He believes that dental disease is a cause of indigestion in consequence of being a continual source of septic poisoning and septic gastric infection. This process may go on until it finally results in chronic gastritis with atrophy of the glands. Other results of oral sepsis are fever from septic absorption, septic rashes, purpuric hemorrhages and bleeding from the gums, profound septicæmia and toxic neuritis.

The book should be read by every physician and being read should serve to induce deep thought and to create a lasting impression. As the author says: "No physician would tolerate for a moment that a person who has a foul septic ulcer on his arm should periodically suck it; and yet this is what is allowed to go on in the case of the mouth for periods of years unheeded alike by doctor and patient." [J. M. S.]

Sixteenth Annual Report of the Bureau of Animal Industry, 1899.—Department of Agriculture, U. S.

The 764 pages which compose the Sixteenth Annual Report of this bureau contain, as is usual with these reports, much that is of interest to physicians generally and especially those interested and working in pathology and hygiene. Of especial interest are the notes on parasites by Stiles, in which appears an excellent account of *Paragonimus Westernmanni*, a lung fluke, which is well illustrated with fine plates. A careful digest of the literature concerning this parasite, and the disease which it causes in man and animals, adds greatly to the value of the article. Since this parasite may cause a Jacksonian form of epilepsy if it develops in the brain or meninges, and a chronic hemoptysis which has several superficial resemblances to phthisis, it behooves the general practitioner or to be well acquainted with the disease and the parasite. The lung fluke is common in the East and has recently been found in this country. A good account of *Pseudo Tuberculosis* or *Caseous Adenitis* is given. This disease commonly attacks sheep and is caused by Preisz's bacillus. Excellent plates of the macroscopic and histological appearance of the lesion accompany the article.

A curious disease of horses, *maladie du coit*, which is venereal in character, is discussed in a lengthy paper in

which an account of a recent outbreak in Nebraska is detailed.

Anyone may considerably enhance his stock of general knowledge by merely turning the pages of this report, but the man who is interested in scientific and hygienic food production, parasitology and comparative pathology, cannot help but pause, read and study, and thereby profit, when he opens this volume. [R. L. P.]

Report of the Commissioner of Education for the Year 1898-99. 2 Vols. 8vo., pp. XCII, 2518. Washington. Government Printing Office. 1900.

These two portly volumes contain a vast amount of information on a wide range of topics in the domain of education, general and special, gathered from a variety of sources, immediate and remote. The many phases of the subject are presented in 51 chapters, some of which are elaborate in detail and include a large array of statistical data. [A. A. E.]

On the Question of the Fate of Bacteria in the Organism of Immunized and Non-Immunized Animals.—S. I. Goldberg, in a dissertation delivered before the Military Academy (summarized in the *Bolnitchnaia Gazeta Botkina*, Vol. XII, No. 3) gives the results of his experiments, which were performed as follows: Pure cultures of pathogenic organisms were injected into the blood of animals, and cultures made from time to time to determine the length of time during which the organisms remain in the blood current and the degree of their virulence. The animals were finally killed and their organs examined. Several other problems in connection with immunity received attention. The following results were obtained: Rabbits immunized against bacillus pyocyaneus became more resistant to infection with anthrax or typhoid bacilli. The organisms injected into the blood current disappeared in 4-8 hours, except anthrax bacilli, which were present in some up to the time of death. In the animals immunized against bacillus pyocyaneus the disappearance of the anthrax bacilli was also inconstant. During the first few hours following the injection the bacilli accumulated principally in the liver, this having been more marked in the immunized animals. This retention of the bacteria by the liver is not passive but depends on active phagocytosis on the part of the endothelial cells and the leukocytes. As infection proceeded, the accumulation of the bacteria took place principally in the spleen where they remained the longest. The organisms retained their virulence within the organs of immunized animals and were capable, under favorable circumstances, of producing local infection (pericarditis, pleuritis and cholecystitis). In the animals immunized against bac. pyocyaneus the bacteria accumulated in the spleen, while in those immunized against typhoid they were mostly found in the bone-marrow. The conclusion is drawn that in the former the spleen and in the latter the bone marrow are the most important defenders of the organism. The agglutinating properties of the blood were not always in proportion to the degree of immunity, and therefore there is no relation between the agglutinating and bactericidal properties of the blood. The immunity depends principally on the activity of cellular elements of certain parenchymatous organs. Phagocytosis is not the only factor in immunity; the bactericidal properties of the tissues, the antitoxins and other factors play an important role. [A. R.]

A Case of Acute Leukemia.—A. Swocchotoff (*Bolnitchnaia Gazeta Botkina*, May, 1901) reports the case of a man, 23 years old, who developed rather suddenly hematuria, bloody stools and pain and bleeding from the gums. Personal history good, except an obscure attack of rheumatism, from which he suffered for about 3 weeks and recovered completely. On examination the mucous membranes appeared pale and cyanosed, the lymphatic glands somewhat enlarged and the skin covered in various places with small hemorrhagic spots. Both liver and spleen were greatly enlarged. An examination of the blood showed 3,622,000 red and 8,000 white corpuscles. The patient became rapidly worse, suffering from severe hemorrhages and excruciating pains in the bones, and died on the fifth day of admission. [A. R.]

Correspondence.

MISSTATEMENTS OF THE ANTIVIVISECTIONISTS
AGAIN.

By W. W. KEEN, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal.

San Francisco, July 8, 1901.

On January 21, 1901, I sent a reply to James M. Brown, president of the American Humane Association, in response to a letter from him challenging me to produce proof of inaccuracy in the references to a number of certain alleged experiments and of garbling the reports of the same. My reply was published in *The Journal of the American Medical Association* and the *Philadelphia Medical Journal* of Feb. 23, 1901.

In reply I received a letter from Mr. Brown saying that he expected to spend the month of February in California, and could not give attention to my letter until his return.

Mr. Brown seems to have been detained in California much longer than expected, for up to the present moment—nearly six months—I have received no further reply whatever. Indirectly, however, a certain reply has been published in the form of an anonymous pamphlet entitled "The Reality of Human Vivisection," which is called a "review" of my letter.

Not long since I had the pleasure of attending a lecture to one of his classes in moral science by Rev. Dr. Faunce, the accomplished president of Brown University. Among the virtues which he discussed was "Courage" and he pointed out the moral cowardice of anonymous letters. While such a letter is an instance of private moral cowardice, an anonymous pamphlet such as this is an instance of public moral cowardice. An honorable open foe I at least respect; one who skulks behind anonymous pamphlets I despise. The antivivisectionists seem to delight in such secrecy and anonymous attack.

There are four publications on this subject up to the present moment, to which I shall hereafter refer by number, except the last which I shall call the "review." 1. In senate document No. 78, 55th Congress, 3d Session, the last of a collection of certain antivivisectionist papers is one entitled "Human Vivisection," signed "A. Tracy." I should like to know who this mysterious "A. Tracy" is.

2. There is a pamphlet entitled "Human Vivisection," third edition, printed for the American Humane Association in 1900, which reprints this paper (with omission of "A. Tracy's" name) and adds to it a long continuation of the misstatements of the first. This is anonymous.

3. There is a small pamphlet entitled "Human Vivisection," published by the Humane Society, Washington, D. C., chiefly a relash of the misstatements of pamphlet No. 2. This is also without the name of any author.

4. Now comes the last pamphlet, the "review" of my letter. This is not only without the name of the author, but without even that of a publisher. It is simply dated "Boston, 1901."

The character of every one of these publications, however, is such that I do not wonder that the author wishes to conceal his identity.

The "review" (No. 4) re-prints Mr. Brown's letter to me and at the end adds: "No sufficient rejoinder to his [my] letter [in reply to Mr. Brown] would be admitted to the columns of these medical periodicals." (*The Journal of the American Medical Association* and the *Philadelphia Medical Journal*). The duplicity of this sentence is evident. The ordinary reader for whom it is evidently intended, would understand that a reply had been sent to the editors of these medical journals and that they had declined to print it. This is absolutely untrue. No such communication has ever been received by the editor of either of these journals. The critical reader will see that the sentence just quoted does not state that such a communication has been rejected. But for one critical reader a thousand casual readers will get the impression which the sentence was evidently intended to convey.

It is impossible for me to take up all the misstatements and misrepresentations contained in the 32 pages of this last anonymous "review," nor is it necessary to do so. That I should be honored from such a source by vivisection and misrepresentation, I expected, of course, but I did hope at least that there would be an honesty of statement to which no exception could be taken.

The author, however, is a very curious person who does not seem to be limited by the ordinary laws of either fair dealing or truthful statement.

Moreover, he would be a very poor lawyer. Most of the evidence cited by him is derived from published reports by certain medical men. Having, therefore, chosen his witnesses, and put them on the stand, he would not be allowed in any court of law to discredit his own witnesses by selecting part of their testimony as trustworthy and rejecting part as unworthy of credence. And yet, throughout this "review," while the anonymous author is eager to accept the statements of the various authorities as to what they did, he declines to admit their statements as to their results, or else misstates them, going so far as to assert that the statements of the physicians cited concerning the recovery of their patients are "utterly valueless."

In reply to Mr. Brown, I used the following language: "Let me again state clearly the question at issue. *It is not whether the experiments meet with my approval, but solely whether the reports of them in the pamphlet issued by the American Humane Association are reliable and accurate both as to their sources and substance.*" At the Hearing before the Senate committee, I distinctly twice over expressed my utter disapproval of many of the experiments referred to in the original pamphlet (No. 2). The condemnation is quoted both on page 1 and page 3 of the anonymous "review;" yet, in spite of these two statements and the third in my letter to Mr. Brown, just quoted, the author represents me throughout his "review" as the apologist and the advocate of such experiments, thus publishing, yet at the same time wilfully ignoring my repeated statements to the contrary.

In my letter to Mr. Brown, in support of my accusation that many of the references in the pamphlet on "Human Vivisection" are "vague and indefinite," I cited fourteen instances of quotations from newspapers, five of which were without date, and I added six other instances of "vague and indefinite" references not to newspapers. I commented upon the unreliability of newspapers as a source of authority in medical matters.

Let us see how the anonymous reviewer attempts to meet this issue. The facts he does not and can not deny. In the first place he claims that I have changed the issue from "the question of vague and indefinite quotation" to that of vague and indefinite references. When I stated at the Senate Hearing (stenographer's report): "Many of them are so vague and indefinite that I could not look them up," it must have been clear to anyone of common sense that I referred to the references to the experiments, and there was no misunderstanding on this point in the letter of Mr. Brown, who asks: "To what other of the references above given did you refer when you informed the Senate Committee that 'many of them were so vague and indefinite that I could not look them up?'" I was challenged by Mr. Brown to adduce examples of "vague and indefinite references," and this challenge I successfully met.

On page 22, the anonymous reviewer says: "Of the fourteen journals referred to, *every one* conveying a statement of fact—save one—had its name and date of publication plainly given." Here it will be observed that a distinction is drawn between references to articles "conveying a statement of fact," and those which do not relate to statements of fact. My indictment against the pamphlet on "Human Vivisection" (No. 2) was and is that many of the references are so "vague and indefinite" that the original sources of alleged quotations can not be consulted, and that some of the reports are "garbled and inaccurate." It may be just as important to determine the accuracy of a reference to an expression of an opinion as to learn the facts upon which the opinion is supposed to be based, and to charge me with an evasion of the issue because I did not restrict myself solely to one particular class of references, but pointed out the vague and indefinite character of all classes of references in the pamphlet, is too absurd to require further comment.

As a matter of fact, as pointed out in my letter to Mr. Brown, there are no less than five citations or reports of experiments in pamphlet No. 2 for which either no reference whatever is given, or the one inserted is wrong or so vague and indefinite that the original can not be consulted.

On page 9, the anonymous reviewer says: "It was pointed out by the president of the American Humane Associa-

tion that, with one exception, every phase of experimentation specifically mentioned had some reference to a medical authority." It is incredible that the reviewer should not have known the falsity of the statement attributed by him to the president of the American Humane Association, or he may think that in this strangely worded sentence he has constructed some loophole of escape through such avenues as may be afforded by throwing the responsibility for a false statement upon another, or by such equivocal phrases as "every phase of experimentation," "specifically mentioned," "some reference." There are in fact in the pamphlet of the American Humane Association seven instances in which reference to a medical authority for the experiments mentioned is lacking, and in addition the sole authorities for an important part of the statements regarding Sanarelli's experiments are the correspondent of a daily newspaper and a speaker at a convention of the American Humane Association.

Let us see how the reviewer tries to meet my demonstration of numerous instances of "garbled and inaccurate" quotations in pamphlet No. 2. Here again the facts can not be denied, but an attempt is made to minimize their importance.

1. "Brevity of quotation is often absolutely necessary" ("review" p. 9). Why, then, as I pointed out in my letter were whole sentences added, which do not appear at all in the original?

2. Errors are described in the "review" as a "translator's exaggeration" (p. 6) "blunders of a copyist" (p. 6) "errors of a translator" (p. 7). So, then, it is now conceded that the pamphlet does contain "exaggerations," "blunders," and "errors." It contains not merely "errors of a translator," but deliberate falsifications and misrepresentations. When a translator says what the author did not say; when the word "collapse" is translated "final collapse" and an oration is made upon the death of patients who did not die; when the American Humane Association in reference to these very cases quotes on the cover of its pamphlet "Is scientific murder a pardonable crime?" in spite of the published fact that the patients referred to did not die; when the translator again and again interpolates words, phrases and sentences which do not exist in the original, when essential phrases and paragraphs are omitted, these I submit are not the mere "errors of a translator" but deliberate misrepresentations. Instances of all of these I furnished Mr. Brown in reply to his challenge.

The pamphlet, moreover, contains, as I have pointed out, false or misleading quotations which could not be attributed to "errors of a translator" as they were from English sources. One can only hope that hereafter the "translators" and "copyists" employed by the antivivisectionists may be more accurate, or rather that the men and women back of these poor employees may be willing not to distort and suppress the truth in order to effect their purpose. It is a safe rule, I find, not to believe any statement of an antivivisectionist until its accuracy is established by reference to the original source from which the alleged statement or quotation is derived.

3. My charge of garbling and inaccuracy of quotation is practically admitted, but the reviewer states (p. 15): "For one of them [the translations] was the American Humane Association responsible in any way whatever." It is now rather late in the day to advance this disclaimer, after the section on the inside of the cover of the pamphlet of the sentence: "The facts are indisputable," and in the preface over the signature of the president and secretary of the association: "In each case, the authority is given." It is a favorite trick of antivivisectionists to attempt to throw in this way responsibility, when confronted with incontrovertible evidence of false statements, as is illustrated in the controversy between Miss Cobbe and Mr. Horsley.

I shall be curious to see the fourth edition of this pamphlet. For it I now furnish one more instance of false statement, the evidence of which was not in my possession at January. Even Mr. Brown admits that to this "the reference may, perhaps, be called indefinite." I submit that "perhaps" it may, for no book, journal or any other publication was named. The instance I refer to is Jansen's lecture purporting to be quoted on page 26 of pamphlet No. 2. The lecture was published in a well-known journal, *Centralblatt f. Bakteriologie u. Parasitenkunde*, 1891, Vol. 2, p. 40. So gross is the falsification that the reference is "perhaps" wisely omitted. The first phrase of the quotation is as follows: "When I began my experiments with smallpox pus, etc." This is an absolute untruth.

What Jansen used was not smallpox pus at all, but sterilized, diluted vaccine lymph, and sterilized blood serum from vaccinated calves, which could do no more harm than injecting so much water. The entire extract is inaccurate as a translation. There can be no question but that the substitution in this alleged quotation of "smallpox pus" for "sterilized vaccine lymph" can not be attributed to the mere "error of a translator," but is a deliberate falsification, and this in a pamphlet introduced with the statement to the reader: "The facts are indisputable!"

Much has been made of my statement that I could only find in the pamphlet references to "two experiments" in America. My reason for this statement was very simple and perfectly evident to any honest-minded reader.

In the pamphlet "Human Vivisection" (No. 2) there are a number of experiments related, the numbered ones beginning with the following on page 1: "1. Vivisection Experiments upon the Insane." Under this title several experiments, all of the same nature and by the same individual, are reported, eight being referred to in all. On page 5, appears, "2. Vivisection of Children in Boston," and under this a number of experiments, all by the same person, are referred to. Anybody with common sense would see that when I referred to "two" instances, I did not mean two individual experiments, but using the classification of the pamphlet, I referred to Nos. "1" and "2" on pages 1 and 5. In fact I specifically referred to these pages and mentioned various experiments under each caption.

I presume, however, that it is useless to expect fairness from an ambushed enemy.

The anonymous "reviewer's" suggestion that as I was President of the American Medical Association last year therefore I am responsible for every paper read before that body—when there were hundreds of papers read in over a dozen Sections before several thousand members—is so amusing that I pass it by with a smile at the author's simplicity.

One sentence of my letter I wrote perhaps better than I knew. In the account of Sanarelli's experiments a certain sentence, "I have seen unrolled before my eyes, etc." was quoted by "A. Tracy" in the original paper (No. 1). In that pamphlet two references were given, one to the *British Medical Journal*, the other to the *New England Medical Monthly*. I stated that this entire sentence occurred in neither of these journals and I added: "Whether it is quoted from some other source not indicated or has been deliberately added, I leave you or A. Tracy to explain." The "reviewer" explains that this quotation was from another source not indicated (surely this was "vague and indefinite"), namely, Sanarelli's original Italian paper, though no reference was made to it.

Inasmuch as in my letter to Mr. Brown I gave the reference to Sanarelli's original paper the anonymous author of the "review" pays me the compliment of supposing that I am a facile Italian scholar, and therefore, that I was perfectly aware that Sanarelli himself wrote this sentence. "With this volume in his hands, the original article open before his eyes," says the "reviewer," "would he have us believe that he did not take the trouble to compare and verify the only quotation from it which appears in the pamphlet? He did not see it? Credat Judæus Apella! There are limitations to credulity. But how queer must be that sense of honor which would permit a man to make a disgraceful imputation knowing all the while that every word of it was false!"

The simple facts of the case are these. Unfortunately I am not an Italian scholar, and have never even seen Sanarelli's original article. In order to find out the real facts, I wrote to a friend who reads Italian well, to learn whether these five patients really died, as the American Humane Association pamphlet (No. 2) asserted. He replied giving me the original reference, and stated that not one of them died.

As the "reviewer" points out that this quotation by "A. Tracy" was from Sanarelli's original paper, a very interesting enquiry arises, viz., if "A. Tracy" in Senate document No. 78, as is now claimed, quoted from this original paper of Sanarelli, it is in order for him now to explain how it is when Sanarelli's original paper states that all of these patients recovered he states that some, if not all of them died, and how he dares to quote nearly a page of oratory about "scientific murder" and "assassination," based upon this false statement.

On page 26 of the anonymous "review" the author disputes the value of tuberculin as a test for incipient consumption in children. Were it worth my while I could give

him references to disprove this statement, but in view of his amazing ignorance of modern medical progress as evinced by the next statement, I do not propose to take the trouble. He says "Dr. Keen knows perfectly well, in the first place, that phthisis, however early discovered, is not in all probability a curable ailment." Has he never made a postmortem examination and found a cured phthisis? Has he never visited, or even read of, the Adirondacks, or Denver, or Colorado Springs, or Minnesota, or Arizona, or New Mexico, or a score of other places? Has he never read of the many books and pamphlets on sanatoria for consumptives? Does he know nothing of these modern movements? Koch's discovery of the bacillus of tuberculosis by experiment upon animals in 1882 has done more to help in curing consumption and other forms of tuberculosis than any other one means and especially by its early recognition. If he will consult the recent Prize Essay on "Tuberculosis as a Disease of the Masses and how to Combat it," by Dr. S. A. Knopf, of New York, he will be made aware of the facts. This essay was awarded the prize by the International Tuberculosis Congress last year in Berlin in a competition in which 85 prize essays were presented from all over the world.

When I see the statement that phthisis is not curable even when discovered at an early stage, put forth seriously by my anonymous reviewer, I throw down the pamphlet in despair. One can not argue further with such dense ignorance. It is equal only to the assertion of another medical light among the antivivisectionists, that brain tumors can not be located outside the motor area.

A CASE OF ACUTE BRONCHITIS, FOLLOWED BY COLLAPSE OF THE RIGHT LUNG WITH A SUBCUTANEOUS EMPHYSEMA.

By N. W. BROWN, M. D., of Youngstown, Ohio.

To the Editor of the Philadelphia Medical Journal.

Subcutaneous Emphysema following Bronchitis, being of such infrequent occurrence, I felt that a report of a case, of which I had charge during part of January might be of interest.

Friday afternoon, January 11, 1901, I was called to see a little girl seven years of age, who, I was informed, was suffering with a sore throat.

Upon arriving, my attention was at once attracted by the respiratory efforts, which were rapid and labored. With each inspiration there was dilatation of the alae nasi, and contraction of the muscles of the neck. Previous history! This was good, the mother stating that the child had never been sick before in her life. The present trouble began two days before I was sent for. Upon examination I found her temperature to be 100 3-5, (1.30 P. M.); pulse 142; cough dry and hard; no expectoration; face flushed; tongue moist and heavily coated with white fur; voice almost gone. No pain anywhere except on the left side of the neck in the region of the larynx. From the symptoms and the knowledge that diphtheria was prevailing in the city at the time, I was led to suspect this trouble, but after a careful examination of the throat along with a bacteriological examination I was compelled to dismiss my suspicion. Vomiting had been a prominent symptom. The stomach was very irritable, all food being promptly ejected.

Careful inspection and palpation of the larynx failed to elicit anything such as peri-pharyngeal or laryngeal abscesses.

Percussion and palpation of the chest also, were void of any result, but on auscultation, signs of a beginning bronchitis were noticeable.

January 12: Temperature 100 1-5; pulse 136; respirations 38; vomiting almost ceased. Except for paroxysms of coughing the patient passed a fairly good night. No symptoms of any trouble in the chest, except an acute bronchitis which was rather severe.

January 13: General condition much improved. Cough painless and less frequent. Pulse 132; temperature 100 2-5; respirations 35. Thirst great.

January 14: Breathing easier, respirations 33; pulse 130; temperature 100. Expectoration viscid and yellow and profuse. Coating on the tongue less marked. Patient rested well during the night.

January 15: General condition much improved. Child playful. Respiration 30; pulse 120; temperature 100; expectoration free. With the exception of two severe paroxysms of coughing, rested well during the night. While

taking the temperature in the right axilla, I noticed a fullness in the infra-clavicular space. Upon drawing the arm backward this fullness still remained. Upon further examination, it was found to extend over the chest to the mammary line, in front, around to within three inches of the spine, and down to the lower border of the ribs.

On palpation, marked crackling was obtained. I immediately made up my mind I had a subcutaneous emphysema to deal with; but the question with me was, from where did this air escape. I could get no history of any injury, and although, on previous days, I had examined the throat for an abscess, I could find none. The left lung was hyper-resonant, but on account of the emphysema over the right side, I was unable to detect anything.

January 16: Child passed a restless night, respiration becoming again frequent and labored, as on my first visit. Pulse 142; respirations 41; temperature 100 4-5. Expectoration slightly lessened.

On inspection and palpation I found that the emphysema had extended over the chest, abdomen and back, though not so marked as it had been.

A compensatory emphysema had developed in the left lung. The right lung did not fill up as it should, with each inspiration, and gave signs of collapse. There was no retraction of the epigastrium or intercostal spaces.

January 17: General condition, worse. Pulse 135 and weak; temperature 100 2-5; respirations rapid; lips slightly cyanosed. Child stupid and drowsy. Physical signs the same.

January 18: Child very restless during the night. Dyspnea greater; temperature same as on previous day. Pulse 150 and weaker.

Sputa purulent. About 8 P. M. I was called to meet another physician in consultation, whom the family called. At this visit a gangrenous odor was detected on the breath. Death took place two hours later. No autopsy was allowed. The temperature in this case, at no time of the day, could be found to be over 101; nor did the emphysema involve the tissues about the neck to any extent. The conclusion arrived at by three other physicians who saw the case, and myself is, that the air escaped through the cellular tissue in the neck, due to a rupture of the sub-pleural tissue, and thence following up along the trachea or sheaths of the vessels.

TUBERCULAR ABSCESS OF THE THIGH.

By H. L. UHLER, M. D., of Marion, Ohio.

To the Editor of the Philadelphia Medical Journal.

About the 1st of July, 1900, H. W., aged 28, presented himself at my office for an examination of his leg. There was no tuberculous nor specific history. The leg had been troubling him for about one year past. The left thigh was much swollen, and the leg below the middle of the thigh was edematous, and the skin red and scaly, resembling an eczema. It was not very painful, but under the quadriceps could be felt what was apparently a localized collection of fluid. Temperature at no time raised more than 1-5 to 2-5 above normal. He seemed somewhat pale, a sort of superficial anemia. His weight had decreased a few pounds in the preceding year, during which the trouble had been manifest.

I diagnosed tubercular abscess. After watching the matter closely for a time, I punctured it with a clean exploring needle under aseptic precautions. I obtained nothing but blood. Then I changed my diagnosis to possible sarcoma. After 3 months further waiting, I again explored it with the needle and obtained characteristic tubercular pus. (In the meantime he had been under the care of an Osteopath.)

This time I made an incision and packed it with iodoform gauze, and waited. In a few days it was evident that something further must be done, and I made a free incision, some 10 or 11 inches long, and curetted out a large quantity of caseous material, some of it coming out in pieces as large as my thumb. There was no localization of process, but the entire fascia covering the rectus and a large portion of the lower half of the vastus externus was found to have been curetted away. This left the striae of these muscles entirely bare. The fasciae dipping in between the muscles had been involved at some points, and it was necessary to dip in after these foci with a small sharp uterine curette. I left the whole length of this large wound open and watched every day for other spots of like

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Laudable Hospital Work.—The general public rarely appreciates the value of hospitals unless they are confronted with the necessity for the service of a hospital by such a catastrophe as occurred in Philadelphia on the night of August 5th. If State officials and Philanthropists could have been eye witnesses of some of the untiring efforts on the part of hospital authorities to relieve the pain and suffering occasioned by the gasoline explosion which occurred on Locust street, there possibly would no longer be any necessity for a cry for appropriations and donations. Both the Pennsylvania and Jefferson Hospitals are to be congratulated for their efficient work. It is stated that 14 cases were admitted to the Pennsylvania Hospital, and almost three times that number to the Jefferson Medical College Hospital. The suddenness and pressure of the work requisite for the treatment of those with minor injuries prevented an exact tabulation of the patients treated in the accident ward, but not kept in the hospital, and it is believed that in Jefferson Hospital alone these cases would amount to between 50 and 60.

Money for York Hospital.—A York resident, whose name is withheld, has left the York Hospital \$40,000, payable at his death.

The Lackawanna County Medical Society held its monthly meeting at Scranton, July 8th. Dr. W. M. Reedy presided.

Vital Statistics of Philadelphia for the week ending August 3, 1901:

Total mortality	474	Cases.	Deaths.
Inflammation of the appendix 4,			
bladder 1, brain 24, bronchi 3,			
heart 2, kidneys 19, liver 2, lungs			
13, peritoneum 4, pleura 1, stom-			
ach and bowels 39			112
Marasmus 26, inanition 24, debility			
6			56
Tuberculosis of the lungs			61
Apoplexy 13, paralysis 7.....			20
Heart-disease of 20, fatty degenera-			
tion of 1			21
Uremia 10, Bright's disease 6, dia-			
betes 3			19
Carcinoma of the breast 1, stom-			
ach 5, uterus 1, pancreas 1.....			8
Convulsions 10, puerperal 1			11
Diphtheria	43		7
Brain-softening of			2
Typhoid fever	92		11
Old age			8
Scarlet fever	43		2
Alcoholism 2, casualties 7, cerebro-			
spinal meningitis 2, cholera in-			
fantum 45, cholera morbus 3,			
cirrhosis of the liver 2, croup,			
membranous, 3, cyanosis 2, diarrhea			
1, drowned 2, dropsy of brain 1,			
dysentery 3, epilepsy 1, erysip-			
elas 1, goitre 1, gangrene 1, hernia			
4, jaundice 1, leukemia 1, obstruc-			
tion of the bowels 3, purpura hem-			
orrhagica 2, pyemia 1, shock, sur-			
gical 1, septicemia 3, suicide 1,			
sunstroke 14, teething 2, tetanus			
1, tumor, abdominal 1, neck 1,			
thigh 1, ulceration of the stomach			
1, whooping cough 15.....			130

NEW YORK.

Wycming County Medical Association.—The following officers were elected at the meeting held at Warsaw, N. Y., July 9, 1901: President, Dr. Carl C. Mann, Warsaw; vice president, Dr. P. S. Goodwin, Perry; secretary and treasurer, Z. G. Truesdell, Warsaw. A resolution was also passed adopting by-laws in conformity with those of the New York State Medical Association. The following gentlemen were elected fellows: Z. J. Lusk, Warsaw; L. C. Broughton,

character, and for several days in succession was rewarded by finding more. I always everted these places thoroughly and after a week had no further use for the curette. I did not close the wound for nearly 3 weeks and then only by means of adhesive strips. The patient's temperature continued normal for 11 days, when he was allowed to sit up, when his temperature went up to 104 in 12 hours. This was the beginning of an acute nephritis which lasted for ten days, and subsided. After about a week of quiet he was again permitted to get up and the nephritis returned with double severity. At this time he became so blind that he could not distinguish any person 10 feet away. During this attack he exhibited the most marked edema I have ever seen in this condition. On skimmed milk steadily persevered in, and later followed by Ferri Tinct, he recovered. At this writing the leg is well, he is out of the house, has gained probably 15 or 20 pounds in weight, and his color is better than it has been for 2 years to my certain knowledge. This condition seems to be very rarely observed, in fact so little, that I wrote to Dr. Senn in regard to it. In his Principles of Surgery is the only account of the malady I can find, and only the history of 2 cases. I imagine from Dr. Senn's reply to my inquiry on this subject that he has seen very little of it. This apparent rarity is my principal reason for writing you so extensive an account of this case. I think that the plan of leaving the wound open was an excellent one, as it enabled me to at once notice the recurrence of infection.

THE USE OF BOVINE TUBERCULIN.

By CLEMENT A. PENROSE, M. D., of Baltimore, Md.
To the Editor of the Philadelphia Medical Journal.

Since Professor Robert Koch's recent address before the British Congress on Tuberculosis, London, July 23d, there has been much controversy concerning the identity of the human with the bovine tubercle bacillus.

The idea has occurred to me while reading this address, that much light would be thrown on the matter if injections of tuberculin prepared from the bovine tubercle bacillus were contrasted with those prepared from the human tubercle bacillus, in their effects on persons afflicted with tuberculosis. I can find no evidence in the literature that tuberculin has ever been made from bovine bacillus and tried on human beings, a very simple thing to do.

Steps have been taken by me to obtain this tuberculin, and I desire you to publish this as a preliminary announcement to some subsequent work on this subject.

Whooping Cough; Prognosis of Hospital Cases; Statistics of the Hospital des Enfants Assistés, from 1890 to 1900.—André Morraisse (*Gaz. Heb. de Méd. et de Chirur.*, May 26, 1901, 48me. Année, No. 42): (*Paris Thesis*, 1900-1901, No. 309). Whooping cough in private practice is usually benign, the mortality seldom rising above 1%. This low mortality is evidently the result of the hygienic conditions in which the disease develops. Hospital cases, on the other hand, badly on account of the poor physical condition of the patients, the crowding and the hospital infections. Paris hospitals have a mortality of 25% to 30%. In the hospital des Enfants Assistés, the mortality in 10 years has been 36% in a total of 825 cases. Tuberculosis and bronchopneumonia have been the principal causes of fatal issue. The results reported by Morraisse from the hospital des Enfants Assistés are due to the immediate isolation of the affected children who develop complications, the monthly disinfection following all infections and the antiseptic routine to which the personnel of the hospital is subjected.

[J. M. S.]

Thyroiditis With Mumps.—J. Simonin reports a case of infectious parotitis in a man of 21, with marked glandular involvement, all the lymphatic glands of the neck being enlarged. On the fourteenth day left sided orchitis developed. On the twenty-fifth day thyroiditis appeared, with swelling of the thyroid, tachycardia, and a tremor of the hands. This lasted about two weeks. The thyroid gland was much enlarged. The goiter, palpitation, and tremor suggested an abortive attack of Graves' disease. Thus far, the patient has kept well. Simonin will watch him for some time, to see whether any signs of exophthalmic goiter appear. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, April 25, 1901, No. 13). [M. O.]

Castile; A. C. Way, Perry Centre; W. B. Blackmer, Pike, Alternates; L. H. Humphrey, Silver Springs; G. S. Skiff, Gainesville; P. S. Goodwin, Perry; C. C. Mann, Warsaw. The next meeting will be held at the Walker House, Silver Lake, N. Y., on Tuesday, September 24, 1901.

Dr. Julius Ullman, of Buffalo, sometime ago was appointed instructor in clinical medicine and assistant in the bacteriological laboratory at the University of Buffalo. Through oversight in preparing copy for the printer, Dr. Ullman's name was omitted from the college announcement for 1901.

Information Wanted Concerning Joseph Dyas, who was last heard from at Dayton, Ohio, on June 22d. Any one who has seen him since this date will confer a favor on his family by communicating with the *New York Medical Journal*.

The Chautauqua County Medical Society held its annual meeting at Chautauqua, July 9th, at which the following officers were elected for the ensuing year: President, E. A. Scofield, of Bemus Point; vice-president, N.E. Beardsley, of Dunkirk; secretary, C. A. Ellis, of Sherman.

Dr. Margaret A. Cleaves, of New York, has recently been appointed the American editor of the *Journal of Physical Therapeutics*, a Quarterly International Review published at London.

NEW ENGLAND.

Stringent Anti-Spitting Ordinance.—The Boston Board of Health has placed itself on record as being determined to enforce its rules relative to expectoration in public places. The penalty for violating the ordinance is \$100.00.

Dr. Charles W. Page has resigned the superintendency of the Middletown Insane Asylum.

WESTERN STATES.

More Plague in San Francisco.—According to the report of Assistant Surgeon Rupert Blue, of the Marino Hospital Service, dated July 20th, 5 new cases of plague had occurred up to that date in San Francisco. The matter has been treated editorially in this week's issue of the *Philadelphia Medical Journal*.

Dr. Almah J. Frisby, who has recently been appointed on the Board of Regents of the University of Wisconsin, is the first woman in the history of this Board to serve on it.

Wayne County Medical Association.—At the annual meeting of the Wayne County Medical Association held in Richmond, Ind., July 11th, the following officers were elected: President, Dr. H. B. Boyd, of Cambridge City; vice-president, Dr. H. Gable, of Centerville; secretary and treasurer, Dr. S. C. Markley, of Richmond. Following the business there were three papers read, which were as follows: "Enterocolitis," by Dr. Hopkins; "Whooping Cough," by Dr. W. O. Mendenhall, and "The Physiology of the Brain," by Dr. D. W. Stevenson.

Enteric Fever in Chicago.—Reports indicate that an unusually fatal epidemic of enteric fever prevails in Chicago. It is stated that there are 38 cases in the County Hospital, of which 6 died in one day.

Byron Springs Sanitarium Destroyed by Fire.—The hotel and cottages forming the famous Byron Springs, Cal., were completely destroyed by fire on July 25th. Fortunately the fire occurred during the day and there was no loss of life. The losses of the guests will be quite heavy, few having saved more than a little wearing apparel.

SOUTHERN STATES.

Vaccination in Baltimore.—It is stated that Health Commissioner Bosley proposes to inaugurate a vigorous crusade against smallpox on August 15 by insisting upon a general vaccination of Baltimoreans.

Anthrax has appeared among cattle in Kent county, Maryland.

Washington is now free from smallpox. The quarantine hospital was closed on July 7.

Dr. Lee Wood, formerly of Mississippi, but more re-

cently of Abbeville, La., died at Warsaw, Ark., June 14, after a prolonged illness. Dr. Wood graduated at the University of Tennessee, Nashville in 1890.

Dr. H. B. Horlbeck Dead.—Dr. Henry Buckingham Horlbeck, for 20 years health officer of Charleston and a former president of the American Public Health Association, died at Charleston, S. C., on August 2d. He left directions for his body to be cremated and it was shipped to New York. Dr. Horlbeck was born in Charleston, S.C., July 15, 1839. He was educated at the Classical School of Prof. A. Sachtleben. In 1856 under the direction of his father, Dr. Ellis Horlbeck, he began the study of medicine. He attended three courses of lectures at the Medical College of the State of South Carolina and was graduated March 15, 1859. Dr. Horlbeck was house surgeon to the Roper Hospital, from April, 1859, to April, 1860. He then visited London and Paris, attending the lectures of V. Beau, Trousseau, Chassaignac and Ricord. He was commissioned surgeon of the First Regiment, South Carolina Regulars, Col. William Butler, Confederate Army, September, 1862, and was in active service during the bombardment of Fort Sumter and Fort Moultrie, at Battery Wagner, James Island and at the battles of Averysboro and Bentonville. He was mustered out of service April 9, 1865. Dr. Horlbeck had been health officer of Charleston since 1881 and secretary of the Board of Health of Charleston since 1886. He took a great interest in perfecting a quarantine service for the protection of Southern ports against yellow fever and succeeded in obtaining an appropriation from the Legislature of South Carolina, which resulted in the efficient plant in use in Charleston harbor. Dr. Horlbeck was a member of the South Carolina Medical Association, American Public Health Association, vice-president of this association, 1890-91, and was elected president in September, 1896, at the convention held in Buffalo. He was chairman of the board of commissioners of the City Hospital in 1886; member of Ancient Battalion Artillery and the Agricultural Society of South Carolina, of which he was president in 1880. Dr. Horlbeck was the author of many valuable contributions to medical journals and issued annual reports from the Charleston Health Department since 1880.

CANADA.

(From Our Special Correspondent).

The Canadian Medical Association.—The annual meeting of this society will be held at Winnipeg on August 28th, 29th, 30th and 31st. The address on surgery will be delivered by Dr. O. M. Jones, of Vancouver, and the address in medicine by Dr. J. R. Jones, of Winnipeg.

Meeting of the Ontario Medical Association, held at Toronto, June 19th and 20th. (Continued). Discussion on Gastric Ulcer.—Medical Aspect.—This was introduced by Dr. R. D. Rudolf, Toronto. In opening the discussion from a medical point of view, he gave a short historical sketch of the chief literature on the subject, and said during the last thirty years only one important symptom had been added to those mentioned by previous writers, viz.: the very common occurrence of hyperchlorhydria. Avoiding the consideration of the well-known points on the subject, he propounded five questions in connection with gastric ulcer which seemed to him to specially merit discussion. First, is there any relation between gastric ulcer and cancer? Trousseau believed that an actual antagonism existed between the two conditions, while Lebert considered that 9 per cent. of all gastric cancers so arose, and Rosenheim states that 5 to 6 per cent. of all gastric ulcers became carcinomatous. Clinically, the speaker had never seen a case of simple ulcer in cancer, nor had he seen a case of cancer preceded by ulcer, although such cases undoubtedly occasionally occurred.

Dr. Rudolf had seen pathological specimens illustrating both. Second: Can we diagnose the site of gastric ulcer? This question is becoming more important on account of operations. Ewald states that in 90 per cent. of cases it is impossible to tell whether the ulcer is in the stomach or in the duodenum, and that usually it is hard to diagnose the site of the stomach. Most gastric ulcers occur on the posterior wall, near the pyloric end. The site of the pain and tenderness; the time the pain occurs after food; the position in which the patient is free from pain, and the presence or absence of gastric dilatation may help, but these are very uncertain facts to lean upon. Thus, in Pin-

nel's famous case, mentioned by Abercrombie, where the patient was known to have ulcers near the pylorus, the pain used to occur immediately after taking food. The taking the food may not only mechanically irritate the ulcer, but by stimulating the acid secretion peristalsis may cause pain without touching the ulcer. It must further be remembered that there are sometimes several ulcers present. Third question: Does ergot ever stop gastric hemorrhage? Most authorities recommend ergot without question, but we must remember that the hemorrhage tends to be self-limiting from the lowering of the blood pressure and the forming of a clot, and ergot may interfere with this natural cure by raising the blood pressure. Turpentine and other local styptics have no such objection, and calcium chloride increases the tendency to clotting. Fourth question: Are cases of apparently "cured" gastric ulcer "first-class lives" for insurance? The speaker did not think that they were, because sudden perforation might occur after years of quiescence (he had seen two such cases). Ulcers were apt to relapse or to break out in new places. The severer the symptoms of the ulcer had been at the time, especially the hemorrhage, and the shorter the period since its occurrence, the worse the "life" was. Fifth question: As regards operation; as soon as perforation into the peritoneal cavity be diagnosed, operation should at once be performed; as regards operation where no perforation exists the question was not so easily settled. Severe, uncontrollable hemorrhage might occasionally call for surgical treatment, but the mortality from hemorrhage is surprisingly small, even when this is severe. Dr. Mayo Robson had recently recommended "that after a second bleeding, even during the course of the hemorrhage, if the patient can stand it, or as soon after as his condition will admit, the operation should be done. The speaker was glad to see that his old teacher, Dr. Byrom Bramwell, challenged this advice (*The Lancet*, March 9, 1900, page 687). Operation for the less urgent symptoms of gastric ulcer would occasionally be necessary, but in this direction we should proceed with great caution. Dr. Moynihan, in a recent paper (*The Lancet*, April 27, 1901), gave a summary of all the cases to date in which gastroplasty or gastro-gastrostomy had been performed for "hour-glass stomach." They amounted to thirty-eight in all, and nine of them were fatal, while in many complete relief of symptoms occurred.

Pathology.—This branch of the discussion was led by Dr. H. B. Anderson, Toronto. In his opening remarks he said he would make no reference to ulceration resulting from the breaking down of tubercular foci, syphilitic gummata, or malignant growths, nor of ulceration occurring during the course of acute infective diseases nor resulting from the action of corrosive poisons, but would limit the discussion to a consideration of the commonly designated simple, round, perforating or peptic ulcer. From the similarity in all essential points, however, he included the corresponding ulcer at the lower end of the esophagus and in the first part of the duodenum. From post-mortem statistics the frequency of gastric ulcer was in about 5 per cent. of cases, cicatrices being found about three times as often as healed ulcers. From his own experience at autopsies in Toronto he was sure that gastric ulcer did not occur in Ontario as frequently as indicated by the above figures.

The condition occurred most frequently in adults twenty to forty years of age, but was by no means rare at the extremes of life. The mortality was greater from forty to sixty years of age, no doubt from the lessened reparative power at that period of life. Females were affected more frequently than males, in about the proportion of two to one.

The etiological import of other diseases, especially chlorosis, was dwelt upon. Injury was a factor in rare instances, a statement substantiated by certain data. Occupation, race, climate, habits—all had an indirect influence in some cases, and arterial sclerosis, thrombosis and embolism of the gastric vessels were occasional factors in the etiology of the condition.

All these factors were, however, of secondary importance, and were only active in the presence of an altered condition of the gastric secretion. The localities where this form of ulceration occurred—at the lower end of the esophagus, in the stomach and in the first part of the duodenum—situations exposed to the ac-

tion of the gastric juice, as well as the not infrequent occurrence of postmortem digestion of the walls of the stomach, were strongly suggestive of the importance of this factor and this had received further direct proof from the discovery of the frequent occurrence of a hyperchlorhydria associated with gastric ulcer from a chemical analysis of the stomach contents obtained after test meals. The failure to find this condition in some cases was not proof that it had not existed at an earlier period of the disease, for the hyperchlorhydria might afterwards have been lessened as the result of the greater or less degree of gastritis following in the wake of the ulcer. Ulceration did not occur unless there was a disproportion between the acidity of the gastric juice and the condition of the blood. Normally autodigestion of the walls of the stomach was prevented, not by a simple chemical reaction in which the acid was neutralized by the alkalinity of the blood and fluids in the tissues, but by the vital resistance of the living cells of the part. He did not think there was anything to uphold the bacterial origin of this form of ulcer urged by some authors.

The pathological anatomy of gastric ulcer and its various terminations were discussed and illustrated by specimens. Healing was the fortunate result in the majority of cases. At other times a fistulous communication was formed with the duodenum, colon or the cutaneous surface, or a subphrenic abscess might result. Adhesion to the pancreas, liver, or to the omentum frequently walled the trouble off. Not infrequently, however, peritoneal infection from perforation occurred, and the symptoms might be so intense as to simulate poisoning. Gastrectasia or "hour-glass" deformity from cicatricial contraction at the pyloric orifice, or in the centre of the organ, at times gave rise to serious results. A specimen, showing the development of a carcinoma at the base of an ulcer with a clinical history extending over many years, was presented.

(To be Continued.)

MISCELLANY.

An Interesting Statistic.—According to the latest governmental statistics, each physician in the United States has 655 persons to look to for his support.

A Dangerous Amusement.—"Loop-the-Loop" is the name of a new entertainment which goes further in the way of tempting Providence than anything yet invented. The "Loop" is an immense circle of track in the air. A car on a mimic railway shoots down a very steep incline, and is impelled around the inner side of this loop. Part of this journey, of course, is made "heads down," the people in the car retaining their places by the great centrifugal force. The authorities at Coney Island are said to have prohibited "looping-the-loop" because women break their corset strings in their efforts to catch their breath as they sweep down the incline, and moreover, a young man is reported to have ruptured a blood vessel in his liver. We predict other accidents from this contrivance yet. No person with a weak heart or bad arteries should try it.

Obituary.—Dr. P. C. Mensch, at Collegeville, N. J., July 29th, aged 32 years—S. C. Vankirk, at Grafton, W. Va., July 23rd—Dr. Gilbert E. Palen, at Ocean City, N. J., July 30th, aged 69 years—Dr. Adam Miller, at Chicago, July 29th, aged 91 years—Dr. Stephen Foss, at Brooklyn, N. Y., August 2nd, aged 76 years—Dr. Adam Miller, at Milwaukee, Wis., July 30th, aged 91 years—Dr. Milo B. Ward, at Kansas City, July 28th, aged 50 years—Dr. Joseph H. Osterstock, at Easton, Pa., July 31st, aged 65 years—Dr. Arthur B. Marshall, at Wytheville, Md., August 3rd, aged 46 years—Dr. Geo. W. Dorsey, at Prince Frederick, Md., July 23rd, aged 81 years.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 Days Ended July 25, 1901.

- C. E. BANKS, surgeon, granted leave of absence for 3 days from July 25—July 29, 1901.
- C. T. PECKHAM, surgeon, Bureau order of July 17, 1901, relieving Surgeon Peckham from duty at Galveston, Texas, and directing him to report to medical officer in command at Boston, Mass., for duty, revoked; and directed to report to Surgeon G. W. Stoner, Immigration Depot, New York, for duty—July 23, 1901.
- W. P. McINTOSH, surgeon, leave of absence for 1 day under paragraph 178 of the regulations.

- T. H. PERRY, surgeon, to proceed to Martinsburg, W. Va., for special temporary duty—July 23, 1901.
- J. O. COBB, passed assistant surgeon, granted leave of absence for 30 days from July 21—July 22, 1901.
- A. H. THOMAS, passed assistant surgeon, granted leave of absence for 30 days from August 16—July 20, 1901.
- HILLI HASTINGS, assistant surgeon, 2 months' leave of absence granted by Department letter of June 28, amended so that said leave shall be from July 20 instead of July 15—July 20.
- M. H. FOSTER, assistant surgeon, granted leave of absence for 14 days from August 8—July 23, 1901.
- A. J. McLAUGHLIN, assistant surgeon, granted leave of absence for 7 days under paragraph 178 of the regulations.
- M. W. GLOVER, assistant surgeon, Bureau order of July 17, 1901, relieving Assistant Surgeon Glover from duty at Boston, Mass., and directing him to report to Surgeon G. W. Stoner, Immigration Depot, New York, for duty, suspended—July 13, 1901.
- J. D. LONG, assistant surgeon, granted leave of absence for 7 days under paragraph 178 of the regulations.
- P. G. RIERA, acting assistant surgeon, granted leave of absence for 1 month from July 11—July 20, 1901.
- W. A. LUCAS, interne, granted leave of absence for two weeks from July 25, on account of sickness—July 24, 1901.
- L. W. RYDER, hospital steward, granted leave of absence for 15 days from August 5—July 24, 1901.

APPOINTMENT.

- A. H. BARR appointed interne in the Marine Hospital Service for duty at Port Stanton, N. M.—July 22, 1901.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 Days Ended July 18, 1901.

- C. T. PECKHAM, surgeon, upon expiration of sick leave of absence, relieved from duty at Galveston, Texas, and directed to proceed to Boston, Mass., and report to the medical officer in command for duty and assignment to quarters—July 17, 1901.
- J. A. Nydegger, passed assistant surgeon, granted extension of leave of absence, on account of sickness, for 30 days from July 9—July 6, 1901.
- H. W. WICKES, passed assistant surgeon, granted leave of absence for 27 days from July 16—July 8, 1901.
- J. B. GREENE, passed assistant surgeon, directed to proceed to Point Pleasant, N. J., for the physical examination of keepers and surfmen of the Life Saving Service. Upon completion of said duty to rejoin station at Washington, D. C.—July 16, 1901.
- CARROLL FOX, assistant surgeon, to report to the medical officer in command at Port Townsend, Wash., for temporary duty—July 11, 1901.
- E. D. LORD, assistant surgeon, relieved from duty at the Immigration Depot, New York, N. Y., and directed to proceed to Galveston, Texas, and assume command of the service, relieving temporary Acting Assistant Surgeon Wm. Kellier—July 17, 1901.
- M. W. GLOVER, assistant surgeon, relieved from duty at Boston, Mass., and directed to proceed to New York, N. Y., and report to Surgeon G. W. Stoner, Immigration Depot, for duty—July 17, 1901.
- C. WILLIAMS BAILEY, acting assistant surgeon, granted leave of absence for 7 days—July 6, 1901.
- J. P. C. FOSTER, acting assistant surgeon, granted leave of absence for 40 days from July 31—July 10, 1901.
- S. GOMEZ, acting assistant surgeon, granted leave of absence for 30 days from July 15—July 12, 1901.
- R. L. McNEER, acting assistant surgeon, relieved from duty at Baltimore, Md., and directed to proceed to Cape Charles quarantine and report to Assistant Surgeon C. W. Wille for duty and assignment to quarters—July 17, 1901.
- M. A. SAFFORD, acting assistant surgeon, granted leave of absence for 14 days from July 17—July 6, 1901.
- W. L. STEALINS, hospital steward, granted leave of absence for 20 days from August 12—July 15, 1901.
- A. M. Roehrig, hospital steward, granted leave of absence for 16 days from August 17—July 15, 1901.
- J. V. LAGRANGE, hospital steward, granted leave of absence for 30 days from August 2—July 15, 1901.
- E. B. SCOTT, hospital steward, granted leave of absence for 1 day—July 8, 1901.
- M. H. WATTERS, hospital steward, relieved from duty at St. Louis, Mo., and directed to proceed to Washington, D. C., and report at the Bureau for duty—July 11, 1901.

APPOINTMENTS.

- H. J. BEARD appointed interne for duty at Evansville, Ind., July 17, 1901.
- M. H. ROSS appointed interne for duty at Cairo, Illinois, July 12, 1901.

Changes in the Medical Corps of the Navy, Week Ended August 3, 1901.

ASSISTANT SURGEON J. W. BACKUS, detached from the Vermont and ordered to the Atlantic Station, August 16—July 30.

ASSISTANT SURGEON F. A. ASSERSON, detached from the Naval Hospital, New York, and ordered to the Asiatic Station, August 16—July 29.

SURGEON S. H. GRIFFITH, relieved as recruiting officer at Buffalo, N. Y., and ordered to continue other duties—Aug. 1.

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for 7 Days Ended August 1, 1901.

- FAIRFAX IRWIN, surgeon, granted leave of absence for 21 days from August 7—July 18, 1901.
- J. O. COBB, passed assistant surgeon, Bureau letter of July 22, 1901, granting Passed Assistant Surgeon Cobb leave of absence for 30 days from July 24, amended so that said leave shall be effective July 25—July 31, 1901.
- C. P. WERTENBAKER, Passed Assistant Surgeon, to proceed to Camp Fontainebleau and adjacent coast towns as inspector—July 20, 1901.
- J. B. GREENE, Passed Assistant Surgeon, relieved from temporary duty at Washington, D. C., and directed to proceed to New York (Stapleton) and report to medical officer in command for duty and assignment to quarters, relieving Assistant Surgeon Tallaferra Clark—July 20, 1901.
- TALLAFERRO CLARK, Assistant Surgeon, upon being relieved by Passed Assistant Surgeon J. B. Greene, to proceed to Immigration Depot, New York, N. Y., and report to Surgeon G. W. Stoner, for duty, relieving Assistant Surgeon J. D. Long—July 20—1901.
- W. A. KORN, Assistant Surgeon, granted leave of absence for 1 month from August 12—July 29, 1901.
- J. D. LONG, Assistant Surgeon, upon being relieved by Assistant Surgeon Tallaferra Clark, to proceed to Manila, P. I., and report to Chief Quarantine Officer for duty—July 29, 1901. Granted leave of absence for 2 days—July 30, 1901.
- L. C. BEAN, Acting Assistant Surgeon, granted leave of absence for 30 days from August 2—July 29—1901.
- R. Y. HARRIS, Acting Assistant Surgeon, granted leave of absence for 15 days from August 12—July 31, 1901.
- H. McI. MARTIN, Acting Assistant Surgeon, granted leave of absence for 30 days from August 1—July 31, 1901.
- T. V. O'GORMAN, Hospital Steward, granted leave of absence for 60 days on account of sickness, to take effect on date of departure from station—July 26, 1901.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended August 3, 1901.

SMALLPOX—United States and Insular.

	Cases	Deaths
CALIFORNIA:		
Los Angeles	July 13-20	2
San Francisco	July 14-21	1
Lexington	April 27-May 4	1
MICHIGAN:		
Grand Rapids	July 13-27	2
NEBRASKA:		
Omaha	July 6-20	5
NEW HAMPSHIRE:		
Nashua	July 20-27	1
NEW JERSEY:		
Newark	July 20-27	6
NEW YORK:		
New York City	July 20-27	9
Cincinnati	July 19-26	1
PENNSYLVANIA:		
Philadelphia	July 20-27	1
TENNESSEE:		
Memphis	July 20-27	1
UTAH:		
Salt Lake City	July 20-27	7
WASHINGTON:		
Tacoma	July 14-21	6
WEST VIRGINIA:		
Martinsburg	July 26	13

SMALLPOX—Foreign.

ARGENTINA:	Buenos Ayres	May 1-31	247
AUSTRIA:	Prague	July 6-13	1
BELGIUM:	Antwerp	July 6-13	4
FRANCE:	Paris	July 12-19	5
GREECE:	Thessalonica	July 1-11	2
GHANA:	Glasgow	July 12-19	3
GREAT BRITAIN:	London	July 6-13	12
INDIA:	Bombay	June 25-July 2	4
	Calcutta	June 23-29	6
	Karachi	June 8-30	13
	Messina	July 6-13	5
ITALY:	Rotterdam	July 13-20	1
NETHERLANDS:	Moscow	June 24-July 6	3
RUSSIA:	Odessa	July 6-13	1
	St. Petersburg	July 15-July 6	7

PLAGUE—Insular.

HAWAII:	Honolulu	July 17	1
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PLAGUE—Foreign.

INDIA:	Bombay	June 27-July 2	65
	Calcutta	June 23-29	11
	Karachi	June 8-30	23

YELLOW FEVER.

COSTA RICA:	Port Limon	July 4-21	2
CUBA:	Cienfuegos	July 15-18	2
MEXICO:	Aera Cruz	July 13-27	1

CHOLERA.

INDIA:	Bombay	June 25-July 2	3
	Calcutta	June 23-29	23
JAVA:	Batavia	June 8-22	49

GREAT BRITAIN.

Jacksonian Prize.—Mr. McAdam Eccles, M. S., F. R. C. S., Eng., has been awarded the Jacksonian Prize of the Royal College of Surgeons of England, and has been elected a Hunterian Professor for 1901-1902. The subject of his essay for the prize was "The Diagnosis and Treatment of the Diseases caused by and connected with Imperfect Descent of the Testicle."

Mr. J. W. Dowden, M. B. C. M., F. R. C. S. Ed., has been appointed Assistant-Surgeon to the Edinburgh Royal Infirmary.

Sir Francis Laking, Physician in Ordinary to the King, has been elected consulting physician, and **Mr. T. Pickering Pick, F. R. C. S.,** consulting surgeon, to the Victoria Hospital for Children, Chelsea.

CONTINENTAL EUROPE.

Gilles de la Tourette, the eminent alienist and the distinguished pupil of Charcot, has himself become insane, and is in an asylum.

The Nudity Cure.—There is a village in Austria near the Adriatic, states the *Medical Age*, where the nudity cure is practiced. The debilitated, neurasthenics, the tired, etc., can go there and, in the costume of Adam, expose their individuals to the air, the sun's rays, or the rain. Thickets are carefully arranged so as to cut off all view of the patients; a hat and short trunks only are allowed; the sexes are separated. Baths, massage, gymnastics, and games are indulged in, and a strict vegetarian diet completes the treatment.

The French National Periodical Congress of Gynecology, Obstetrics and Pediatrics will meet this year at Nantes under the general presidency of Dr. Sevestre, of Paris, who will also preside over the section on pediatrics. Dr. Segond will be the president of the section on gynecology, and Professor Queiral, of Marseilles of the section on obstetrics.

A New Journal.—An adjourned meeting of members of the medical profession practicing obstetrics and gynecology, states *The Lancet*, was held in London on July 24th, under the presidency of Sir John Williams, at which it was unanimously resolved to establish a new Journal, to be called *The British and Colonial Journal of Obstetrics and Gynecology*, and to raise the funds required for its publication by the formation of a limited liability company.

Dr. Bureau, of the Museum of Natural History, Professor of Botany at the University of Paris, has recently been elected a member of the French Academy of Medicine.

Dr. Weill has been appointed Professor of Pediatrics at the University of Lyons.

Humor at the British Congress on Tuberculosis.—According to the *London Chronicle* there were two distinct sensations at the opening of the British Congress on Tuberculosis. One was when the American delegate, Prof. Osler, rapped out a good round oath, with an apology of course to the Duke of Cambridge and to the ladies in the gallery. He contrasted the altruistic attitude of the members of the congress with the egotistic attitude of the great American trusts, and said the motto of the one was "Pro bono publico," while the other adopted the motto: "D—n the public." The other sensation was when Prof. von Schrotter, the representative of Austria, described the Berlin Congress on Tuberculosis of 1896 as exceeding "the most sanguine expectations."

A Virchow House.—The Medical Society of Berlin has decided to erect a Virchow House as a permanent memorial of its honorary president, Professor Rudolph Virchow, the 50th anniversary of whose birthday will soon be commemorated. Considerable money has already been placed at the disposal of the society for the completion of its plan. The Paris Anthropological Society, upon invitation, will be present at the celebration, and will present Professor Virchow with a large gold medallion.

Virchow on Koch.—Prof. Rudolph Virchow's eightieth birthday will be celebrated in Berlin on Saturday, October 12, when he will personally receive delegates with congratulatory addresses from various scientific bodies, foreign as well as German. Prof. Virchow is not without a certain youthful vigor, especially in thought. When asked the other day what he thought of Koch's latest pronouncement on consumption he said: "Koch is not a Pope. One cannot say because of his views the thing is settled; Roma locuta est (Rome has spoken)."

Society Reports.

Proceedings of the School for Health Officers, held in Burlington, Vermont, from July 8th to July 11th, inclusive.

The Health Officer's School opened with an attendance of about 150, representing nearly all sections of the State. Dr. C. S. Caverly, president of the State Board, called the meeting to order and gave a brief review of health legislation in the State of Vermont. He showed the difference in the prevalence of diseases before and after the establishment of the State Board of Health and the enactment of this public health law. The Board was welcomed by Mayor Hawley, Gov. Stickney, and Hon. J. A. DeBoer, of Montpelier.

The second day opened with about the same attendance as the previous evening. The first speaker was Col. Joel C. Baker, of Rutland, who exhaustively treated the subject of laws relating to public health. This paper was discussed by Hon. D. J. Foster, of Burlington, Drs. Holton, of Brattleboro, Grout, of Waterbury, Newton, of Benson, and Sanborn, of New Haven.

H. L. Stillson, of Bennington, read a paper on the duties and responsibilities of health officers, which was discussed by Dr. L. M. Greene, of Bethel.

Dr. W. N. Platt read a paper on sanitary legislation. The paper was discussed by Dr. W. S. Hubbard and Dr. W. D. Huntingdon.

Dr. D. D. Grout next read a paper on "The Relation of Animal Diseases to Public Health." He calls attention to the common causes of infectious diseases, and the transmission of animal disease to man. Of all domestic animals none are so intimately or closely related to the human race as the cow. Grout gives a tabular form of diseases of domestic animals that are known to be communicable to man. They are: (1) Glanders and farcy in horses, etc.; (2) canine madness, rabies in dogs, cats, etc.; (3) malignant anthrax in all domestic animals; (4) tuberculosis in all animals; (5) malignant cholera in all animals; (6) milk-sickness in animals; (7) small-pox in all animals and fowls, (8) diphtheria in animals; (9) scarlet fever in various animals, (10) plague, which is a disease so common to man, monkey and rodents. A brief discussion of the mode of transmission of these diseases is given. Tuberculosis is a disease which affects nearly all our domestic animals, and tuberculous cattle are especially to be dreaded, since they furnish so much food for the consumption of men. In the Northern States from 5 to 8 per cent. of the cattle suffer from tuberculosis, and in some localities 50 per cent or more are affected. The question whether the bacillus which produces the disease in man is identical with that found in cattle is one of very great importance, for upon the affirmative settlement of the question rests the possibility of transference of the disease from animals to man and vice versa. It is generally believed that the bacillus found in man and cattle are the same. There have been many instances that point to the conclusion that the disease has been transferred from cattle to man, and Grout thinks there can be no question that the bacillus is the same if the disease can be carried from one to the other.

Regarding the proportion of infection from tuberculosis, he considers that more deaths occur among the human race than among animals, but that there are far more dairy cows infected with tuberculosis in proportion to their number than in the human family. He believes that the high natural temperature has much to do with this lower death rate in cows, for the tubercle bacillus requires for its growth, multiplication and pathogenicity, a temperature above that of the normal body, and the raised temperature of the human subject that is pathognomonic of the growth of the tuberculous masses is the normal bovine temperature. Consequently, tubercle will grow in the cow without any disturbance of her normal temperature, and the train of consequences that follows the effects of increased bodily heat does not occur in the cow from an invasion of tuberculosis, and therefore the progress goes on in the animal, and unless other morbid conditions supervene to increase the bovine temperature, the tubercle does not break down and cause sepsis, which is always the cause of

death where the primary disease is tuberculosis. This he considers a good reason for the apparent good health, good flesh and prime condition of many cattle that are tuberculous. Grout regards nodulation (nest-building) as the first step in tuberculosis. These may remain in a dormant or latent state for a very long time, and their spreading is undoubtedly due to an alteration of the general health which lowers the power of resistance of the patient. Grout considers the removal of diseased animals the essential requirement in the prevention of disease. He thinks the use of the tuberculin test in the early stages of great advantage, especially in cattle. As to the treatment of infected animals, he advises that animals without outward signs of disease might be fattened for the butcher and inspected, and if found to be tuberculous, they are to be killed. After all tuberculous animals have been removed the stables should be disinfected, and the remaining healthy animals retested with tuberculin. All animals introduced into a herd should be examined, tested, and found to be sound beforehand.

Regarding the contamination of milk he calls attention to the fact that not only is milk drawn from a cow with a tuberculous udder likely to contain the bacillus, but mentions other possible sources of contamination. In tubercular animals the disease in a large proportion exists in the gastrointestinal tract, and the bacilli are thrown off in the feces which may adhere to the animal when it lies down, and this by a careless milker may be brushed off into the milk. The feces also becomes dried, the dust of the stable is loaded with the germs, and he considers it doubtful if milk ever leaves the stable where the disease exists without containing tubercle bacilli. He also calls attention to the possible contamination of milk after it is drawn from the cow. In conclusion he advises that legislation is needed that will require the tuberculin test of every animal in the state, and that dairymen should be educated to see that it is not for their interest, to say nothing of the interests of the consumers of their products, to keep their cattle in unhygienic surroundings, such as small, dark, damp and unventilated stables, and that a law requiring the rigid inspection of dairies should be enacted.

This paper was discussed by Dr. F. A. Rich and Dr. C. W. Peck. Dr. Peck called attention to the fact that 5000 people die annually from tuberculosis in Vermont, and 6000 children under 6 years of age are killed by bad milk.

E. B. Moore then spoke on the subject of milk supplies, which was discussed by Drs. P. P. White, G. G. Marshall and W. H. Vincent.

At the evening session J. H. McCollum gave an address on smallpox eruptions, illustrated by copious stereopticon views. Drs. E. D. Ellis, of Poultney, and Dr. R. T. Goss, of Hartford, and Dr. J. W. Copeland, of Lyndonville, illustrated the progress made in stamping out smallpox in their respective towns recently.

The first paper of the morning session was on plumbing by W. P. Gerhard. He called attention to the great advance made in plumbing, but thinks a simpler system is needed which will be more effective and less costly. Following this a paper on vital statistics was read by Dr. C. L. Wilbur. This paper was discussed by Drs. Allen, Caverly, Holton and Hon. C. W. Crowell.

Dr. H. H. Stone read a paper on the value of blood examination, which was followed by a paper on "The Value of Our Laboratory to the People," by Dr. M. J. Wiltse. This paper was discussed by Dr. S. E. Maynard, Dr. John Egan, Hon. E. D. Proctor and Dr. F. Fletcher.

Prof. W. T. Sedgwick mentioned great epidemics directly traceable to the water supply. Mr. C. P. Mont opened the discussion, which was continued by Drs. Avery, Philip, Sanborn and Bront.

Prof. Sedgwick called attention to the fact that destruction of sewage was more fundamental than that of procuring good water. Lantern slides were then used illustrating the different forms and conditions of sewage. The paper was discussed by Drs. Holton, Grout and Sanborn.

Dr. W. L. Hollington then took up the subject of School Sanitation, which was discussed by Drs. Leavenworth, Sanborn, Kent, Hipgood and Osgood.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

July 20th, 1901.

1. A Clinical Lecture on Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ; With Four Successful Cases. P. J. FREYER.
2. The Treatment of Stammering (and "Lalling"). H. GRAHAM LANGWILL.
3. On Edematous and Erysipelatous Anthrax. JOHN HENRY BELL.
4. A Case of Multiple Malignant Pustules (Anthrax). R. LAWFORD KNAGGS.
5. A Case of Anthrax with Extensive Meningeal Hemorrhage. JOSEPH C. STURDY.
6. The Danger of Anthrax from the Manipulation of Horse-hair, and its Prevention. ALEXANDER SCOTT.

1.—P. J. Freyer, in discussing the radical cure of enlargement of the prostate, states that until recently partial prostatectomy by the suprapubic route was the most commonly applicable and most satisfactory of all the operations. After this operation, however, the expulsive power of the bladder is usually lost. Freyer thinks that the trouble lies in the fact that pressure is still exerted on the urethra by the enlarged lateral lobes. The author then reports 4 cases in which he has performed a total prostatectomy by the suprapubic route with the most satisfactory results, and reproduces photographs of the organs after removal. Each is found to be encapsulated and contains several smaller tumors also encapsulated. In each case the growth was an adenoma. Where the two lateral lobes are removed separately the ejaculatory ducts are left uninjured. When the gland is removed as a whole, however, the author is uncertain what injury is done to the ducts. This is thought to be a matter, however, of little importance when the age of the patient is considered. When the gland is enucleated out of its sheath there is only a small amount of hemorrhage, and this can readily be controlled by hot irrigation. The large cavity left after removal of the prostate quickly contracts. One of the most satisfactory features of the operation is the fact that restoration of the expulsive power of the bladder is obtained. In each of the author's cases the patient was able to retain the urine for a number of hours. [J. H. G.]

3.—John Henry Bell reports six cases of edematous and erysipelatous anthrax. This condition is so named on account of its resemblance to erysipelas, and not that it is a compound of erysipelas and anthrax. The condition begins with a pale swelling, soft and without pain. It is only after several days and marked development that vesicles and eschar form, notably on the eyelids, but at the onset the skin is smooth and has no trace of pimples. The general symptoms are negative. The freedom from pain and distress is remarkable. The pulse is not greater than normal, nor is the temperature above that of health. The local symptoms are the extensive edema which may extend from the scalp to the pubes with much swelling. In slight cases there is no redness, vesication or eschar; in severer cases there is much redness, late vesiculation and eschar, or gangrenous appearance of the skin. In none has there been pain, only tightness from stretching of the skin. Of six cases here recorded, three were fatal. As to treatment, it is evident that incision, cautery, or caustics were not suitable for the diffused inflammatory form. The writer believes that the most promising method of treatment is the intravenous injection of non-toxic germicides. [T. L. C.]

4.—R. L. Knaggs reports a case of multiple malignant pustules (anthrax). In a groom of 20 years, treatment of excision of the pustule was followed, also the symptoms promptly disappeared. The writer believes that this result may be counted upon if the bacilli have not penetrated the lymphatics and been carried on beyond the focus of the disease. Infection of the resulting wound by bacilli from the sore which is being cut out cannot be a really serious danger. The writer has seen many pustules, but no recurrence in the wounds. [T. L. C.]

5.—Joseph C. Sturdy reports a case of anthrax with meningeal hemorrhage. The patient was a wool-sorter of 33 years and complained of a swelling on his neck three

inches above the clavicle, on the right side. The adjacent glands were not enlarged. The condition was recognized as anthrax. The swelling was excised. On the following morning he suddenly became blind, accompanied by pain in the head, vomiting, and in half an hour he was unconscious and very restless. At 5.30 in the afternoon, the temperature in the axilla was 99.7° and in the rectum 102.2°. The violence of the symptoms continued, and he died late in the same night. Bacteriological examination of the blood, pleural and peritoneal fluids, revealed the presence of the anthrax bacilli. [T. L. C.]

6.—Alexander Scott discusses the danger of anthrax from the manipulation of horsehair, and its prevention. He believes that all the workers should wear overalls; that no one with any cut or abrasion of the skin should be allowed to work unless the wound can be absolutely protected from contamination; that all workers should wash themselves frequently, especially before taking food; that all cases of illness, especially if connected with any swelling or boil, should be immediately intimated to the manager, so that the other workers similarly exposed may be warned of their danger. He believes that the bales of horsehair should not be handled except in a wet state, which will prevent dust from arising. He further advises that the hair should be boiled for half an hour in order to cleanse it, and, if necessary, that disinfectant agents be added. Care should be taken that all dust and residue be carefully burned. [T. L. C.]

LANCET.

July 20, 1901.

1. Clinical Lectures on the Pathology of Hysteria. THOMAS D. SAVILL.
2. Some Further Cases of Ethyl Chloride Narcosis. W. J. MCCARDIE.
3. Headache. A. H. COPEMAN.
4. The Prognosis and Treatment of Cases of Ascites Occurring in the Course of Alcoholic Cirrhosis of the Liver, with Special Reference to the Treatment by Operation. H. CAMPBELL THOMSON.
5. A Rare Form of Purpura Complicating Diphtheria. CHARLES W. BUCKLEY.
6. The Deciduous Dentition as a Factor in the Health of the Child. W. H. DOLAMORE.
7. Tuberculosis of the Choroid. GEORGE CARPENTER.
8. Notes on Some Surgical Cases Treated in the General Hospital at Springfontein. S. F. LOUGHWEED.
9. Lichen from a Histological Point of View. MORGAN DOCKRELL.
10. Infantile Scurvy. EDMUND CAUTLEY.
11. On X-Rays in the Treatment of Lupus and Rodent Ulcer. JAMES STARTIN.

1.—Savill delivered a lecture on "The Pathology of Hysteria" at the West End Hospital for Diseases of the Nervous System, Welbeck street, London. The author states that there is only one tenable explanation for the production of hysterical attacks, namely that the same anatomical part of the nervous system is the seat of the lesion, and that this damage is of sudden onset and disappears with equal rapidity. He further emphasizes that this anatomical change is a vascular one. This theory is based upon purely clinical manifestations of the disease, such as hysterical syncope, the hysterical diathesis, and upon the causes of hysteria. It is highly probable that the nervous apparatus of the splanchnic area (abdominal sympathetic) is very susceptible in hysterical individuals, and is easily influenced by emotional disturbances, such as grief, fear, and anger. This nervous derangement of the splanchnic area, which may give rise to hysteria, induces a dilatation of the blood vessels and cerebral anemia immediately follows. Syncope and even convulsions may be produced by this cerebral anemia. He defines hysterical diathesis as "a peculiar condition of the nervous system, inherent in the individual and for the most part inherited, consisting in its psychological aspect of the want of self-control and emotional instability, and in its physical aspect of a tendency throughout life to the development of various sensory, motor, visceral, and neuro-vascular disturbances, not connected with any definite organic lesion by our present means of investigation." The causes of hysteria are classified as predisposing, contributory or exciting, and those which may determine the attack. There is ample reason for believing that the ilio-hypogastric nerve is the de-

pressor nerve of the abdominal sympathetic, which, when irritated, in those individuals who show a hysterogenic zone along its distribution, produces dilatation of the blood vessels in the splanchnic area and consequently cerebral anemia, with the development of all the phenomena of an attack of hysteria. Savill promises at some future date to submit further proof to substantiate the theory which he has advanced. [F. J. K.]

2.—W. J. McCardie reports his recent experience with ethyl chloride narcosis and presents briefly the history of 26 cases in which this agent had been used in the performance of minor operations. The longest anesthesia lasted about 16 minutes. In this case a previous anesthetization with chloroform had given rise to serious symptoms. Many of the operations done were for hypertrophied tonsils and adenoids. In one case there developed a peculiar rash during the anesthesia; in another instance great muscular excitement rendered complete anesthesia impossible. This patient was not an alcoholic. In a third case death occurred about an hour after the narcosis. The patient had made a good recovery without any other effects. The postmortem showed advanced disease of the heart and other organs. The condition of the heart was supposed to be the cause of death. It is not thought the chloride of ethyl had anything to do with it, since no symptoms were present during its administration. On an average the author used about 10 cc. of the agent in each case. This drug has proved a satisfactory anesthetizing agent in excisions of the eye. The drug should be given gradually and never "crowded" [J. H. G.]

3.—Copeman discusses headache in a thesis for the degree of Doctor of Medicine, Trinity College, Dublin. The seat of headache may be either in the scalp, the bones of the skull or its pericranium, or in the brain or its membranes. Headaches of intracranial origin he classifies as: (1) headache due to the lesions of the brain, meninges, or their blood vessels; (2) headache occurring in the course of acute fever; (3) headache due to congestion; (4) headache due to anemia; (5) headache due to nervous causes; (6) headache due to gastric substances; (7) headache of reflex or sympathetic origin; and, (8) sick headache or migraine. In the consideration of headache due to brain lesions and acute fever, he lays stress on the importance of directing attention to the disease of which the headache is a symptom. The clinical thermometer will serve to distinguish headache due to fever. The condition of the arteries and the age of the patient are valuable guides to diagnosis. Severe and persistent pain accompanied by nausea and vomiting are constant symptoms of the headache due to gross brain lesions. The result of the ophthalmoscopic examination and the fact that sooner or later paralysis of some of the cranial or some of the other nerves might develop, are valuable diagnostic signs. The following causes are mentioned for congestive headache. Valvular heart disease, hypertrophy of the left ventricle, chronic interstitial nephritis, plethora, emotional disturbances, irregular menstruations, the use of tight collars, and the abuse of corsets. He recommends aconite for the headache due to acute congestion, as a result of the hypertrophy of the heart, and digitalis and opium, in small doses, for the headache due to passive congestion. Cold applications to the head, saline purges, hot mustard foot baths, gentle exercise in the open air, and the proper regulations of the diet, are all valuable adjuncts in the treatment. The headache due to cerebral anemia is very common amongst all classes and in people of all ages. When this form of headache is due to a general anemia few drugs will give immediate relief to the patient. Improvement must follow more slowly. In chlorosis the administration of iron often produces rapid improvement. A glass of wine, preferably champagne, or the mere taking-up of the recumbent position often gives speedy relief. The headache of general debility and neurasthenia is known as nervous headache. The pain in this variety is not infrequently fixed in one small spot, but it may occur in any part of the cranium. In the treatment of this condition he recommends the bromides and camphor combined with absolute rest and quiet in a darkened room. The dilute mineral acids and preparations of iron, zinc, and arsenic are valuable drugs to strengthen the exhausted nervous system between the attacks. The following causes are mentioned for toxicemic headaches: Faulty digestion, imperfect action of the liver, acute al-

coholism, gout, rheumatism, malaria, lead poisoning, confinement in close stuffy, ill-ventilated rooms, and the inhalation of sewer gas. This form of headache is frequently frontal in character. When due to dyspepsia or bilious states, prompt relief follows the use of an emetic or brisk purgation. When the stomach is irritated bismuth and dilute hydrocyanic acid in an effervescent draught will relieve the patient. The following causes are given for reflex or sympathetic headache: Eye strain, dental caries, diseases of the throat and nasal passages and ovarian and sexual derangements. The treatment should be directed to the organ whence the irritation springs. Migraine or sick headache is now generally thought to be due either to a nervous disturbance of the nature of epilepsy, or to some other ill-defined condition of the cortex of the brain, while there are still others who hold that it is due to circulatory disturbances of the brain. The author is inclined to the view that this form of headache is due to a toxemia; the blood being saturated with toxic products from faulty digestion. In the treatment of this condition he recommends 5 grains of phenacetin and 2 grains of caffeine. 12 or 24 hours rest in bed is necessary before relief will be secured. [F. J. K.]

4.—Thomson read a paper before the Royal Medical and Chirurgical Society on "The Prognosis and Treatment of Ascites occurring in the course of Alcoholic Cirrhosis of the Liver." In this address he mentions the following interesting points: (1) Ascites in the course of alcoholic cirrhosis may be due either to the cirrhosis directly, or co-exist with that condition without being dependent upon the cirrhosis; (2) the prognosis of ascites directly due to cirrhosis is very unfavorable, while ascites occurring with cirrhosis but not directly dependent upon it, is not infrequently temporarily relieved and may even be cured; (3) the operation performed for the relief of ascites is only likely to be successful in those instances in which the peritoneal effusion is an associated condition and not directly due to it. From post-mortem observations he has classified the cases of ascites, which, during life, seem to be due to cirrhosis of the liver into 3 groups: (1) Those cases in which the ascites is found after death to be the result of an entirely different cause; (2) those cases in which the ascites is associated with cirrhosis but not dependent upon it; (3) ascites directly due to cirrhosis. In regard to the treatment of the later stages of cirrhosis of the liver, at the present time it is generally advised to tap the peritoneal effusion early, but the author contends that there is no good evidence to show that tapping has any favorable influence on those cases where the ascites is directly due to cirrhosis. In this article a table is appended giving the results of the radical operation for ascites which was introduced with a view of curing cirrhosis with ascites. In this table 11 operated cases are recorded. It is very difficult to draw conclusions from this inserted table. Thomson has clearly defined the limitations of this radical operation. He believes that the cases best suited for operation are those in which the ascites is not dependent upon the cirrhosis but exists as an associated condition. The presence of cirrhosis with ascites is not necessarily a contra-indication to operation. He also states there is good reason to believe that the operation should not be undertaken when active symptoms of cirrhosis have supervened; the ascites being directly dependent upon these symptoms, for the liver, in such cases, is in a condition incompatible with prolongation of life. Care should always be taken to decide whether the cirrhosis is latent. The only cases to be selected for operation are those which have been tapped several times. [F. J. K.]

5.—Buckley reports a rare case of purpura complicating diphtheria. The patient, a girl 10 years of age, first came under the observation of the author on October 8, 1900, when she was suffering from diphtheria. The disease had progressed 4 days. After an examination it was found that a membrane covered both tonsils and the uvula. The Klebs-Loeffler bacillus was isolated from the exudate. Antitoxin was administered, and on the 7th day the membrane separated. On the evening of the 6th day the patient had a spell of vomiting and recurrence of these seizures during the next 36 hours. Blood was found in the vomit and in one of the stools. On the 8th day a rash appeared on the elbow, which consisted of large deep purple papules. Numerous petechiae were seen on the buttocks. Fresh petechiae continued to appear on the face,

ears, elbows, and knees. The papular rash on the elbows became vesicular. These vesicles coalesced, forming large bullae which contained a dark, broken-down, bloody material. The elbows and the left hip were painful and very tender upon pressure, but no swelling showed itself. 40 days after the initial attack of vomiting the patient again vomited, but purpuric manifestations did not recur. The patient gradually made a good recovery. Buckley thinks this was an example of Henoch's purpura. [F. J. K.]

8.—S. F. Loughwood reports a number of interesting surgical cases treated in the general Hospital in Springfield. The first case is one of gun-shot wound of the head in which the patient was operated upon 10 days after the receipt of the injury because of motor aphasia, complete motor paralysis of the right arm and leg, and Jacksonian seizures. A large blood clot was removed from the motor area, resulting in complete recovery. At one time after the operation the patient had a number of Jacksonian seizures and became very violent. At this time chloroform was administered to induce sleep, which kept up eight hours after the chloroform was discontinued and terminated in perfect consciousness and quiet. The second case is also a gun-shot wound of the head in which there was complete paralysis, both motor and sensory, of the right arm. The patient was trephined 6 days after the injury. The bullet had only passed through the scalp and no fracture of the bone had taken place. When the dura was opened, however, considerable clot was removed. This patient made a good recovery and gained complete power in the arm. Another case reported is that of laminectomy for gun-shot wound. Death followed 2 days after the operation. Postmortem examination showed a wound at the apex of the lung and a wound passing through the spinal cord. The author concludes with two reports of amputation for gun-shot wounds and six cases of herniotomy. [J. G. G.]

9.—Dockrell writes on lichen from a histological point of view. He states that there are two varieties of pityriasis rubra pilaris, namely, the benign and the malignant. He points out that in pityriasis rubra pilaris the hair follicles are primarily involved, while in lichen the involvement of the hair follicles occurs later in the disease and is secondary; and finally that in this condition there is no tendency to the formation of a hyaline material. He defines lichen as a cutaneous disease of an inflammatory nature, being ushered in by an eruption of red conical papules. These papules vary in size from that of a pin's head to that of a split pea. They are either discrete, confluent, arranged in rings, or may become distinctly warty. Four stages of the disease are mentioned: (1) The acuminate stage; (2) the planus stage; (3) the hypertrophic stage; and (4) the verrucose stage. In this article he gives a report of 5 cases. [F. J. K.]

10.—Cautley discusses infantile scurvy. This author gives a report of 2 cases of scurvy which were due to a prolonged diet of sterilized milk and cream, and also reports 2 which were due to patent foods. He contends that the boiling of milk for infants is essential, except under certain circumstances, and that the longer milk is boiled and the higher the temperature to which it is subjected, the less will be its antiscorbutic value and nutritive principles. The slight tendency to scurvy which is induced by a prolonged diet of cooked milk may be remedied by the addition of barley-water and fruit juice. He finally emphasizes that it is highly illogical to argue that unboiled milk is a proper food for infants. [F. J. K.]

11.—Startin writes on the treatment of lupus and rodent ulcer with the X-Rays. He has had beneficial results with the X-Rays in lupus, rodent ulcer and certain other skin affections, and believes that the X-Rays are a valuable therapeutic agent. [F. J. K.]

MEDICAL RECORD.

August 3, 1901.

1. Hemolysis. S. J. MELTZER.
2. The Principles of Diagnosis of Lesions of the Spinal Cord. JOHN PUNTON.
3. Cerebral Abscess; Operation, Recovery. FLETCHER GARDNER.
4. Limitations of Surgical Work for the Insane. WILLIAM J. MAYO.
5. The Primary Treatment of Infected Wounds with Tincture of Iodine. CARL BECK.

1.—S. J. Meltzer presents a paper on **hemolysis**. Hemolysis in general means solution of the blood. The term, however, is now chiefly employed to designate the separation of the hemoglobin from the stromata of the red blood cells. The author is chiefly concerned in dealing with the biologic agents which bring about this end, **alien blood or alien serum**. The paper deals with a discussion of Ehrlich and Morgenroth's studies of hemolysis and Ehrlich's lateral-chain theory, and then the author details at length the results of his own experiments. He finds that normal and immunized serum lose their hemolytic power during their prolonged stay in the peritoneal cavity; that the loss is due to the complement of Ehrlich, or the alexin of Bordet and Buchner. The disappearance means absorption, and the disappearance of the complement in a much greater proportion than the balance of the fluid means elective absorption. However, as this elective absorption takes place also in a dead animal, it cannot be a vital phenomenon. It is probable that it has its explanation in some laws of osmosis and imbibition. A valuable bibliography is appended to the article. [T. L. C.]

2.—John Punton discusses the **principles of diagnosis of lesions of the spinal cord**. He arranges his conclusions as follows: (1) Determine whether the symptoms are due to a lesion affecting the spinal cord by reference to your knowledge of the function of its several parts, thus excluding those symptoms due purely to cerebral or peripheral lesions. (2) Next determine whether the symptoms are due to organic or to a functional lesion, or are simply produced by malingering. This can usually be done by careful methodical examination of all parts involved in the process, together with a study of the mode of onset of the symptoms, their duration, nature, and character, and other facts connected with the family, personal, and clinical history of the case. (3) Next determine the exact location of the lesions, whether it be extra-medullary, intra-medullary, systemic, or non-systemic in its invasion. This calls for ability to interpret correctly the nature and character of the symptoms produced by these lesions, taken into conjunction with their causes and the known liability of certain structures to such lesions. (4) When all these questions are correctly answered the diagnosis is to be made, and upon this the prognosis and treatment are based. [T. L. C.]

3.—Fletcher Gardner reports a case of **cerebral abscess with operation and recovery**. The patient was a young man of 21. He suffered all but two years of his life from ear trouble. The patient presented symptoms of pain in the mastoid and left eyebrow; had a temperature of 103° to 104°, and was rapidly becoming somnolent. The mastoid was opened and Schwartze-Stacke extenteration was performed, and the contents of the middle ear, the posterior wall of the meatus, and the whole of the mastoid except the tip were removed. The patient did well after the operation, but with a subsidence of fever a **paraphasia** new became noticeable and words were misused. The aphasia became more and more marked, and the general symptoms led the author to diagnose the presence of an abscess and decide upon an operation, which was performed. A large flap was turned back with the base down, and the trephine pin was placed one and a quarter inches behind and the same distance beyond the external auditory meatus. As soon as the button of bone was removed the brain bulged into the opening without pulsating. A groove director was passed through an opening in the dura in the direction of the ala of the opposite nostril and two ounces of extremely foul pus were discharged. The patient made a very gradual recovery. The author believes that in this case the lesion is to be explained by the fact that from the temporal lobe there proceeds to the frontal lobe a band of association fibres which are concerned with speech and any lesions of which cause paraphasia. A second band proceeds to the occipital lobe and a lesion of this causes alexia. Bacteriological examination of the pus taken 66 hours after operation showed a diplococcus, which was probably the prime cause of the trouble, and a rare, or new, bacillus, resembling that of tetanus, but the whole organism was much smaller. The bacillus forms a gas of most obnoxious odor. [T. L. C.]

4.—W. J. Mayo treats of the **limitations of surgical work for the insane** under three general heads. First, the surgical relief of physical ailments without regard to the mental condition; second, operations for the purpose of

relieving the mental condition of the patient; third, operations performed with the public welfare in view. In a considerable operative experience in traumatic epilepsies and periodical attacks of insanity from the same cause, this author has seen but two cases in which relief was marked and lasted long enough to deserve attention. In neither case was there a return of mental vigor, but there was amelioration, and both cases remained sufficiently well to warrant home treatment now for more than three years. The surgical cure of insanity, supposed to be due to a reflex irritation in a distant organ, needs but little discussion. The cases are usually reported early or the mental condition greatly exaggerated and the future process seldom justifies the early prospects. The most energetic work of this kind has been done by gynecologists. In an extensive experience the writer has seen few if any, cures brought about in this way. He believes that operations for the public welfare are of questionable propriety, and at the present time would not have legal sanction. [T. L. C.]

5.—Carl Beck describes the **primary treatment of infected wounds with tincture of iodine**. His method is to apply the tincture over the carefully dried wound-surface, and he has not been able to obtain cultures from areas so treated. A large number of cases have been treated with iodine in this manner, and no general disturbance has taken place, although in two cases iodine reaction was found in the urine three or four hours after the application. He calls attention to the fact that in cases in which iodine was used in this manner, it appears to permeate the tissues. [T. L. C.]

MEDICAL NEWS.

August 3, 1901. (Vol. LXIX, No. 5.)

1. Injuries of the Head in the New-born. ANDREW F. CURRIER.
2. The State of the Gastric Secretions in Chronic Rheumatism and Rheumatoid Arthritis. FRANK H. MURDOCK.
3. The Administration of Ethyl Chloride as a General Anesthetic, with Descriptions of a Mask for Its Use. MARTIN W. WARE.
4. The Therapeutic Uses of Tri-Chlorotertiary-Butyl-Alcohol. E. M. HOUGHTON.
5. Belladonna vs. Scopolia. REYNOLD WEBB WILCOX.
6. Ulcer of the Duodenum Considered from a Surgical Standpoint. D. S. FAIRCHILD.

1.—A. F. Currier found in sixty cases of various **head injuries in the new-born** the following: Indentations or depressions of the bone showed 2 of the right frontal; 16 of the left; 5 of the right parietal; 9 of the left; 1 of the right temporal; 1 of the occipital and left parietal. The depressions varied from one-half inch to 2 inches long, one-half inch to 1½ inches deep, and three-fourths to 1¼ inches wide. These generally disappear in a few weeks or months, but in some cases remain visible for years. In 17 cases there were fractures of one or more bones. In 1 case there were extensive dislocations of cranial and facial bones. In 5 cases the bones were fissured. In 5 cases the brain was injured. In 4 cases there were injuries during fetal life. There were 21 forceps deliveries, 3 high forceps and 3 versions. There were 12 normal deliveries, and 7 labors were prolonged, the period varying between fifteen hours and six days. There were 3 precipitate labors. There were 6 cases in which there was tumor of the scalp. In 23 cases there was hemorrhage of one variety or another. Of the abnormal presentations 2 were breech, 1 face, 1 face arms and cord, 2 occiput posterior. There were 5 cases in which there was coma and 6 of convulsions, 4 of paralysis, 1 of idiocy. In 24 cases there was deformity of the pelvis of one kind or another. Death occurred in 26 cases from various causes. In 3 cases the scalp was incised and the bone elevated, and in 1 there was trephining and elevation. [T. M. T.]

2.—F. H. Murdoch, after examining the **gastric contents** of six cases of **chronic rheumatism and rheumatoid arthritis**, found that the total acidity was generally increased, and that under treatment, not for the rheumatic condition, but for the gastric symptoms (distress in the stomach, bloating and belching), there was marked improvement in all the cases. He refers to various authorities as

follows. (1) Bouchard reports a case with swelling of the finger joints associated with dilatation of the stomach. (2) Ewald reports numerous cases in which the gastric symptoms were so marked that the pain in the joints was overlooked. Neither of these men make any mention of analysis of gastric contents; (3) Elmhorn examined the stomach contents of a patient suffering from rheumatism and found an absence or deficiency of gastric juice. The author advises, especially in chronic rheumatism, and rheumatoid arthritis a diet, not with a view of suiting the condition of the joints, but to suit the existing state of the gastric secretions. [T. M. T.]

3.—M. W. Ware gives the usefulness of **ethyl chloride**, and compares it with laughing gas as follows: In the administration of laughing gas we have rigidity, cyanosis and increased hemorrhage, while in ethyl chloride there is a small percentage of rigidity, but never cyanosis. Other advantages are its portability and the fact that it requires no expensive apparatus for its administration. As the drug is so fugacious it is not likely to give an overdose, and the danger of cumulative effect is practically *nil*. It is best administered to children and young adults, and is not advised to be used in robust individuals. The author places the failures of this anesthetic at five per cent., and gives the following reasons for them: (1) by a prolonged period of excitation, it being impossible owing to the fugacious character of ethyl chloride to produce the paralytic effect on the cortical centers; (2) although the patient is seemingly narcotic, any painful manipulation causes muscular rigidity as the expression of increased reflex excitability and this interferes with any finer manipulations. The author only recommends it in minor operations and as a preliminary to cut short the agonies of the early stages peculiar to chloroform and ether. [T. M. T.]

4.—R. W. Wilcox considers in a paper on **Belladonna vs. Scopolia** that scopolia rhizome as fluid-extract incorporated into a liniment is devoid of therapeutic action, and should not be substituted for belladonna root; on the contrary, belladonna root, under certain conditions, produced rise of temperature, pulse and respiration, flushing of the face, reddened mucosae, dry tongue, thirst, headache, drowsiness and dilatation of pupils. All these symptoms will be increased with the amount of the liniment used. It was thought that possibly the camphor interfered with the production of the symptoms in the use of scopolia liniment, but recent results show that it does not interfere with its action as far as the scopolia rhizome fluid extract is concerned. It certainly aided in the absorption of the active principle of belladonna root. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

August 3, 1901. (Vol. LXXIV, No. 5).

1. "Inoperable" Recurrent Cancer of the Breast; Relief by Beaton's Method. ROBERT ABBEE.
2. Cancer, Particularly Cutaneous Cancer. ELLICE M. ALGER.
3. A Year's Experience in the Treatment of the Eustachian Tube by Means of the Electro-bougie. THOMAS J. HARRIS.
4. Native Medical Practice in the Philippines, with Introductory Observations. PHILIP F. HARVEY.
5. Flagellated Malaria Parasite; Observations upon its Structure Showing that the Flagella are Performed in the Body of the Organism. JOHN T. MOORE.
6. Specimen of Bone from Shot Fracture of Skull, Which Resisted Against the Brain for Forty-four Years. D. S. LAMB.

2.—E. M. Alger states that the diagnosis of cancer, particularly cutaneous cancer, is generally difficult. Warts and moles cannot be pronounced malignant with any certainty till considerable progress has been made, but such growths in males of the right age should be objects of suspicion. Sarcoma of the skin is rare, develops more rapidly, has secondary deposits sooner, affects younger patients as a rule, and has a comparatively slight tendency to ulceration. Tuberculosis of the skin commonly begins in childhood, the lesions are usually multiple, instead of single, the individual tubercle have more of a purplish color, and have none of the induration of cancer. In fact, they are distinctly soft. Syphilis is the cause of most errors in di-

agnosis, but aside from the history of the patient, the syphilis develops much faster; it is often indurated, but has none of the cartilaginous hardness of epithelioma. It ulcerates much sooner, showing a punched out edge, often an undermined one, and a more profuse discharge. Syphilis, too, has a marked tendency to heal on one side while advancing on the other in a serpiginous form. A week's observation and treatment will generally decide the question if doubt exists. As to prognosis in these conditions we will find in the individual lesions such slow growth that often the disease could hardly be considered a malignant one were it not for the possibility of metastasis. Primary cancer makes its reappearance after extirpation in one of three ways: A nodule appears in the scar, which is to be understood as indicating that a few cells have been overlooked, to renew the growth. Or the lymphatics nearest the growth enlarge and finally show secondary appearances very much like the original tumor. This taking up of cancer cells may occur very early, and may be far more extensive than can be determined by looking for simple glandular enlargement. A third cause for dissemination is involvement of the blood-vessels themselves in the growth, enabling large or small masses of cancer cells to break loose in the circulation and lodge in various organs. It is probable that very few of these cancer emboli survive the change, and that they only grow under favorable circumstances, otherwise we should have a much larger percentage of secondary growths in the lungs, which, from their location and the fineness of their capillaries, probably arrest most of these emboli. The same reasoning must explain the frequency of secondary growths in the liver and their rarity in the spleen. [T. M. T.]

3.—T. J. Harris, in **Treatment of the Eustachian Tube by Means of the Electric Bougie** draws the following conclusions: (1) The electro-bougie has a place in our aural therapy—though a less important one than was at first supposed; (2) It should be used after, and not before other methods of treatment; (3) It will be most liable to fail if any associated internal ear disease is present; (4) Its results are not always permanent—the stricture may reform—we may hope rather for a diminution than a disappearance of the tinnitus. Two cases totally relieved out of 25. Two cases partially relieved. (5) Its use is not without danger—and a proper knowledge of the anatomy of the parts and of the technique is essential; (6) It is a question whether the process is a true electrolytic one, or if in many instances the obstruction is a true fibrous stricture. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 1, 1901.

1. The Fight Against Tuberculosis in the Light of the Experience Gained in the Successful Combat of Other Infectious Diseases. PROFESSOR DR. ROBERT KOCH.
2. Scientific Research; The Indispensable Basis of all Medical and Material Progress. GEORGE BAGOT FERGUSON.
3. Practical Blood Examination. HENRY F. HEWES.
4. Rachitic Deformities of the Spine. J. S. STONE.
5. Measurements of Girls in Private Schools and of University Students. ARTHUR MACDONALD.

4.—J. S. Stone discusses **rachitic deformities of the spine**. The diagnosis of rachitic deformity is very easy. It does not occur as a rule except in the more marked grade of rickets. The usual deformity is a general kyphosis, extending from the lower cervical region downward, and most marked in the lumbar region. It generally occurs early in the course of the disease. This kyphosis is usually associated with round shoulders. Deformity of the spine is not usually proportionate to the deformity of the long bones, because it occurs usually to the greatest extent in those children who have never walked, but who have been propped up in chairs long before they are able to stand. Treatment consists in recumbency upon some firm, even surface. The recovery from rachitic deformity of the spine is usually complete if proper treatment be instituted early. [T. L. C.]

5.—Arthur MacDonald presents tables showing the results of the measurements of girls in private schools and of women University students. His observations are of

interest. He finds that girls in the private schools in Washington and Chatanouga are much more sensitive to pain than girls in public schools; that the girls in the private schools are less sensitive to heat and locality on the skin, but more sensitive to pain before puberty than after puberty. Considering University women, he has found those of poor nutrition, when compared with others, are inferior in weight and strength; in distance between the orbits, corners of eyes and from crown to chin, and in distance between zygomatic arches. In general the blondes are inferior physically to the brunettes. The first born (men and women) are more sensitive to pain than the second born, and the second born are less sensitive to pain than the later born. [T. L. C.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

August 3, 1901.

1. A Further Study of Pseudo or Modified Smallpox (?). T. J. HAPPEL.
2. Smallpox—Old and New. W. L. BEEBE.
4. Sanitary Features of Smallpox. LOUIS LEROY.
4. The Diagnosis of Mild and Irregular Smallpox as Found in the Present Outbreak in the United States. HERMAN SPALDING.
5. The Distinguishing Characteristics Between Mild and Discrete Smallpox and Chickenpox. FREDERICK LEAVITT.
6. Variola. H. M. BRACKEN.
7. Cancer of the Uterine Neck, with Comments on the Present-day Teaching. J. M. BALDY.
8. Acute Mastoiditis After Subsidence and without Recurrence of Tympanic Inflammation. HIRAM WOODS, JR.
9. Leiter's Apparatus for the Ear, Modified by Amberg. EMIL AMBERG.
10. The Present Status of Renal and Ureteral Surgery. J. HENRY BARBAT.
11. A Note on the Use of Thuja Occidentalis in Removal of Papilloma of the Larynx. JAMES M. BROWN.
12. Scientific Research. The Indispensable Basis of All Medical and Material Progress. GEORGE BAGOT FERGUSON.

1.—Happel submits a clinical study of an eruptive disease resembling variola but differing from it in so many ways that he questions the likelihood of this disease being a form of variola. The general characteristics of this disease are the same it differs only in degree. The period of incubation varies from 14 to 18 days. The symptoms from the 1st to the 3d day are the following: The onset is abrupt and is marked by chilly sensations; the temperature rises to from 102°F. to 105°F.; there may be vomiting but no prostration; delirium and convulsions are absent. On the 4th day there appears an eruption having the characteristics of acne. Rarely do shot-like papules appear. In women and children the eruption first appears on the face, while in men it shows itself about the forehead, cheeks and chin. The temperature at this time rapidly falls to the normal, and the patient appears well. On the fifth day the acne-like eruption becomes vesicular. The fluid in these vesicles at once assumes an opalescent appearance, the vesicles are unicellular and do not umbilicate. At the apices of the vesicles the serum exudes, dries, and turns brown; in some instances this gives the vesicles the appearance of being umbilicated. At this time they may rapidly dry up and recovery follows. The disease may then be said to have aborted. In other instances by the 6th, 7th, 8th, or 9th day the eruption may have spread over the entire body. Secondary fever does not occur. Scabs rapidly form and drop off, and by the 10th day the patient's skin may be entirely clear. When the eruption has involved the entire body the skin may not be clear until the 14th day. Occasionally papules form with the appearance of the acne eruption. These vary in size from a pin head to a split pea. They do not umbilicate and form unilocular cysts, and do not extend into the derma. With the appearance of the eruption convalescence begins. Fitting of the skin does not occur and vaccinated subjects are susceptible to the disease. The prognosis is favorable, the death rate being less than 2%. [F. J. K.]

2.—Beebe believes that there is ample evidence to show

that the epidemic of smallpox which prevailed throughout the United States and our new possessions during the past 2 years, differs from old fashioned smallpox, and he questions whether the term mild, modified, or light type of smallpox should be applied to this disease. There are, in fact, medical men who assert that this malady is not smallpox. [F. J. K.]

3.—Leroy discusses the sanitary features of smallpox. He emphasizes that this disease, above all others, should be stringently dealt with by the health authorities. In this article he points out the necessity of establishing immediate and strict isolation of the patient, the necessity of proper infection of all articles coming in contact with the sick, and the methods of vaccination. [F. J. K.]

4.—Spalding presents an article on the diagnosis of mild and irregular smallpox, as found in the recent outbreak in the United States. He refers to the statistics of an outbreak which occurred in Chicago. The first case was discovered on March 9, 1899, and in the 17 months that followed, 72 cases developed. Then there followed a short period without the appearance of a single case. On November 30, 1900 there came to Chicago an individual suffering from smallpox in the pustular stage. During the following 6 months 238 cases were reported. In both of these outbreaks typical cases were always present, but the greatest number of cases were deviations from the true type. Among the different varieties there occurred: One hemorrhagic case (fatal), 13 confluent cases (with 3 deaths), 24 semi-confluent cases (with 2 deaths), 54 severe discrete cases (with no deaths), 179 mild discrete cases (with no deaths), and 39 modified forms. In all of the modified cases there was evidence of more or less successful vaccination. In these 2 outbreaks the disease attacked almost exclusively those individuals not protected by vaccination. [F. J. K.]

5.—Leavitt gives the distinguishing characteristics between mild discrete smallpox and chickenpox, and summarizes these in a differential table. He states that smallpox may occur at any age. The period of incubation is 2 weeks; the onset is marked by headache, backache, fever, and general malaise, lasting from 3 to 4 days, and the eruption is a progressive one. It is more marked on the exposed parts, the extremities, and invariably occurs upon the palms. The eruption undergoes progressive changes from papules to vesicles, then to pustules, and finally crusts form. The vesicles are multilocular and the skin lesion involves the lower layers of the derma. The temperature is high until the eruption appears, when it falls and remains about normal for a week, and again rises except in the milder discrete forms. The eruption is quite uniform in size and frequently umbilicated. It lasts from 2 to 4 weeks, is painful to the touch, and may itch. Pitting occurs occasionally in the discrete form. There are no complications and vaccination is protective. The mortality is high in the hemorrhagic type and in the severe confluent. He states that the period of incubation of chickenpox is from 13 to 17 days and that this disease occurs only in childhood. The eruption is more marked on the unexposed portions of the body and is rarely seen on the palms of the hands or the soles of the feet. The eruption, which is very superficial, undergoes vesiculation and crusts form. The eruption lasts from 1 to 2 weeks and is not painful to the touch. There are no complications and the mortality is practically nil. [F. J. K.]

6.—Bracken calls attention to the fact that there occurred in Minnesota, during the past 2 years, 7211 cases of variola with 19 deaths. The clinical picture of the typical cases of variola that occurred in this epidemic correspond with that given for variola in medical text-books. He, however, clearly points out that the usual text-book description of variola will not be of service in making the diagnosis of all cases that occurred in this epidemic. From the statistics which the author has collected, he is convinced that vaccination absolutely protects against the form of smallpox in this outbreak. The remainder of the article is chiefly devoted to the consideration of vaccination. [F. J. K.]

7.—Baldy remarks that cancer of the neck of the womb is practically incurable. At the present time there is no cure for cancer short of surgery, and it is no abuse of language to state that this is surgery's disgrace. He objects to the statistics as presented by Johns Hopkins Hospital, which claims a cure of 20% or more of cancer

cases. Seventy-three cases of cancer of the cervix were operated upon there and 15 cases or somewhat over 20% are alive to-day. But 68 cases were rejected as non-operable, all of whom are dead to-day. Consequently only a little over 10% of the cases which have come to that institution are alive to-day. There is an additional possibility that one or two of the 10% were not cancer cases, since the microscope is not always a positive evidence for or against the disease. In addition to this 9 of these cases of reported cures have only passed from 10 months to 2½ years since their operation, and only 6 cases are alive from 1 to 3 years after the operation. It is impossible to say how many may die of the recurrence of the disease within the next 2½ years, hence less than 5% can be said to be cured. Baldy emphasizes the importance of the clinical manifestations even before the microscopic evidence as an aid to the early diagnosis of cancer of the womb. It is the clinical manifestations which incline the surgeon to a microscopical examination. The symptoms of early cancer are as plain as those of any other disease in its early stages, and the reason that it is not oftener detected is the fault of the observer. [W. A. N. D.]

8.—Hiram Woods reports three interesting cases of acute mastoiditis after the subsidence of tympanic inflammation in which this condition did not return. Generally it has been his experience that mastoid symptoms develop while the otorrhea continues or increases in amount. Occasionally the discharge lessens or ceases with the onset of mastoid inflammation. The first case reported is that of a girl eight years of age who made a satisfactory recovery after an attack of acute middle ear disease. Nine days after the otorrhea had ceased she developed an inflammation of the mastoid which required operation. A satisfactory recovery followed the operation without any return of tympanic inflammation. One symptom which was present during the first attack remained until after the operation; this was torticollis. Case No. 2 was a boy, 14 years of age, who 12 days after the disappearance of all symptoms of an acute otorrhea developed an acute mastoiditis. The mastoid cells in this case were filled with pus and granulations. The extent of suppuration, however, was small as in the first case. The wound was closed in this case after operation but opened spontaneously later and healed by granulation in three weeks. The third case was that of a boy 14 years of age who three days after the cessation of an otorrhea developed pain over the mastoid and torticollis. The membrane was normal, presenting a healed perforation, except for a slight hyperemia of the malleus plexus. The patient suffered considerably from earache and an incision in the membrane was made for its relief. The torticollis disappeared, the temperature came down, and the patient was sent home. One week after the incision of the membrane the patient's temperature rose and he suffered from headache. No tenderness was present at this time over the mastoid and there was no otorrhea. The patient's pulse became slow, however, with an occasional intermission. The headache was confined to the left side and was most severe on the supra-orbital region. About this time the left pupil became dilated. The patient grew weaker and nothing definite developed. The transient symptoms of mastoiditis and the neck rigidity, however, caused the author to decide upon an exploratory mastoid operation. A little pus was found in the tip of the mastoid and when the antrum was opened there was a gush of clear fluid. The patient made a satisfactory recovery. The headache disappeared and the day after operation the pupils were equal. The author does not think well of the application of cold in acute mastoiditis but rather inclines to the opinion that its use only masks the symptoms.

[J. H. G.]

9.—Amberg gives a brief description of his modification of Lister's apparatus for the application of hot and cold water to the ear. Two illustrations of this apparatus are inserted in this article. [F. J. K.]

10.—J. Henry Barbat after showing the great advancement made recently in the diagnosis and treatment of renal and ureteral conditions refers to what the X ray, the Harris segregator, and Kelly's method of ureteral catheterization, have done in aiding the diagnosis of difficult and doubtful renal conditions. He reports some most interesting experiments upon dogs in which he has endeavored to use a portion of the small intestine to bridge over the gap between the cut ends of the ureter.

A portion of the ileum was usually chosen, a piece of which was excised without disturbing its mesenteric attachment. The calibre of the remaining intestine was re-established with a Murphy button. The portion excised was thoroughly irrigated with a 1:1000 formalin solution. The proximal end of the ureter was then firmly fixed in one end of the piece of intestine and the other end of the intestine inserted into the bladder. Three such operations were done. In two the result was perfect; the third dog died five weeks after operation of an ascending infection due, the author thinks, to his not having thoroughly cleansed the portion of bowel used. One dog was allowed to go three months and another six months before removing the specimens. In one case both ureters were implanted into a loop of bowel which was attached to the bladder by a lateral anastomosis. The dog died, however, from an overdose of strychnine. In one dog a complete removal of the bladder was made and a portion of the bowel substituted for it. The dog died with an enormously distended new bladder and some slight leakage at the urethral attachment. It is thought this death might have been prevented had catheterization been possible. [J. H. G.]

11.—J. M. Brown reports several cases of papilloma of the larynx which have been cured or greatly improved by the application of the *Thuja occidentalis*. [J. H. G.]

12.—This is an abstract of an address of "Scientific Research," delivered by the President of the British Medical Association at the 69th annual meeting. [F. J. K.]

VRATCH.

April 28, 1901. (Vol. XII, No. 17).

1. Changes in the Composition of the Blood of Animals in Intestinal Auto-intoxication. I. A. KRASNOFF.
2. On Sporadic Elephantiasis. L. V. ORLOFF.
3. Chaffkin's Lymph and Other Substances Elaborated by the Human Organism, Producing Immunity Against the Plague. A. F. VIGOURA.
4. The Treatment by Koumiss and Some of the Koumiss Settlements of the Government of Oufin. P. V. TSEZAREVSKI.
5. On the Question of Reforming the Suvoroff School at the Kalinkin City Hospital at St. Petersburg. P. E. OBOZNEENKO.

1.—Krasnoff has under taken the study of the quantitative changes produced in the blood by auto-intoxication. For this purpose he produced an artificial cleatrical narrowing of the lumen of the large intestines of dogs, causing constipation and determined before and after the operation the number of red and white blood corpuscles, the amount of hemoglobin, the specific gravity and the amount of iron. The present paper is a preliminary report which contains the following conclusions: (1) The number of red blood cells is diminished, maximum 72.5%, minimum 15.6%. (2) The white blood cells are either diminished or increased; Maximum diminution 80%, minimum 10%; maximum increase 60%, minimum 10%. (3) The amount of hemoglobin is uniformly decreased. (4) The specific gravity is lowered but not always in proportion to the decrease in the number of the red blood cells. (5) The amount of iron is diminished. [A. R.]

2.—Orloff reports 4 cases of sporadic elephantiasis. Case 1. Elephantiasis of the scrotum and left leg. The patient, a man of 28, a mine worker, suffered from repeated inflammations of the scrotum for a period of 13 years. Each attack was accompanied by redness and swelling of the scrotum lasting a few days and followed each time by a greater enlargement of the scrotum. On the fifth year after the onset the glands of the groin began to suppurate and a purulent discharge appeared from a fistula formed in the skin of the scrotum. 3 years later the left leg became the seat of frequent attacks of inflammation followed by enlargement of the extremity. At the time of admission the scrotum was considerably enlarged, the lower border reaching almost to the knees. Internal medication having proved useless, the larger portion of the scrotum was removed, leaving enough to enclose the testicles, which were normal. After a protracted convalescence, the patient recovered. Case 2. Elephantiasis of the scrotum and prepuce. This case was of 15 years standing. The swelling was preceded by attacks of inflammation. Removal of the scrotum and a plastic operation on the penis restored the parts to their normal size. Case 3. Elephant-

trias of the penis and the right lower extremity in a man 21 years old. The case was of 9 years standing and there was a history of suppuration of the glands of the axillae and the groins and an attack of erysipelas on the right leg. For the last 3 years erysipelatous inflammations of the leg occurred 19 to 12 times, each attack being accompanied by an elevation of temperature. There were also syphilitic dermatitis which made their appearance when the patient was 11. Antisyphilitic treatment having proved of no avail, a plastic operation was performed on the penis. The affected skin was removed and new skin from adjoining parts grafted on. The results were quite satisfactory. Case 1. Elephantiasis of the abdomen. A woman, 59 years old, disposed to obesity, had 3 attacks of erysipelas of the abdomen within 2 years. After the first attack the abdomen began to enlarge until it assumed the shape of an apron hanging down 10 cm. below the knees. Locomotion was almost impossible, and an extra stool was required to support the mass when sitting. Injections of calomel had no effect, and excision of the hypertrophied skin was performed. The removed mass weighed about 56 pounds. Recovery was delayed by ulceration of the wound and slow granulations. Considering the etiology of elephantiasis, the author reviews both forms of the affection, the endemic and sporadic. The former occurs mostly in hot climates and is caused by the *filaria sanguinis hominis*, with the mosquito as the intermediary host. The latter is caused by venous stasis and interference with the circulation of the lymph. Erysipelas, lymphangitis, phlebitis, or any condition producing circulatory disturbances, must be the direct factor in the causation of elephantiasis. As to treatment, various remedies, such as mercury, iodide of potash, quinine, etc., have been recommended and applied but without any effect in the majority of cases. An operation is often the only means of accomplishing a cure. Various operative procedures, as well as the conditions in which they are indicated, are discussed and illustrative cases cited from the literature. [A. R.]

3.—Will be abstracted when concluded.

4.—Tsezarevski describes in detail a number of results for the koumiss cure, a treatment very popular in Russia, employed with considerable success in various forms of exhaustion. The koumiss is made from mares' milk which is allowed to ferment. The beneficial results achieved are due as much to the climate of the steppes as to the beverage. [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

May 9, 1901.

1. The Magnet-operation Room. J. HIRSCHBERG.
2. Contribution to the Home Treatment of Tuberculosis by Hydrotherapy. H. MEFFERT.
3. The Serum Diagnosis of Tuberculosis.

E. ROMBERG.

4. On Occupation Poisonings (Methemoglobin) and their Treatment by Oxygen Inhalation. H. BRAT.

H. BRAT.

2.—Meffert recommends that the patient be placed on a bed which is first covered with a large woolen blanket, over which one places two shorter blankets of such size that one will serve to envelop the trunk, the other the legs, separately. Over these is placed a sheet. The patient is wrapped in these coverings in a "dry pack" until thoroughly warm. His trunk is then uncovered, he sits erect and is sponged a few moments, the trunk then covered without drying and the same procedure carried out with the legs. He then lies in the damp pack until dry and warm. Then he steps into a chamber bath containing luke warm water and is given a shower bath from a sprinkling pot for 30 seconds. He is then thoroughly dried and clothed. Meffert recommends this treatment both in hospital practice and in private where it can be used for the poor patients as well as the rich. [D. L. E.]

3.—Romberg presents a new and much more satisfactory method of carrying out the serum diagnosis of tuberculosis which was first attempted by Arloing and Courmont. The great difficulty has always consisted in getting homogeneous cultures; these can be secured only after long effort and the attempt may and often does end in failure. Behring found that emulsions of dead tubercle bacilli are agglutinated quite as well as the living bacilli in homogeneous culture, and communicated this observa-

tion to Romberg. The latter has used it clinically. The blood serum is freed completely by centrifuge, from red cells 0.5 c. c. mixed with the emulsion in equal parts and then 0.2 c. c. of serum is mixed with 5, with 10, 15, 20 and 30 times each of the emulsion of bacilli, using small test tubes. The tubes are placed in the thermostat kept at the same temperature. The reaction must take place within 40 to 44 hours if the result is to be considered positive. Naked eye observation is best. The cloudy mixture should become perfectly clear if the result is wholly positive and a precipitate should settle at the bottom of the tube. Ninety-five human beings were tested, many of them repeatedly. The blood of six new-born children showed absolutely no reaction, even though the mothers of all showed advanced tuberculosis. Of 39 adults who showed no suspicion of tuberculosis, 22 gave a reaction. These results Romberg attributes very positively to the existence of latent tuberculosis. One point that spoke for the truth of this belief was that the positive reactions were found chiefly in young persons, the figures for reactions corresponding very closely as to the age of the subjects, with Macgill's figures for latent tuberculosis. Romberg thinks it possible that a negative result of this test in a person who shows signs of tuberculosis may have to mean that he has old, inactive and not "latent" tuberculosis. Of 30 persons with early tuberculosis, 26 (86.7%, gave no reaction. Of 11 with marked disease 8 (72.7%) gave the reaction. Of 2 very advanced cases one gave the reaction. Of the total 8 negative cases 6 were very severe, rapidly advancing cases such as at times will not react to tuberculin, and will not give Arloing and Courmont's reaction. Romberg states that the only conclusion that one can reach is that a positive reaction probably means the presence of active tuberculosis, while a negative reaction probably means either that tuberculosis does not exist in the body or that, if it does exist, it is old and healed, but even this conclusion is not yet justified and further investigation is necessary. Only in the general sense of showing that tuberculosis in some form is present could the reaction be of any real diagnostic value. It could not point out a more definite local diagnosis.

[D. L. E.]

4.—To be concluded.

May 16, 1901.

1. Concerning the Morphology of Bacteria and its Relation to their Virulence. G. ASCOLI.
2. Occult Gastric Hemorrhages. I. BOAS.
3. A Simple Gas-Volumetric Method of Estimating Sugar in the Urine. E. RUEGLER.
4. The Magnet-Operation Room. J. HIRSCHBERG.
5. On Occupation-Poisonings (Methemoglobin) and their Treatment by Oxygen-Inhalations. H. BRAT.

1.—Ascoli refers to the work of Marx and Writhe and others concerning the relation of the Ernst bodies in bacteria to their virulence. He disagrees with those who think that there is any direct relation between these bodies and the virulence of the bacteria. They are not spores and do not form spores, nor are they evidences of a possible karyokinesis. They are closely related to the development of the bacteria, and may be degenerative products, or evidences of advancing development; which of these is not known. At any rate Ascoli's experience leads him to believe that they have absolutely no constant relation to the virulence of the bacteria. He also thinks that there has never been any real demonstration of the presence of nuclei in bacteria. [D. L. E.]

2.—Boas has undertaken a series of investigations for blood in gastric contents when its presence was not evident to the naked eye. He used the guaiac test, which he considers best. He recommends shaking the etherguaiac terpenine solution with water and chloroform and allowing the mixture to stand a long time. Examination of the stomach contents removed by the tube, not of vomit, should be undertaken. The results of the examination of 83 cases lead him to the statements that even when blood cannot be suspected from the naked eye examination, the guaiac test is often positive in gastric ulcer or pyloric stenosis from ulcer and in other cases in which there is marked stagnation of stomach contents. Blood was repeatedly found in one case of duodenal stenosis. The most striking result was the constant presence of blood in twenty cases in carcinoma. It was always absent in neuroses, gastritis

and benign stenosis. He believes that in doubtful cases the presence of small amounts of blood would be important evidence of ulcer as against neurosis, and on the other hand of cancer as against gastritis or benign stenosis. He thinks this "occult hemorrhage" one of the main causes of the early cancer cachexia, and believes that its discovery and proper treatment will lead to important results in the management of cases of carcinoma and ulcer.

[D. L. E.]

3. The method depends upon the use of a special apparatus, the details of which can be understood only by examining the original paper. The principle of the method is, first, reduction of copper to oxide by the sugar of the urine, then heating this copper oxide with hydrozin sulphate in the presence of a base; the copper is reduced to the metal and nitrogen in quantities proportionate to the amount of copper oxide present, is set free. The amount of gas is determined and the amount of sugar is then calculated from a table. [D. L. E.]

5.—Irat has had excellent results from the treatment of methemoglobinemia occurring in those working in aniline dye establishments, etc., by inhalations of oxygen. He based this treatment partly upon the experience of others and partly upon the fact that he noted marked levo-rotation in the urine of these subjects, and that this was associated with the presence of glycuronic acid, and was probably due to its presence. This indicated to him that oxidation processes were reduced as he follows the teaching of Meyer concerning glycuronic acid (abstracted from *Deutsch. Med. Woch.*, April 29th and 27th). He admits that previous work seems to have shown that inhalation of oxygen does not cause any increase in oxidative processes in the body and actually passing oxygen through methemoglobin solutions had no effect. Addition of an alkali to the latter solutions, however, increased their power of absorbing oxygen, and he believes that in the alkaline blood, and more especially if the blood alkalinity be heightened, oxygen may alter methemoglobin so that it at least approaches hemoglobin in its character. One of the best means of increasing the alkalinity he considers to be blood-letting. He found in animals that blood greatly increased the alkalinity. He also thinks that oxygen inhalations may do good by completely saturating all the healthy hemoglobin present. [D. L. E.]

CENTRALBLATT FUER CHIRURGIE.

June 29, 1901. (28 Jahrgang, No. 26).

1. An Attempt to Simplify the Treatment of Pseudarthrosis. F. COLLEY.
2. The Technique of a New Operation for Phimosis. HERMAN SCHLOFFER.

1.—Colley reports a case of united fracture of both bones of the forearm, in a strong man of 23, with delirium tremens. There was absolutely no callus formed. Fearing to perform a large operation upon such a restless patient, Colley injected 10 c.c. of a mixture of pulverized bone ash (of the femur of a steer) in distilled water and gum arabic, every four weeks. After the sixth injection, both radius and ulna showed permanent consolidation. [M. O.]

2.—Schoffer has devised a new operation for phimosis, which can only be performed upon a normal, undiseased foreskin. Two incisions are made in the outer layer of the prepuce from one point at its edge, at a right angle to each other, as far as the corona glands. As the foreskin is retracted, a denuded surface, oblong in shape, is seen, which is sutured to form a transverse line. Then the wide prepuce can be replaced over the glans as a protection. The technique is described and illustrated by diagrams. Phimosis cannot recur. This operation is only possible when the two layers of the prepuce are freely movable. [M. O.]

DEUTSCHE ARCHIVE FUER CHIRURGIE.

May, 1901. (Volume 59, Nos. 5 and 6).

18. The History of Circular Pylorectomy. ALFRED STIEDA.
19. Exclusion of the Intestine with Entero-anastomosis. FRIEDRICH ROSKOSCHNY.
20. Perimetry of the Joints. C. HUEBSCHER.
21. Surgery in the Bible and Talmud. J. PREUSS.
22. The Surgical Significance of Morel-Lavallée's Traumatic Separation of the Skin. BERNHARD MOELLERS.

23. Splenectomy for Primary Splenomegaly. M. L. HARRIS and MAXIMILIAN HERZOG.

21. Winkelmann's Hydrocele Operation. OHL.

25. Casualistic Communications. GELPKE.

26. An Apparatus for Closing the Sacral Anus Formed after Resection of the Rectus. ERWIN PAYR.

18.—Stieda has written an able review of the work done and the publications which have appeared upon resection of the pylorus, to show that Rydygier's claim of having originated the method commonly called Billroth's method of performing circular pylorectomy, is not borne out by facts. The first operation of this kind was done by Péan in 1879, the second, by Rydygier, in 1880. Both patients died. Billroth performed the first successful circular pylorectomy in 1881, and described the technique in full. Both Merrem and Gussenbauer had made experiments upon animals at this time. From this very truthful and convincing paper no doubt remains that the first method of resecting the pylorus was Péan's; the second, not Rydygier's, but Billroth's. [M. O.]

19.—Up to 1885 there are but 47 cases of simple entero-anastomosis reported. These were performed for clerical stenosis, from chronic inflammation, tuberculosis, and malignant tumors; for fecal fistulae; invagination, acute or chronic; and gangrenous herniae. Later, when the operation was performed, the intestine affected was left in place entirely cut off, other connections being made so that the affected intestine was excluded from the track of the fecal material. After a full review of the history of these operations, with quotations from the literature, Roskoschny reports 18 cases of partial exclusion of the intestine, and 16 cases of total exclusion. All the case-histories are given in detail, with diagrams to show the path of the intestinal contents before and after entero-anastomosis. 7 out of 34 cases died from the operation, four of pneumonia, three of peritonitis. In only one of these was total exclusion performed. 17 of the cases were male, 17 female. In 24 cases the cecum was affected. Total exclusion of the fistula cured 5 cases of fecal fistula. Of the 16 total operations, the ileum was excluded 16 times, the cecum 14, the ascending colon 16, the transverse colon 2, and the splenic flexure once. Of the 18 partial operations the ileum and ascending colon were excluded 7 times, and the ileum and transverse colon 6 times. Lateral apposition with sutures was used 24 times, Murphy buttons 8, and lateral implantation of the ileum in the colon twice. Silk was employed as the suture material. Of the 18 cases of partial exclusion of the intestine, three are still alive, two perfectly well and at work, the other at home. Of 5 other cases nothing is now known. Of the 16 cases of total exclusion of the intestine, 7 are yet alive, 1 perfectly well. Of four others nothing is known. A table of the 34 cases follows. [M. O.]

20.—Huebscher describes the use of the perimeter to measure the movements of the joints, giving the field of motion diagrammatically. Each joint is discussed separately, with drawings to show the different uses of the perimeter. After a most detailed description, he concludes that the field of the excursion of motion in the different joints of the human body is easily measured by the perimeter; that in the treatment and prognosis of accidents, the range of motion left will indicate the amount of damage done; that the action of the faradic current upon the normal muscles will give a normal physiological field of motion; that in paralysis, perimetry quickly aids in the discovery of the muscles affected, and so assists therapy; and that flat-foot will be revealed by perimetry even in a latent stage, by the insufficiency of the supinator muscles. [M. O.]

21.—Preuss has written a detailed and entertaining account of surgery as it is mentioned in the bible and the talmud. He quotes many interesting passages.

22.—Morel-Lavallée called the condition of the skin when it is separated by a force attacking it at a tangent, the space between skin and fascia filling up with serum, traumatic separation of the skin and its underlying layers. Moellers reviews the literature of this separation, in injuries occurring both in time of peace and war. The main cause of this accident is a rolling wheel. The direction and the intensity of the force will determine the depth of the lesion. The upper part of the lower extremity is most frequently affected. The separation may be deep or superficial, generally the latter. The fluid which accumulates under the skin varies in amount. It is generally little in

comparison with the size of the space between the skin and the fascia. It is serous fluid of low specific gravity. While fluctuation is never felt, a certain undulation exists. The skin is normal in color, but can be shoved about abnormally. It is not sensitive, but shows a tendency to gangrene. Diagnosis is generally easy, from the undulation, the regularly increasing effusion of serum, and the relief afforded by a change of position. The condition occurs frequently. The prognosis is not unfavorable. The fluid should be evacuated by an incision, and the cavity irrigated. The accident will heal in about two weeks. The condition is most common in war, due to the action of the bullets. It is more often deep than superficial. Finally Moellers reports a rare case in which the retina showed this condition. [M. O.]

23.—Harris and Herzog report two cases of successful splenectomy for primary splenomegaly, or splenic anemia, which were performed in Chicago. In the first case a young girl of 22, the disease ran a chronic course, with leukopenia; in the second, a man of 47, it was acute, with marked leukocytosis. The literature of the subject is given. In the first case hematemesis occurred. Both cases recovered after operation. The pathological and histological appearances found follow in detail. There was a marked increase of the lymph-endothelium; and the remains of destroyed blood corpuscles in great numbers were found in the dilated splenic pulp. The treatment of the 19 reported cases of splenomegaly is detailed in tabulated form. 14 cases recovered with splenectomy. The technique of the operation is meagerly given, and a number of drawings show the character of the enlarged spleens. [M. O.]

24.—Ohl reports 19 cases of hydrocele treated by Winkelman's operation. Local anesthesia was employed in all but one case, in which a hernia was also operated by Bassini's method. The results were excellent in every case. [M. O.]

25.—Gelpke reports some of his interesting successful cases: A man of 22 with severe traumatic tetanus, cured by intracranial and intravenous injections of anti-tetanic serum, 140 g. in all; a resection of the upper jaw in a boy of 12 for adenoma of the base of the skull; brain abscess in a child of 6, with paralysis of the right arm and epilepsy, cured by trephining; a 6 year old girl with fracture of the skull, in the temporal region, cured by puncturing the dura; a tuberculous kidney from a woman of 41; a resection of the stomach in a woman of 67; and a case of pseudo-pernicious anemia due to the bothriocephalus latus. [M. O.]

26.—Payr describes and gives photographs of an apparatus for keeping the sacral anus formed after resection of the rectum closed. It is like a truss, supported over the shoulder and about the waist. [M. O.]

BERLINER KLINISCHE WOCHENSCHRIFT.

June 10, 1901. (No. 23.)

1. The Dietetic Treatment of Epilepsy. R. BALINT.
2. A Case of Hemorrhage From the Internal Carotid Artery Following a Cholesteatoma. HEINE.
3. Is Cancer Curable? A. ADAMKIEWICZ.
4. The Symptomatology and Therapy of Appendicitis. KAREWSKI.
5. Concerning a New Electrical Therapeutic Procedure. P. RODARI.

1.—R. Balint recommends for the treatment of epilepsy the removal of sodium chloride from the diet and replacing it by a bromine salt. Even the bread should be specially prepared by baking it with a bromide instead of table salt. The author reports favorable results in the 28 cases of epilepsy he treated and states that there were no symptoms of bromism. His conclusions are as follows. (1) In every case of epilepsy a diet deprived of sodium chloride is applicable and should be tried. (2) The treatment is most successfully carried out in an institution. (3) Until a thorough knowledge of the character of the disease is ascertained, a rigid diet deprived of sodium chloride should be instituted. (4) In addition to this form of diet, small doses of bromides should be administered. (5) The introduction of bromides into the nutriment and especially into the bread as a substitute for the sodium chloride is to be recommended, as it is an agreeable way of administering the drug. The favorable result of this treatment is to be attributed to the ascending dosage and the consequent sedative action of the bromine, and is therefore also to be

employed in other nervous diseases in which large doses of bromides are indicated. [M. R. D.]

2. Heine reports a case of hemorrhage from the carotid followed by a cholesteatoma, occurring in a woman 56 years of age who had been suffering since three years of age from middle ear disease. A mastoid operation was performed and another one six months later. Hemorrhage then repeatedly occurred after the operation but was checked by packing. About a month after the last operation another grave hemorrhage occurred and two days thereafter the patient got out of bed during the absence of the nurse upon which a severe hemorrhage immediately took place. The patient was at once placed under an anesthetic, the bleeding focus exposed and the hemorrhage checked by packing. The patient died four days later from edema of the lungs. Postmortem examination showed an erosion of the internal carotid at its angle in the carotid canal. The dark color of the blood which was observed during the hemorrhages led the author to suspect that the hemorrhage was of a venous character, as did also the absence of pulsation. The latter phenomenon was accounted for by the fact that the internal carotid was found markedly thickened for some distance each side of the bleeding focus with a consequent lessening of its lumen. [M. R. D.]

3.—A. Adamkiewicz reports a case of a woman, 58 years of age with a pelvic carcinoma involving the uterus, vagina and parametrium and whose condition had been declared as inoperable by Albert of Vienna. The woman markedly improved under injections of "cancerin," the rectal and vaginal symptoms having disappeared. The author even states that the problem of the therapy of cancer has been solved. [M. R. D.]

4.—Will be abstracted when concluded.

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

June 4, 1901. (No. 23.)

1. How Great is the Mortality After Operations for Gall Stones To-day? H. KEHR.
2. The Position of the So-Called Moller-Barlow Disease. Remarks upon Milk for Children. STARCK.
3. Typhoid Spondylitis. A KUEHN.
1. Inoperable Intestinal Obstruction Relieved by Atropine. G. HAEMIG.
5. Historical Notes upon the Distillation of Alcohol, and Inhalation. G. FRANK.
6. Additional Notes upon My Work About the Influence of Carbon upon the Tubercle Bacillus. J. PAPASOTIRIU.
7. The Vaporization of the Uterus. S. LACHMANN.
8. Causes and Treatment of Menstrual Colic, (Dysmenorrhea). THEILHABER.

1.—(See editorial.)

2.—Stark discusses the Moeller-Barlow disease in children. He admits that the American idea that it is merely a form of infantile scurvy produced by improper feeding, is probably correct. His own experience has failed to convince him that it has any particular relation to rachitis or to hereditary syphilis. The diagnosis is often difficult. The most important symptom, the hemorrhagic swelling of the eye-lids, is often absent. The causes are numerous. It may even occur in children fed upon breast milk, if this is imperfect, but the great majority of cases occur in children who have been fed on sterilized milk, Mellin's Food, malted milk, and other proprietary preparations. In Germany almost all the forms of artificial nutrition may give rise to the disease. It is interesting to note that there seems to be a geographical distribution. In some districts such as Hamburg, it is exceedingly common, and in others, such as Munich, it is exceedingly rare. The proper diet is very difficult to determine. In many cases the children do best upon ordinary raw milk, but children differ so much in their ability to take certain diets that it is very difficult to decide in advance, which will, and which will not produce Barlow's disease. Starck has observed one family in which 11 children were raised successfully upon undiluted raw cow's milk. [J. S.]

3.—Kuhn reports the following extraordinary case, A man of 18 had a severe attack of typhoid fever, in the course of which there was albuminuria and excessive meteorism. During convalescence there was thrombosis of the right femoral vein, associated with rise of temperature. Thirty days after the cessation of the fever the patient developed severe pain in the left lumbar region, followed by pains in the sacrum, complete prostration, and high temperature. Any attempt to move the body caused intense agony. The pains gradually disappeared the fever diminished, but at the same time the lower lumbar vertebra became slightly prominent and tender upon pressure. This condition persisted for some time, until a distinct kyphosis was produced, although when the patient was able to leave the hospital it had disappeared to a considerable extent. The case resembles one reported by Quilcke, of typhoid spondylitis. This usually comes on some times after defervescence, and may be associated with the presence of typhoid bacilli in the medulla of the bone.

[J. S.]

4.—Hämig reports the case of a man 59 years of age upon whom the removal of the right kidney had been performed on account of carcinoma that involved the vessels and the ureter. Everything went smoothly until the 6th day, when the patient, who in the meantime had had no evacuation of the bowels, complained of tympanites. The following day there was collapse, and the condition of the patient became so much worse that it was impossible to think of operation. All the signs of acute intestinal obstruction were present. As the outcome seemed necessarily fatal it was decided as a last resort to give him an injection of atropine, and 1-20 gr. was accordingly given. The physiological results were very pronounced. There was dilatation of the pupils, active delirium and small filiform pulse. The following day the patient was better but it was necessary to give him a subcutaneous injection of normal serum. The pupils had become normal in size, the bladder was evacuated of 1300 ccm. by catheter, and there was some feculent vomiting. The same evening an injection of oil produced an abundant evacuation of the bowels, and the patient rapidly recovered. The cause of the obstruction could not be determined. It is not likely that peritonitis existed, there were no signs of hernia, it is possible, however, that thrombosis had occurred in the mesenteric artery. [J. S.]

5.—Frank opposes the suggestion of Scévos-Zérvos, that the Greeks were familiar with the disinfectant properties of alcohol. He quotes extensively from the literature to show that it was not until the 12th century that distillation was so well known as to enable us to obtain concentrated alcoholic preparations, the only ones of course that are available for disinfectant purposes. He gives then some quotations from recent literature to show that alcohol has become more and more popular as a disinfectant.

[J. S.]

6.—Papanotriu corrects his former statement regarding Frankel's use of charcoal in wounds. He now admits that Frankel believed the action was due merely to the stimulation of the hyperplasia of the connective tissue.

[J. S.]

7.—Lauman continues his article upon the vaporization of the uterus. The effect is usually limited to the most superficial area, although in some cases it may cause complete necrosis of the mucous membranes. The general indication for its use is climacteric and pre-climacteric uterine hemorrhage. It is of very doubtful value in endometritis, partly because we are not sufficiently acquainted with the etiology of this disease. He mentions a case of his own in which it was employed in a woman of 29 for uterine hemorrhage. The hemorrhage was not cured, and it was necessary to extirpate the uterus, when there was found cystic distention of the glands of the cervix causing a formation of a tumor mass in the wall of the uterus. In 14 cases of this condition only 6 were really improved. Two have withdrawn from observation. He

has not treated puerperal diseases, and considers hemophilia as a very rare indication indeed. He is very much opposed to the employment of vaporization for the treatment of prevention of carcinoma, and condemns particularly Scheehold's method of treating uterine carcinoma after this method in preference to an immediate radical operation. Among the complications are elevation of temperature, the development of infection, of which he reports 3 cases, and the production of obliteration of the uterine cavity, which may occur after moderate applications of the vapor. In fact, in some cases total extirpation has been required. When the operation is performed it is necessary to keep the patients in bed for a considerable time, and it has been Lachmann's custom to employ vaginal lavage with lysol 3 times a day. In conclusion he considers that vaporization is of value in climacteric and pre-climacteric hemorrhage, but it should be very cautiously used in other conditions. [J. S.]

8.—Theilhaber, in continuation of his discussion of the causes of dysmenorrhoea, calls attention to the great probability that the condition is almost invariably due to spasm of the internal os. This may be due to nervous conditions. Regarding the treatment, of course the hygienic one is most important. The patient should be exercised, given cure for the nervous system, and any constipation should be relieved. It is possible that the application of cocaine to the nose may be of advantage. As it has been observed for such a long time that parturition frequently cures the condition permanently, Theilhaber has devised an operation which he believes produces the same result in the same manner, that is to say, an incision of the internal sphincter. It is his custom to remove a small wedge-shaped portion from the uterine wall, and from the inner end of the cervix. He controls bleeding by tampons which are removed on the 3d day. Usually narcosis is not necessary. In 14 patients upon whom the operation was performed in this manner, all have been permanently recovered, and in some the result has lasted for more than a year. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

May 3, 1901. (XIV Jahrgang, No. 22).

1. Iodoform-Solder. NIKOLAUS HACKMANN.
2. Bier's Spinal Anesthesia. RUDOLF TRZEBICKY.
3. A Case of Subcutaneous Rupture of the Patellar Ligament. F. PENDEL.

1.—After a full review of the surgery of bony caries, necrosis, etc., Hackmann describes an iodoform-solder, an idea of von Mosetig's, especially of use in treating those morbid processes in bone which cause the formation of cavities. This solder is composed of spermaceti 40; old sesam 20; and iodoform 30 or 60. von Mosetig employs it in diseases of the bones and joints. Hackmann details an apparatus made by him for liquefying the iodoform-solder. Röntgen photographs show that the solder is gradually absorbed as the bone grows and fills up the cavity. In using this iodoform-solder, in operation, it is poured into the opened cavity, hot, is allowed to harden, and then the operation is continued. Drainage may be left in place. The details of 16 cases treated in this manner follow, with photographs and Röntgen photographs. The results are excellent. Hackmann concludes that iodoform-solder quickly causes healing of carious and necrotic cavities; that it makes healing by first intention more probable, that it increases or stops the discharge from the wound; that it diminishes the chance of recurrence; and that a good clean result. [M. O.]

2.—Trzebicky reports his results in 133 cases of anesthesia by Bier's spinal method. Of these 103 were successful; four were finished with chloroform; and 31 were unsuccessful, 8 times due to technical errors. He concludes that it cannot as yet replace ether or chloroform anesthesia, on account of the danger of infection, especially in private practice; that in institutions where there is little danger of infection, further investigations should be undertaken, in especially adapted cases; that this method is particularly suitable for operations upon the lower extremities and in the pelvis, especially in laparotomy for appendicitis, hernia, etc. But intestinal operations are contraindicated.

Other contraindications are myocarditis and septic or pyemic conditions. [M. O.]

3.—Pendl reports a case of subcutaneous rupture of the patellar ligament, in a man of 42, upon whom he operated a week after the accident occurred. He made an incision lengthwise, laid open the torn ligament, and irrigated the opened joints. The ends of the broken ligament were freshened and sutured with silk. Then, after closing the incision, the knee was put into plaster. Later a support was worn, and massage given daily. Hard masses are now felt in the line of the sutures, which Röntgen photographs show to be bony. Yet they in no way interfere with the patient's movements. Pendl could find but 28 reported cases of suture of the patellar ligament in the literature. Pendl believes that no other operation would secure such a good result. [M. O.]

May 23, 1901. (XIV Jahrgang, No. 21).

1. Theodor Meynert. PROFESSOR ANTON.
2. Alimentary Glycosuria. EMIL RAIMANN.
3. The Juvenile Form of Progressive Paralysis.

JOSEF A. HIRSCHL.

1.—A eulogy delivered at the unveiling of the bust of the late Dr. Theodor Meynert.

2.—After experiments upon healthy men, in whom the assimilation of sugar ingested, measured by the amount of glycosuria resulting, was seen to be variable, Raimann experimented upon diseased individuals. In idiocy, acute mania, paranoia, and in the abstaining alcoholic, the assimilation limit is high; in melancholia, acute dementia, senile dementia, paralysis, and alcoholic delirium, it is low. Among the 103 cases examined were two diabetics, one with dementia, the other with paranoia. Next to these, in the amount of glycosuria following the ingestion of sugar, come the alcoholics. Of the 65 remaining cases, only 14 showed any sugar in the urine, the other 51 being negative. Raimann concludes that the grade of the sugar assimilation is the expression of a general function; it differs in individuals. This sugar assimilation is influenced by a series of ectogenous and endogenous disease poisons. [M. O.]

3.—After a thorough review of the literature, Hirschl describes the full four cases of the juvenile form of progressive paralysis, varying from 16 to 24 years of age. Hirschl has made autopsies upon twelve such cases. He concludes that hereditary syphilis is often the cause of juvenile progressive paralysis; that it appears about puberty, as a rule; that the patients are generally children of deficient intellect; that there is a prodromal stage, rich in symptoms, especially in attacks; that, at its height, the disease is a simple dementia, not paralytic mania or hypochondria; that no remissions occur, though irritation symptoms, movements, attacks, etc., are frequent; that the disease lasts a long time; and that at the autopsy a diffuse sclerosis of the brain with marked leptomeningitis is found. [M. O.]

JOURNAL DES PRATICIENS.

May 18, 1901. (15 Année, No. 20.)

1. Abdominal Massage.

1.—Abdominal massage is above all a great regulator of the general economy by its action upon the general circulation. The patient should lie on a hard bed, with his abdominal muscles relaxed. Before receiving massage, he should urinate. Cautru divides abdominal massage into massage of the whole abdomen, of the intestines alone, or of the stomach alone. Massage of the whole abdomen, which may be superficial or deep, should be given first in all cases. Superficial abdominal massage may be soothing, which is done by skimming over the surface of the abdomen lightly, hand after hand, or by superficial vibrations, the hand of the masseur being kept in one place, trembling from voluntary tetanization of the muscles of the arm. Or superficial abdominal massage may be exciting, which is done by lightly administering taps, pinches, kneading, knocks, etc. Deep abdominal massage is given by pressure with the open hand or closed fist, by kneading, knocking with the knuckles, and by deep vibrations. Massage of the entire abdomen should not exceed 5 or 6 minutes in weak individuals, 15 to 20 minutes in a strong subject. Massage of the large intestine consists of kneading with pressure over the course of the colon. Superficial soothing of the stomach is of use in gastralgia pyloric stenosis, and nervous dyspepsia;

superficial exciting massage is of use in gastro-intestinal atony and hypopepsia, but is contraindicated in gastric ulcer, cancer, gastralgia, etc. Deep massage of the stomach is used either to strengthen the muscle action or to help evacuate the stomach, in dilatation. Abdominal massage is indicated in gastric or intestinal dyspepsia. It is to be employed in hypochlorhydria, and in aepsia, whether due to nervous causes or to tobacco, but is contraindicated when aepsia is due to glandular atrophy or cancer. When gastritis exists, massage will do good. In hyperchlorhydria massage is only indicated if pain exists, and should then be only superficial. In plethoric individuals with hypertension and hyperchlorhydria, deep massage will help, but it is contraindicated in nervous hyperchlorhydria or tabes. In constipation, massage will do wonders. It is also indicated in chronic diarrhea, mucomembraneous enteritis, and chronic typhilitis; but it is contraindicated in appendicitis. Three or four weeks after operation, however, massage of the cecum is very good. With Swedish movements and abdominal massage, gastro-intestinal dyspepsia will be well cured. [M. O.]

May 23, 1901. (15me. Année, No. 21).

1. The Nature of Gout and its Treatment. A. MOREL LAVALLEE.
2. Essential Paroxysmal Tachycardia in Childhood. PIERRE MERLEEN.
3. Death in Typhoid Fever. CHARLES FIESSINGER.

1.—Morel-Lavallée has had an opportunity to examine gouty tophi in a patient under his care, as the deposits increased. These examinations showed that the deposit was composed, not of urates, but of calcium phosphate and carbonate with some calcium sulphate. With this the urine was found hypo-acid, its acidity being but one third the normal. Morel-Lavallée concludes that when hyperacidity exists, the gouty deposits are tribasic calcium phosphate. The treatment should be directed against the cause of the gout, gravel, rheumatism, etc., not against hypo-acidity. This deposit is increased by the ingestion of large quantities of alkalies. [M. O.]

2.—Merklen reports a case of essential paroxysmal tachycardia in a girl of 13, with rheumatic ancestry. She has had three attacks of palpitation, with vomiting and dyspnea, each one more severe than its predecessor. The last attack lasted a week. Under treatment the dyspnea cleared up, but the tachycardia (220 per minute) persisted, after leeches and warm applications had been placed over the precordia. During convalescence there was a striking polyuria. Two weeks later the heart was found perfectly normal. There was dilatation of the heart, with bloody expectoration. The pulse rate fell to 80 suddenly, on the eighth day, normal, but the blood pressure was slightly diminished. The last attack Marklen considers prolonged paroxysmal tachycardia with acute dilatation of the heart. Other cases of this kind in literature show the immediate good effect of applying leeches. The disease often appears first in childhood. [M. O.]

3.—The cold bath treatment prevents death in typhoid fever. Fiessinger believes that deaths from cardiac, pulmonary, and nervous complications are only seen when the bath treatment has been omitted. Hemorrhage and perforation are not stopped by the bath treatment. Saline injections are of great use in hemorrhage, especially when the hemorrhage is small in amount. Fiessinger also uses ice bags when hemorrhage occurs in typhoid fever. [M. O.]

REVUE DE CHIRURGIE.

May, 1901. (21me. Année, No. 5).

1. Fracture of the Base of the Skull. E. QUENU and RENE TESSON.
2. The Late Results of Tarsoplasia with the Osteoclast. E. VINCENT.
3. Accidents Attending the Eruption of the Wisdom Teeth. MOTY.
4. The Treatment of Paralytic Luxation of the Shoulder. BOTHEZAT.
5. The Perihepatic and Pleural Complications of Appendicitis. L. LAPEYRE.
6. Observations upon 1200 Cases of Chloroform Anesthesia. MAURICE BOUREAU.
7. The Treatment of Colostomy. X. DELORE and M. PATEL.

1.—Quenu and Teston report a case of postero-anterior radiating fracture of the base of the skull. An omnibus conductor, aged 49, had been knocked down by a bicyclist, and died the next day. The autopsy revealed a basal fracture of the skull, beginning at the superior angle of the occipital bone, to the left of the median line, the fracture passing along the floor to the left cerebellar fossa, along the petro-basilar suture, through the pterygoid portion of the sphenoid bone. But three similar cases were found after a thorough search of the literature. In all four cases the occiput struck the ground with violence. From experiments upon 10 bodies, this fracture was produced only four times. Thus a special type of fracture exists, a **postero-anterior fracture of the base of the skull**, following a fall upon the occiput, radiating across or around the cerebellar fossa, to the sphenoid along the petro-basilar suture, as a rule, extending even into the ethmoid bone. Direct violence is always the cause, associated with a certain loss of resistance of the bones forming the base of the skull. Hemorrhage occurs, otorrhagia also occasionally, with coma and death. The diagnosis will depend upon finding the line of fracture. [M. O.]

2.—Vincent, who has performed tarsoplasty with the osteoclast (forcible massage), for difficult cases of club-foot, reports the late results of his operations. Out of 204 cases operated eight or more years ago, only 17 have reappeared for examination. The osteoclast molds the tarsus in these deformed feet by force. A description of the instrument, and the supports worn after operation follows. Radiography shows no changes in children. But the effects of tarsoplasty in adults are well shown by radiographs of 5 cases before operation, after operation, and eight or twelve years after operation. The foot-prints are also given. Vincent concludes that tarsoplasty with the osteoclast generally causes lesions similar to those found in a sprain. Fracture is very rarely seen. In no case, even years after operation, was osteitis or arthritis found; both the form and the function of the feet being improved by this procedure. This good effect has continued for years, and will probably be permanent. Operation should not be attempted in infants under one and a half or two years old. And massage and an apparatus must be kept up for years following operation. [M. O.]

3.—Will be abstracted when concluded.

4.—Will be abstracted when concluded.

5.—Purulent pleurisy with appendicitis may exist rarely as a result of metastasis through the blood vessels from the appendix, but is generally a local complication, a **pleural abscess by contiguity**. While the former is found with an infarct on either side, the latter will be upon the right side always, preceded and accompanied by **subphrenic suppuration**. In 13 cases of appendicitis collected from the literature right-sided pleurisy was found post-mortem with subphrenic abscess, showing the extension from the appendix through the diaphragm into the pleura. In three others perihepatic abscess was found with appendicitis, but separate from it. From these autopsies it is plain that suppuration from the appendix spreads up the parieto-colic zone to the liver and pleura. Clinically Lapeyre reports 16 cases of right-sided pleurisy with subphrenic abscess complicating appendicitis. He believes that the extension is not due to either the retroperitoneal cellular tissue or the parietal lymphatics, but to the uninterrupted peritoneum in the retrocolic sinus. This is limited above by the suspensory ligament of the liver; below by the inferior cecal ligament. Thus an abscess will form above or below the liver. Pleurisy will then follow by perforation of the diaphragm, or by the lymphatics transporting the microbes through the diaphragm. There are first the ordinary symptoms of appendicitis, then great pain in the right hypochondrium, with dyspnea, stitch in the side, and cough. When the abscess is below the liver, there may be edema of the abdominal wall, enlargement of the subcutaneous veins, and, perhaps, fluctuation. If the abscess is above the liver, however, there is, as a rule, only marked induration of the right side of the abdomen. The physical signs simulate purulent pleurisy. The prognosis is grave; the diagnosis always difficult. Perihepatic abscess may be prevented by removing the appendix when the appendicitis first appears. The only treatment is immediate operation, with removal of the appendix and evacuation of the abscess. [M. O.]

6.—Boureau reports 1200 cases of anesthesia with chloro-

form, using a compress and adding the chloroform drop by drop, gradually. It was necessary to use a tongue forceps but three times, when syncope occurred. Syncope was seen in but 12 patients, all of whom recovered. Sylvester's method of artificial respiration was employed for them all successfully, although it was kept up for a long time in a case of cardiac asphyxia. Eight of these cases were due to asphyxia two to traction upon the stomach in gastro-enterostomy, one to traction upon the liver in cholecystotomy, and one occurred during the stage of excitement, near the beginning of the administration. Three hundred and seventy-two of the operations were laparotomies, with the patient inclined at an angle of 45°. Cardiac syncope is much less seen in this position. The longest operation lasted almost three hours, when 80 c.c. of chloroform was given. She had but little vomiting, and recovered perfectly. Vomiting, more frequent in women, occurred in about one-third of the cases. Very little chloroform was needed in cases of tumors or cerebral lesions. In some cases anesthesia was begun with ethyl bromide. The few cases of paralysis of the extremities which followed chloroform anesthesia were probably due to the position of the extremities during the administration of the anesthetic. The age of the individuals anesthetized varied from three months to 95 years. Boureau believes that there are no contraindications to the use of chloroform. It is innocuous, if well administered. But a skilled anesthetizer should always administer chloroform. [M. O.]

7.—Will be abstracted when concluded.

BOLNITCHNAIA GAZETA BOTKINA.

May 16, 1901. (Vol. XII, No. 20).

1. A Contribution to the Study of the Toxic Manifestations of the Plague in Man. A. F. VIGOURA.
2. On the Physiological Conditions of Destruction and Conservation of the Ferments of the Pancreatic Juice. E. A. GANICKI.
3. On the State of the Albumin-ferment of the Pancreatic Juice under Various Physiological Conditions. N. I. LINTVAREFF.

1.—Will be abstracted when completed.

2.—Ganicki made a special study of the fact observed in Prof. Pavloff's laboratory that when pure pancreatic juice is allowed to stand in the thermostat for a certain length of time, the digestive ferments become weaker and finally cease to act. This phenomenon is due to the destructive action exerted by one ferment upon the other. A series of experiments showed that the **steapsin** becomes decidedly weaker in its action on fats at the expiration of 20 minutes, and after 3 hours only traces of the ferment can be detected. The addition of bile to the pancreatic juice conserves the activity of the steapsin, while the addition of intestinal juice has the opposite effect. But when both intestinal juice and bile are added the activity of the ferment is greatly augmented, while at the same time its destruction is hastened. This is probably due to the action of the trypsin upon the steapsin, for when egg albumin is added the action of the former is inhibited and the activity of the latter is conserved for a considerable length of time. Precisely the same results were obtained with **amylpsin**. In the case of **trypsin** there takes place at first an augmentation of the ferment, owing to the conversion of the zymogen into trypsin. This is followed at the end of 2 hours by a gradual destruction. The addition of intestinal juice has the same effect on trypsin as on the other ferments. Bile exerts a favorable influence, while the best results are obtained from a mixture of bile and intestinal juice. The addition of egg albumin inhibits the action of trypsin, probably to some more or less stable combination of the two. This supposition, however, is to form the subject for future investigations. [A. R.]

3.—Lintvareff found as a result of experiments performed on dogs with fistulae that on a meat diet the pancreatic juice contains trypsin without zymogen, and is not rendered more active by the addition of intestinal juice which seems to exert rather an inhibitory influence. The addition of bile to such juice exalts its activity. On the other hand when the diet consists of bread and milk only, the reverse takes place; there is more zymogen, and the intestinal juice, and not the bile, stimulates the activity of the ferments. The absolute digestive power of the pancreatic juice on a meat diet is greater than on bread and milk. [A. R.]

British Congress On Tuberculosis

FOR THE PREVENTION OF TUBERCULOSIS.

ABSTRACT OF PAPERS.

The Infectiousness of the Milk of Tuberculous Cows, the Bacteriological Diagnosis, and the Practical Value of Tuberculin for the Extirpation of Tuberculosis Among Cattle. By Dr. Lydia Itabinowitsch, Institut für Infektionskrankheiten, Berlin. The occurrence of tubercle bacilli in the milk of cattle suffering from general tuberculosis, or from tuberculosis of the udder, is a fact established by numerous researches many years ago. Some authors demonstrated experimentally that the milk of cattle suffering from incipient tuberculosis may also be infectious, even if the udder is not affected by the disease.

In the year 1899 it was first demonstrated by Dr. Kemper and myself that tubercle bacilli can also occur in the milk of animals suffering from latent tuberculosis where the disease could only be detected by means of tuberculin. This fact was demonstrated in the same year by Ostertag's observations conducted on mixed milk, and by experiments of Adami and Martin on milk samples of single cows. The animals, in all their cases, presented no clinical symptoms of tuberculosis, but reacted to tuberculin. A further proof was furnished by my last year's observations on the milk supplied to infants in Berlin. No tubercle bacilli were found in the milk taken from cows which did not react to systematically repeated tuberculin tests. On the other hand, the milk from animals which were not submitted to the tuberculin test contained tubercle bacilli, though they showed no clinical symptoms of tuberculosis. My earlier bacteriological studies, as well as those of the latter years, on the milk of animals with suspected tuberculosis of the udder established the following facts:

The detection of tubercle bacilli by microscopical examination of specimens of centrifugized milk sediment is not reliable, as they occur in milk bacteria, which are in regard to the character of their growth, as well as to the effect on the animal organs, very similar to the bacilli found by Koch in butter, and which are very difficult to distinguish from the real tubercle bacilli. These acid-resisting bacteria found by us years ago in the milk of animals suspected of tuberculosis were also found by Kühnau under similar circumstances.

The single and only reliable test of the presence of tubercle bacilli in milk remains the animal experiment. This may be somewhat wearisome when it happens, as it sometimes does, that the inoculated animals show suspicious changes, which call for a new test in order to make the diagnosis positive. Further, the suspected milk must be examined repeatedly, as a single result is not sufficient for the diagnosis.

The presence of tubercle bacilli in the milk is not always proportionate to the disease in the animal, though it is natural to expect tubercle bacilli in the milk when there is extensive general tuberculosis, or when the udder is affected. But the difficulties of a clinical diagnosis, even of tuberculosis of the udder, are so great that not unfrequently cases diagnosed as tuberculosis of the udder prove, on post-mortem and on histological examination, to be cases of chronic interstitial mastitis. On the other hand, the presence of tubercle bacilli was ascertained by microscopical examination of pieces of the udder, as well as by animal test, in cases where there was either no apparent disease of the udder at all, or where inflammation only was diagnosed.

There exists experimental evidence also for the third possibility, namely, that tubercle bacilli are not detected in the milk, even by repeated animal inoculation, while the clinical examination and the autopsy of these cows demonstrated tuberculosis of the udder, and showed clumps of tubercle bacilli in the tubercular interstitial tissue of the mammary gland, though there were none to be found in the ducts galactiferous. Thus we see that the clinical examination alone, without the aid of auxiliary methods, is both insufficient and unreliable as a guide to the discovery of tubercle bacilli in the milk. On the other hand,

the inoculation method, though more certain in its results, has proved too elaborate and tedious a process; and, therefore, we are obliged to acknowledge the tuberculin test as the only reliable and rapid means of diagnosis.

As mentioned above, animals reacting to the tuberculin test only, and showing no clinical symptoms of tuberculosis, may supply milk containing tubercle bacilli. Such animals can just as much be the cause of the spread of tuberculosis among other animals, and chiefly among the young cattle, as animals with grave forms of the disease, for nearly all new-born animals are fed for some time with mother-milk.

The frequency of tuberculosis among calves, as well as the great increase of tuberculosis among swine in recent years (the latter is, in 99 per cent. of the cases, to be ascribed to the tuberculous food), offer the best evidence of the assertion that the use of milk of tuberculous animals is the chief cause of the dissemination of tuberculosis among animals. The test with tuberculin, aided by clinical and bacteriological examination, furnishes us with the surest means for obtaining milk free from tubercle bacilli, as well as rearing cattle free from tuberculosis.

The Alimentary Cure of Tuberculosis, by Dr. Samuel Bernheim, Paris. The author insists on the importance of the alimentary cure of phthisis, and on the place which it should occupy in the therapeutic triad of Brehmer. The necessity for restorative feeding, already proclaimed by former clinical teachers, should, however, be carefully studied, and not put into practice blindly.

It is not sufficient merely to speak to a tuberculous patient and to order him to eat often and much, and to take a very rich diet. Before imposing so vague a regimen, the clinician should take an exact and precise account of the digestive power of the patient, for cases vary in this respect. In some we find defect of acidity, in others hyperacidity; in some excessive dilatation; in others diminution in size; in some total anorexia, in others again an absolute intolerance of food. The author insists on this point, not generally admitted, that the stomach of the tuberculous patient is often the seat of tuberculous lesions, or that it is at least the subject of tonic disorders of bacillary origin. It is therefore useful to vary the means of procedure according to the requirements of the patient.

After having studied this first section, Dr. Samuel Bernheim reviews the different foods most to be preferred in tuberculosis. He studies their richness in nitrogen and mineral salts, and parallel with this general study of foods he brings into relief the principal factors producing excess of katabolism in the patient. The clinician will be able for himself to draw from this clinical and biological study the practical conclusions which have in fact been summed up very precisely. The author states that if the tissues and the debilitated organism are to be repaired as speedily as possible, it is imprudent to exact any considerable effort on the part of the stomach at the commencement. This organ should be protected with "pious care," and not be brutally overworked. No good is served by putting inside of a patient an enormous quantity of food; above all, it is necessary to give him nourishment that he is capable of digesting and assimilating. By commencing this nourishment prudently and methodically we arrive at the stage of tempting the stomach of the patient, and the patient finishes by taking his food himself with relish and benefit.

In conclusion, Dr. Bernheim disapproves of an exclusively meat diet, for although these foods contain a large quantity of nitrogen, they contain a very small proportion of the numerous salts and potent acids so indispensable to the renewal of the body. It is not a question of merely fattening the soil of tuberculous patients; it must also be enriched by the numerous organic salts indispensable to vitality; and to attain this end a mixed diet of nitrogenous and carbonaceous foods is absolutely necessary.

The Uses of Tuberculin, by Dr. Charles Denison, Denver, Colorado, U. S. A. Divided into diagnostic and immunizing or therapeutic. The composition of the glycerine extract and its reactionary effect described. Diagnostic proficiency and observance of technique required in its use.

The method of administration and size of dose for diagnostic purposes. The reaction determined by (1) tem-

perature rise, (2) systemic effect, and (3) local auscultated sounds in affected lung tissue.

The immunizing or therapeutic effect of tuberculin, and reasons why the *direct* method (extracts) is preferable to the *indirect* (animal sera).

Descriptions given of the different preparations: Tuberculin R. (Koch), Tuberculoidin (Klebs), Antiphthisin (Klebs), Tuberculinum Purificatum (von Ruck), Watery Extract (von Ruck). Tables of results, giving the author's ten years' experience with 213 patients, also comparative tables.

A discussion of the *modus operandi* of immunization. Chiefly based upon the theory that the toxins are insufficiently or with difficulty absorbed (during the pre-tubercular and infiltration stages) in order to sufficiently stimulate the healing process. Hence the utility of this form of immunization.

Propositions to be dealt with by Sir John Burdon-Sanderson, Bart., F. R. S. *Sanatoria for Working Men and Women.* 1. In Germany more than fifty sanatoria, affording accommodation for about 4000 working-men, are in operation.

2. The success of the experiment has been such as to afford ground for believing that by the *timely admission* of the consumptive workman into a sanatorium his life may be prolonged.

3. In Germany the funds required for maintaining workmen's sanatoria are chiefly derived from the system of compulsory insurance against illness which exists in that country. It may be assumed that no such system could be established in England. It must, at the same time, be admitted that the expenditure required for the maintenance of the working man when incapacitated by sickness must be principally derived from his earnings; in other words, some form of *voluntary* insurance against disease must be regarded as the best substitute for the compulsory system as it exists in Germany.

4. A system of sanatoria supported by voluntary insurance (as, for example, the Industrial Insurance Societies which exist in this country) cannot be as efficient as a means of diminishing the frequency or spread of pulmonary tuberculosis as a system dependent on compulsory insurance. As regards the individual contributor it would no doubt be more advantageous, because its benefits would not be extended to the inferior class of workmen who are most liable to phthisis. But for the same reasons it would be less advantageous to the health of the community, for in this relation the degree of advantage arising from the prompt removal of an infected person from his dwelling and its insanitary surroundings is proportional to his poverty. A system which would provide for the well-to-do workman, excluding the toiler whose earnings are not more than sufficient for bare maintenance, would be unsatisfactory unless it were largely supplemented by funds derived from other sources.

The Diagnosis of Tuberculosis in Living Animals by Serum-Agglutination. By Professor Arloing, Lyons. Since 1898, the author has been trying to discover the existence of tuberculosis in man and in animals by agglutination effected by the serum of suspected subjects (*des suspects*) and a homogeneous culture of Koch's bacillus in a glycerinated broth, *carefully selected for this purpose*.

Applied to animals of the bovine species the observations, carried out on more than 150 subjects, have demonstrated:

1. That the blood serum of calves from five to eight weeks old does not agglutinate these cultures and does not clear them when in the strength of 50 per cent. (i. e. 50 per cent. serum).

2. That the serum of *healthy* adults agglutinates and very often clears when of 20 per cent. strength, but never completely when of 10 per cent. strength.

3. That the serum of tuberculous adults, with rather rare exceptions, agglutinates and clears completely when between 10 per cent. serum and 5 per cent., and sometimes even when weaker than that.

So that every suspected animal which clears with 10 per cent. serum, a culture that would be imperfectly cleared with 20 per cent. serum from a healthy animal, may be considered as affected by tuberculosis.

4. A diagnostic injection of tuberculin (injection *révéla-*

trice de tuberculine) does not perceptibly modify the agglutinating power of healthy cattle (bovine).

5. Serum-agglutination is therefore a new method of diagnosing tuberculosis in oxen, which can be utilized under any conditions *ad hoc*, especially in cases where recourse cannot be had to the use of tuberculin.

Cacodylate of Guaiacol in the Treatment of Tuberculosis. By Dr. F. Barbary, Nice. Cacodylate of guaiacol, first prepared by M. Rebec and myself, has been used in the treatment of tuberculosis since 1899.

The chemically pure substance, $AS(CH_3)_2O-(CH_2-OCCH_3)$ has been employed in the form of injections dissolved in an oily medium. Every flask of 10 grammes of sterilized oil contains 0.9354 of cacodylic acid, equivalent to 0.05 of cacodylate of sodium and 0.05 of guaiacol.

A flask of the solution is injected every two days, the treatment is then stopped for eight days, and subsequently resumed.

Cacodylate of guaiacol acts:

1. On general nutrition, strengthening the organism by cacodylic acid.
2. On the tuberculosis itself, modifying the soil and bringing about an arthritic evolution by means of the guaiacol.

We have been able to compare the results with those of the ordinary treatment in fifty cases. Combined with hygienic measures it has yielded rapid and lasting results in the first and second stages of the disease.

On a New Process of Skin Excitation in the Treatment of Pulmonary Tuberculosis.—Pneumatic Massage.—By Dr. Breuillard, St.-Honoré les-Bains, France. In this communication the author maintains, in the first place, that excitation of the skin constitutes a therapeutic means of the first rank in the treatment of pulmonary tuberculosis, but that in practice this manipulation is far too much neglected.

After having compared the physiological and therapeutic actions of the principle modes of cutaneous excitation (rube-facients, blisters, chemical and thermal caustics, frictions, hydrotherapy, electrotherapy, and massage), Dr. Breuillard gives reference to massage, the action of which is more certain, and is exempt from troublesome complications.

But well applied massage is too engrossing for the doctor, and necessarily is an exceptional and luxurious method. The results obtained are *artistic*, that is to say, inconstant and variable, and depend on the special aptitude of the masseur.

In view of these considerations the author proposes the substitution of pneumatic massage for manual massage, the former of which he has invented, and the simple working of which he demonstrates by means of an entirely new apparatus.

In a word, according to the author, pneumatic massage, which is easily used, combines the actions of hydrotherapy, of various electrical methods, and of manual massage. It is a new note to add to the scale of physical and natural agents hitherto employed; a note which it seems to him will play a very important part in the treatment of chronic pulmonary tuberculosis.

Typhoid Fever Along the Railroad of Ekaterinino from 1886 to 1899.—M. A. Zausajloff (*Bolnitchnaia Gazeta Botkina*, Vol. XII, No. 4) is of the opinion that an etiologic relation exists between the prevalence of typhoid fever and the consumption of fruits and vegetables. He bases his view on statistics compiled from 1,622 cases. These show that the maximum morbidity occurs between the months of July and October, inclusive, when the consumption of fruits is greatest. The minimum is between May and July. Regarding treatment, he observed that the mortality is less when a restricted liquid diet is employed. Under this regime it reached 8.69%, while with a more liberal diet it was 12.46%. He, therefore, does not agree with the authors who recommend forced feeding. Cold sponging, packing or baths were used in cases of high temperature. Baths were not employed during the second half of the disease, as they predispose to intestinal hemorrhage. Of drugs, benzonaphtol, naphthallin, carbonate of guaiacol and acid drinks, made of hydrochloric or lactic acid, were most frequently employed. The best results were obtained with carbonate of guaiacol in large doses. [A. R.]

New Instruments.

SOME CONTRIVANCES FOR APPLYING CARBONIC ACID DOUCHES FOR THERAPEUTIC PURPOSES.

By A. ROSE, M. D.,
of New York.

A number of letters from colleagues who had read my communication to the Editor of *The Philadelphia Medical Journal*, published in the issue for November 24, 1900, asking a description of the mode of application of carbonic acid gas induces me to describe some of the contrivances to apply the gas. The first apparatus which did good service and which has the advantage over the others that it can be easily improvised, as a rule, with the aid of a nearby living druggist, consists of a bottle, holding a pint or a little less, with a wide neck and a rubber stopper perforated so as to admit a tube, with a nozzle, as the case may be, for nose, rectum, or vagina. A solution of about 6 drachms of bicarbonate of soda in about 6 or 8 ounces of cold water is introduced into the bottle, and 4 drachms of crystallized tartaric acid (if pulverized acid is used the development of the gas goes on too rapidly) are added. The larger these crystals are the better. Instead of the tartaric acid crystals, disks of acid sulphate of soda may



FIGURE 1

be used. The bottle is then closed, and the carbonic acid developing in the water rises through the tube, the nozzle of which has been placed in position. This form of gas generator serves quite well to apply the gas to the nasal cavities, to inflate the rectum and in some instances it can be used to give vaginal gas douches. Gas develops during about 10 to 12 minutes. Its disadvantage is that the current of gas can neither be regulated nor interrupted. When I saw the so-called sparklets by means of which liquids are charged with carbonic acid gas, the idea suggested itself to me to make use of this form of containers of liquefied carbonic acid gas for therapeutical purposes,

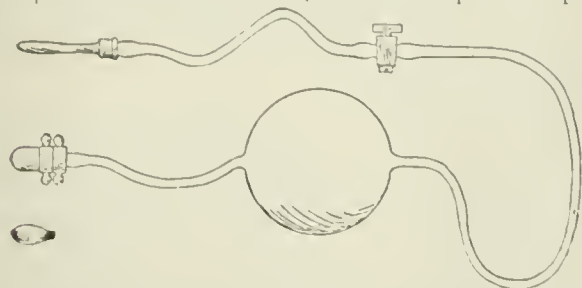


FIGURE 2—The accompanying cut shows the contrivance for applying douches. The gas contained in the steel capsule in its liquefied state is freed as soon as the screw is turned and has pierced the capsule. It assumes its original state again, descends through the rubber tube into the rubber bag whence it may be applied passing through another tube, to which a stopcock is attached. By means of this stopcock the gas current can be regulated exactly. While the gas douche is applied to the nasal cavity the patient is to be directed to keep his mouth wide open, in order to avoid intoxication, which might occur if an excessive amount of gas should be swallowed.

poses, and the inventor of the sparklets connected the steel capsule containing liquefied carbonic acid, with an aerostat, by means of which the gas current can be regulated exactly.

The sparklet contains about 1700 cc. of CO_2 . The following apparatus for the generation of carbonic acid gas is devised by the apothecary, Mr. H. A. Cassebeer, of New York, and is, like the aerostat, connected with the sparklet portable in our instrument satchel. It has the advantage over those described that the current of gas can be kept up for 40 minutes in succession. It is the best of the three in such gynecological cases as those described by Demme, and reiterated by me in the letter to the Editor of *The Philadelphia Medical Journal*, above mentioned. It consists of a collapsible rubber con-

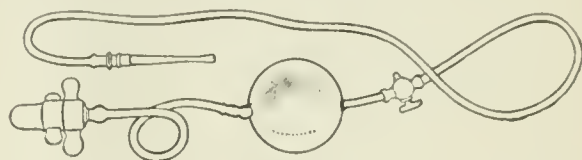


FIGURE 3

tainer suspended on three standards, and having a capacity of 1500 cc. This generator is fitted with a screw cap perforated by a small hard pipe to which is attached a 3-inch rubber tube leading to a hand bulb fitted with valves and used to provide a greater pressure in the aerostat directly attached, which furnishes a steady supply of gas. In the tube leading from the aerostat is inserted a hard rubber stop-cock to regulate the flow of gas, and to the end of this tube any desired nozzle may be attached. The method adopted, and which is an inexpensive one for obtaining the gas, is the same as used for the generation of carbonic acid in the Nauheim treatment as devised and prepared by H. A. Casse-

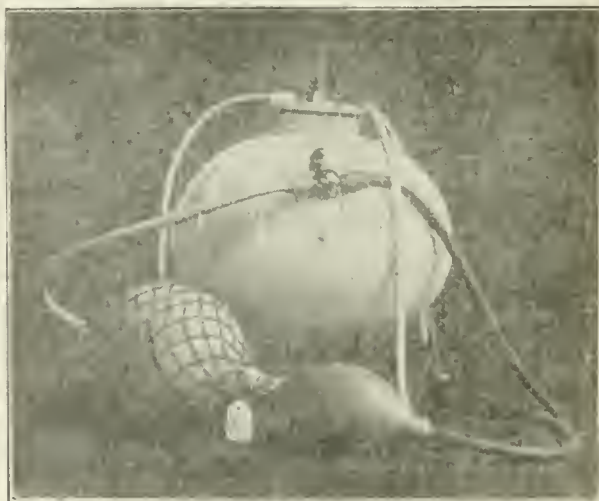


FIGURE 4

beer, and consists of pure acid sulphate of soda compressed into hard discs, and pure bi-carbonate of soda in exact quantities to neutralize. The generator is filled to about 2-3 of its capacity with water, and to this is added one of the discs with a corresponding amount of bi-carbonate of soda to neutralize.

Original Articles.

THE BUCCO-ANTRAL ROUTE IN NEURECTOMY FOR
THE RELIEF OF TIC DOULOUREUX.*

By GORDON KING, M. D.,

New Orleans, La.

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City of New Orleans General Hospital, Fellow of the
American Laryngological Association, et c.

Of the various forms of neuralgia affecting the sensory nerve trunks or their terminal branches none causes more atrocious suffering, is more rebellious to ordinary means of treatment, and is more long lived than that affecting the trifacial nerve, and accompanied by spasmodic contractions of the facial muscles, designated by the French as "tic douloureux," and also known as epileptiform neuralgia. This severe variety of trifacial neuralgia has long been classed among those diseases which are but rarely amenable to medicinal treatment and which require surgical procedures for their relief. While sometimes, in its milder form, the distressing symptoms may be greatly mitigated by the administration of proper constitutional or local remedies, the effects of such treatment are more often but palliative or entirely negative, and after the long list of antineuralgic and anodyne drugs at our disposal have been tried and found ineffectual, we must turn, as a final resort, to surgical measures to afford relief to the unhappy patient.

According to Bruns (*Neurol. Centralblatt*, 1897), genuine tic douloureux is situated in the second and third branches of the fifth nerve and rarely in the first, and he claims that surgical treatment is invariably necessary. As this is the generally accepted theory, where the neurosis is considered of peripheral origin, operative measures should be directed to these branches.

Stretching of the nerve trunks, and subcutaneous division or resection of the nerves at their points of emergence from the bones of the face are methods inadequate to give more than brief temporary relief, and are to be discarded in favor of the more radical operations directed towards resection of the nerve trunks as near to their foramina of exit from the cranial cavity as possible, in inflicting the least amount of traumatism on the patient, and in avoiding unnecessary unsightly scars on the face.

Carnochan, in 1851, is credited with being the first to perform resection of the superior maxillary nerve at the foramen rotundum with success. His method consists in exposing the infra-orbital nerve at its foramen, following it up along the floor of the orbit, and resecting the trunk in the spheno-maxillary fossa in the neighborhood of the foramen rotundum. This operation entails a certain degree of traumatism to the orbital contents, opening of the antrum externally, the formation of a scar upon the cheek, and does not allow of free access to the spheno-maxillary fossa.

The operation of Lucke, or the modification of Lucke's method by Braun and Lössen, is designed to gain freer access to the round foramen, and consists in a temporary resection of the malar bone. The two methods differ only in the external incision

and in the fact that Lucke displaces the malar bone upward, and Braun and Lössen downward. The chief objections to this operation are the great amount of traumatism inflicted and the resulting ugly scar on the face. It was in view of these disadvantages that Alexander Fraenkel, of Vienna, sought a simpler and less difficult route to reach the nerve trunk without scarring the face.

Having observed in Zuckerkandl's anatomical laboratory the method employed for demonstrating the course of the superior maxillary nerve, which consists in exposing it in the antral cavity by an opening in the canine fossa, he was led to attempt its surgical resection by this method. After practicing the operation first on the cadaver, he applied the method to a patient who had suffered a relapse of neuralgia after an operation performed a year and a half previously for division of the terminal of the nerve at the infra-orbital foramen. As described in the *Centralblatt für Chirurgie*, March, 1899, the Fraenkel method is as follows: An incision is made through the mucous membrane of the mouth, beginning over the root of the canine tooth and extending backwards along the gingivo-labial fold to the tuberosity of the maxilla. The lip and cheek are strongly retracted upward, exposing the anterior bony wall of the antrum of Highmore in the canine fossa. This wall is then broken through with a sharp chisel and the bony plate and its internal mucous lining raised in the form of an osteo-mucous flap. This opening brings the interior of the cavity plainly into view, and when the bleeding is checked and all blood clots carefully cleaned out, artificial light is thrown into the cavity by means of a head reflector or a Clar head lamp and the roof of the antrum closely inspected. The infra-orbital nerve can be traced in its course along the infra-orbital canal, which sometimes projects prominently into the antral cavity, or may be seen in its posterior aspect through the thin plate of bone forming the floor of its canal. This canal is then broken into with a small chisel and the nerve drawn out of its bed by means of a short blunt hook, and used as a guide in cutting away the upper posterior wall of the antrum to gain deeper access to the trunk in the spheno-maxillary fossa. The nerve is seized with a forceps, put on the stretch, and divided as near to the round foramen as it is possible to reach, and that portion cut away which has been left exposed in the antrum. The antral cavity is dried out thoroughly, the osteo-mucous flap replaced, and the buccal wound sutured, a small strip of iodoform gauze being left in one angle of the wound as a drain.

This method, as may be seen, is simply a modification of the old Carnochan operation, but its advantages over that procedure are, to my mind, plainly in evidence. Access to the cavity of the antrum, even in its deeper parts, is, to one experienced in the surgery of that region, quite as easy through the canine fossa as through the cheek, and having as an advantage of no mean importance the avoidance of any disfiguring scar or depression about the face. The nerve is readily accessible and can be dislodged and resected without disturbing in the least the contents of the orbit.

The general plan of the operation is similar to

*Accepted as Candidate Thesis for Membership in the American Laryngological Association at meeting held at New Haven, Conn., May 27th, 1901.

that advocated by Caldwell and Luc for opening the antrum in the treatment of empyema of that cavity. My experience with this latter operation had so familiarized me with this route of access that I readily accepted the feasibility of the plan recommended by Fraenkel for neurectomy of the second branch of the trigeminus in obstinate neuralgia, and when two such cases came under my care I did not hesitate to advise and perform the operation so highly extolled by that author. Before applying it to my patients, however, I performed the operation on the cadaver and was agreeably surprised to find how very easy it was to carry out the technique of the procedure and to approach quite near the round foramen to divide the nerve trunk.

The cases which form the subjects of the two following observations have afforded a practical demonstration of the facility as well as the utility of this operative method in the surgical treatment of severe and obstinate forms of trifacial neuralgia affecting the superior maxillary division.

Observation 1.

S. H., a farmer, aged 62 years, a native and resident of Louisiana. His father was a strong and vigorous man and died at the age of 70 from dysentery. The mother reached the age of 40 years and died of causes unknown to the patient. Two brothers and two sisters of the patient are alive and in good health; one sister and three brothers are dead. The man himself was in excellent health up to fifteen years ago, when he experienced the first symptoms of his neuralgic affection. No history of syphilis could be obtained, and, although residing in a malarious district, the patient had never had an attack of malarial or typhoid fever. He had gone through the civil war as a soldier, was accustomed to exposure, and given to hard labor in the fields. In 1885 he suffered an attack of rheumatism, which, according to his statement, began in the right foot, and, ascending up the right side, attacked the shoulder joint and the neck, and ended in a neuralgia of the right side of the face. This passed away for a time but recurred at regular intervals, becoming gradually more frequent and severe and interfering greatly with his daily work. These attacks seemed to resist all palliative treatment given him, but finally subsided somewhat, and for three years he had some relief and was able to carry on his farm work. At the end of that time, however, the pains returned and grew frequent and regular in their recurrence, accompanied by spasmodic twitchings of the facial muscles. Thinking that perhaps the teeth were the cause of the trouble, he consulted a dentist who proceeded to extract four teeth of the upper and six of the lower jaw. This afforded relief of but short duration, and after three weeks the attacks recurred with ever increasing frequency and severity. At various times he applied to his family physician for relief and numerous antineuralgic remedies were tried without affording more than slight temporary benefit. For eight months previous to coming under my observation the patient had been suffering intensely, paroxysms of sharp lancinating pain coming on every five or ten minutes, lasting a few seconds and passing off to recur upon the slightest effort to talk or masticate. Life became burdensome, sleep of more than a few minutes at a time was impossible, and he had become weak and thin from want of rest. I saw him first early in January, 1900, and judged from his history that operative interference alone would give complete relief. At that time the paroxysms were very frequent and intense, but in the intermissions of a few minutes between them no pain was felt and no sensitive points could be detected about the face. The pain was traceable to the distribution of the second and third branches of the trifacial of the right side. His temperature was normal and urinalysis showed nothing abnormal.

January 4th, patient was sent to the New Orleans Sanitarium and the following sedative mixture ordered given every hour until some rest was obtained: Codeine Sulphate gr. 2-3, Antikamnia and Sulfonal, of each, grs. v. Light diet and mild saline purgation was also ordered. One week of this regime modified the attacks to the extent that he

was enabled to gain a little sleep and rest, but it produced no effect upon the disease, as shown by renewed attacks whenever the sedatives were suspended for a few hours.

January 11th, the patient was prepared for operation, as I had decided to resect the superior maxillary branch of the trifacial by the Fraenkel method, and at the same sitting remove the inferior dental by trephining the inferior maxilla. Accordingly, under chloroform anaesthesia, an incision was made through the gingivo-labial fold and the antral wall exposed. The periosteum was detached and elevated to lay bare the infra-orbital nerve at its exit from the foramen the nerve being separated from its attachment to the soft tissues of the cheek and caught up with a hemostatic forceps. The anterior wall of the antrum was then broken through with a chisel and the bone cut away as high up as the infra-orbital foramen, so as to bring the interior of the cavity into plain view when the lip and cheek were retracted forcibly upwards. By making traction on the nerve its bony canal could easily be traced in its course between the roof of the antrum and the orbit, and broken into with a small chisel. Thus the nerve was freed from the canal and followed up into the sphenomaxillary fossa, where it was firmly grasped with a narrow bladed forceps and drawn out by a twisting motion. It parted almost at its exit from the foramen rotundum. This done, the antrum was carefully dried out and the buccal wound sutured with catgut. Attention was then turned to the inferior dental branch, which was exposed at its entrance into the inferior dental canal by trephining the inferior maxilla externally just at the angle. About an inch and a half of the nerve was removed and the skin wound closed. The time required for the two operations, including the administration of chloroform, was one hour and a quarter. Later the patient took some liquid nourishment and passed the first restful night he had experienced for years. An occasional slight twinge of pain in the right side of the face was the only vestige remaining of his painful affection, and that disappeared entirely after the first twenty-four hours. A mouth wash of Seiler's solution to be used every two or three hours was the only after treatment prescribed. With the cessation of all pain and with the ability to sleep peacefully, and to talk and eat with comfort, the man grew cheerful and began rapidly to regain his strength. One week from the date of operation he left the sanitarium and returned to his home in the country. A careful examination before his departure showed the wounds well healed, entire absence of the spasmodic pains, and anesthesia of the skin of the right side of the face corresponding to the area of distribution of the two resected nerves. Two months later a letter from the patient informed me that he had gained twenty-five pounds in weight and felt well in every respect. The following December his family physician wrote me that the patient had come to him to report that, as a result of over-exerting himself while at hard work in the field, he had experienced some slight pain in the face of a spasmodic character. It was not severe enough to interfere with his eating or sleeping, and he reported it simply because he had been instructed by me to do so should he, at any time, have neuralgia of that side of the face. I wrote advising him to strictly avoid heavy labor and over-exertion, and have since received encouraging reports from time to time. As late as May 1st, of this year, he was still enjoying good health and only felt faint paroxysms of pain when he was imprudent enough to over-tax his strength.

Observation 2.

Mrs. O. L., 53 years of age, a native of Louisiana, and a near neighbor of Case No. 1, and in many respects a case of similar nature. She was referred to us by her family physician who had long before exhausted the medicinal remedies at his command in a vain endeavor to prevent the frequent agonizing paroxysms of neuralgic pain to which the unfortunate woman had been a victim for the past seven years. She had always been a hard working, vigorous woman until her strength had given way for want of rest, and she was no longer able to perform her household duties and had grown morose and despondent. The pains followed the courses of the superior and inferior maxillary divisions of the right trifacial, the latter branch being only recently affected. The paroxysms were accompanied by salivation and contractions of the facial muscles, in fact, a typical case of *tic douloureux*. The cheek appeared to

be a little sunken on the affected side, showing some trophic change in the muscles. A thorough examination failed to reveal any reflex cause of the affection, so resection of the superior maxillary and inferior dental branches was proposed. She was admitted to the Sanitarium June 15th, 1900, to be prepared for operation on the following day. Urinalysis revealed nothing abnormal.

June 16th, patient was taken into the operating room, and under chloroform anesthesia, the usual incision was made in the gingivolabial fold down to the bone, and the periosteum and cheek retracted upward to reveal the nerve at the infra-orbital foramen. The anterior wall of the antrum was then broken into with the chisel and freely enlarged with rongeur forceps as high up as the infra-orbital foramen and backward towards the tuberosity. The nerve was divided at the foramen, its canal along the roof of the cavity laid open throughout its entire length, and the upper posterior wall of the antrum broken through into the sphenomaxillary fossa. The trunk of the nerve was caught in this situation with a hemostatic forceps and twisted out, almost two inches of the nerve being thus removed. All bleeding in the cavity was completely checked and loose pieces of bone removed, and then the periosteum and mucous membrane caught up and closed over the breach in the anterior wall with catgut sutures.

The inferior dental was next exposed by trephining the maxilla at the angle, and drawn out of its bed with a tenaculum. The distal end came out readily upon traction with a forceps, parting as far anteriorly as the mental foramen, and then about one-fourth of an inch more was brought out by twisting the proximal end. Some hemorrhage occurred at this point from injury of the accompanying artery, but was easily controlled by compression. The patient took the anesthetic rather badly and vomited frequently, which delayed the progress of the operation to some extent. One hour and a half was consumed in completing both operations. The patient slept at intervals during the night that followed, but was frequently disturbed by the persistent nausea, experiencing, however, no more attacks of facial pain. Convalescence was rapid and uneventful, and at the end of a week she was permitted to leave the Sanitarium and return home. The area of cutaneous anesthesia extended over ala of nose, right side, over cheek to lower margin of the orbit, right half of upper lip and gums. The tongue and inner surface of the cheek were sensitive to the prick of a pin.

Recent news of the patient inform me of her improvement in general health and, as yet, no recurrence of the neuralgia.

In operating on these cases I saw fit to modify the method advocated by Fraenkel in such manner as to both simplify the procedure and to resect a greater length of the nerve, while at the same time to assure complete closure of the buccal wound by dispensing with the gauze drain. After incising the mucous membrane and periosteum covering the anterior wall of the antrum, I elevate the periosteum as high up as the infra-orbital foramen, divide the nerve at this point, and open the entire canal into the antrum. This dispenses, in a measure, with the necessity for a very strong light to illuminate the cavity in order to recognize the situation of the nerve in the deeper parts.

I find, likewise, no special advantage in preserving a bony flap, provided the periosteum is well sutured over the opening made in the anterior wall, as no depression of the cheek results from the deficiency of the bone. The opening should be made large enough to permit of easy manipulation within the cavity.

I have found it expedient to remove the nerve by twisting and avulsion, as advocated by Thiersch, instead of cutting through it; for this insures extraction of a greater length of nerve and division of those branches that are given off in the sphenomaxillary fossa.

Experience has also taught me that the healthy lining membrane of the antrum shows strong resistance to infection from surgical wounds, and that a gauze drain is not necessary, but even harmful, when proper precautions are already taken for asepsis and arrest of hemorrhage before the cavity is closed. A strip of gauze left in the wound as a drain may lead to the formation of a fistula into the mouth and subsequent infection from that source. If any symptoms of infection within the cavity appeared in the course of healing, irrigation through the hiatus could be practised.

As but slight traumatism is inflicted by the operation, the inferior dental branch can be excised at the same sitting, as was demonstrated in the above cases. While neurectomy of this nerve by trephining the maxilla necessitates scarring the face, the scar is merely linear and in men is less noticeable or entirely hidden by the growth of the beard. The functions of the tongue and the muscles of mastication are not weakened when the nerve is cut at this point.

In conclusion, I desire to enter a plea in favor of the extra-cranial resection of the nerve trunks in cases of obstinate trifacial neuralgia, to be proposed as a test treatment always before such dangerous operations as are required for resection of the Gasserian ganglion are attempted. While we know that in many cases recurrence comes on within a few months or years after a peripheral operation has been done, and resection of the ganglion is a last resort, such is not necessarily the case, and permanent, or at least temporary, relief is obtained by this simpler and less dangerous method.

A CASE OF TIC DOULOUREUX, WITH SUCCESSFUL REMOVAL OF THE GASSERIAN GANGLION—WITH PHOTOGRAPH OF THE PATIENT.*

By HENRY T. WILLIAMS, M. D.,

of Rochester, N. Y.

Surgeon to Rochester City Hospital and St. Marys Hospital.

The history of the case is as follows:

Mrs. M. Housewife, 38 years of age, born in New York State. Has had three children, aged 10, 7 and 2 years; aside from two attacks of severe tonsillitis when she was 15 years of age, has been in good health up to the birth of her first child, when she had puerperal fever, confining her to bed for several weeks.

Family history is good; her father died of old age, mother is still alive and well, 2 brothers died in infancy and 2 brothers and 2 sisters are still living and in good health.

Her first attack of neuralgia occurred about 10 years ago; began about 2 months before birth of her first child; she suffered with severe neuralgia of right side of her face until after the birth of her child, when it disappeared for 18 months; she again became pregnant and the neuralgia returned and lasted nearly continuously until 1893; when she came to Rochester and was operated upon by Dr. J. M. Lee, who she states divided the nerves on the right side of her face (there is a scar about one and one-half inches long, extending from below the zygoma to near the angle of the jaw); this gave her relief for 4 months, but the pain again returned and she had difficulty in masticating her food, or even talking; every effort at moving her jaw

*Read at a meeting of the Rochester Academy of Medicine, April 10th, 1901.

causing excruciating pain; nearly all of her teeth were extracted, but it gave her no relief; in the fall of 1894, she was again operated upon by Dr. Lee, who I understand stated that he removed the superior maxillary ganglion, this gave her no relief whatever; in 1896, she was operated on in the same location, by another surgeon, who rephined the inferior maxillary bone, but this gave her no relief. In 1897 she again became pregnant and the pain became very much less and she was quite comfortable for 3 months, when the pain again returned with increased severity, so that she was confined to her bed most of the time and was unable to sleep or walk around or eat, except when under the influence of anodynes; could only open her mouth a very little way and could eat only soft food, and that with great difficulty, owing to the pain.



Patient with Tic Douleureux.

She came under my care and entered the City Hospital August 11th, 1899. At Dr. Roe's suggestion, I examined her nose and finding a deflected septum and a spur of bone, I removed the spur and straightened the septum; this gave her no relief at all and on August 30th, 1899, I made a curved incision with its convexity upward, after the House-Hartley method, in the temporal region above the zygoma, and after partly turning down the skin and muscle I chiseled through the skull with a small grooved chisel, following the line of incision outward with a strong bone elevator, the section of bone was removed by cracking it across the base with a few blows with hammer and chisel and the dura exposed, the section of bone remaining attached to the skin and muscle flap; the dura and brain were next separated by the finger from its attachment to the skull, the temporal speno lobe of the brain was lifted up by a long retractor and the nerves were divided; the bone was replaced and the skin flap united by catgut sutures; no relief being experienced, the pain returning as soon as the patient came out from the influence of the anesthetic, I again operated upon the patient, three days later, viz: on September 2, 1899. This time I opened up the previous incision and in order to make a more room, another flap was made posterior to the first and quite a little larger, and after the bone had been

chiseled through, the flap (including the bone), was turned up; this made a larger opening and the incision through the skin was an "S" shaped one, with the letter "S" lying on its face; one flap of bone being turned up and the other down. The dura and the temporal lobe of the brain were lifted up with long retractors; the layer of dura covering the Gasserian ganglia and superior and inferior maxillary division of the trifacial nerve was divided and turned either side exposing the nerves and ganglia; about one quarter of an inch of each nerve was resected, and the distal ends of the nerves were pushed through their foramina with a probe; the proximal ends of the nerves, with the Gasserian ganglia were scraped out with a small curette and a probe was passed into the Gasserian fissure and the fissure well scraped with it; during the operation the two pieces of bone removed, became loosened from the skin and muscle flaps and were found on the floor, they were picked up, and placed in salt solution for a while and were then replaced and the wound in the scalp sewed up with catgut. The operation took 1 hour. Primary union took place and patient left the hospital in 18 days, well. Patient was entirely free from pain and could open her mouth wide without pain as soon as she recovered from the anesthetic, and 4 days after the operation she was allowed to eat solid food, and experienced no pain. The last time I heard from her (which was several months after the operation), she was still well and free from pain.

DIAGNOSIS AND PROGNOSIS OF HEART DISEASE.*

By M. H. FUSSELL, M. D.,

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When your secretary asked me to address you this evening on the subject of Diagnosis and Prognosis of Heart Disease, I at once remembered an occurrence of my early medical life which has had much to do with my present view of heart lesions.

From 1885 to 1889 I had the great privilege of being the clerk of Professor Osler, in the Medical Dispensary of the University of Pennsylvania. Among my duties was the preparation of notes of dispensary cases for use in Dr. Pepper's clinics. On one occasion I wrote out and reported to Dr. Pepper the notes of a case of grave diabetes mellitus. After the history of the case came the physical signs. I had written "Heart's action rapid, but heart sounds normal." When the great clinician came to "Heart's sounds normal," he omitted the words, and examined the patient. He pointed out to the class the extreme weakness of the muscular element of the first sound, causing it to resemble closely the second sound in character. He laid much stress upon the fact that, because there was no murmur present, was no reason to believe that the heart itself was in a normal condition.

That one lecture by Prof. Pepper taught me what I had never before realized, a fact which I believe many general practitioners to-day do not realize, namely, that while heart murmurs are signs of cardiac lesions which are never to be ignored, the mere presence or absence of an adventitious heart sound is of relatively small value in the diagnosis or prognosis or treatment of heart disease.

In my observation of the heart cases I have had the opportunity of studying, it has appeared to me that no accurate diagnosis or prognosis and consequently no proper or efficient treatment can be undertaken in any lesion of the heart—indeed, in any disease—unless the observer has availed himself of the four cardinal principals of physical exam-

*Delivered before the Germantown Medical Society, May 13, 1901.

ination: Inspection, Palpation, Percussion and Auscultation. I fear that the latter means of arriving at a diagnosis of heart disease is the only one frequently used. How valuable it is when used in conjunction with the other helps and how little it can be depended upon when used alone shall be my endeavor in this evening's address.

Inspection.—By inspection I do not mean the causal view of the region of the apex beat of the heart, but a view of the entire body of the individual, his facies, the line of his peripheral vessels and the cardiac region. If the patient's face is anxious and pale or cyanosed, we may be well assured that the circulation is interfered with either by some extraneous cause or by some weakness in the heart muscle itself. An undue pulsation along the line of the great vessels means—a nervous condition, an anemia, an atheromatous condition of the vessels, or some grave heart lesion.

A diffuse wavy impulse seen over the cardiac area means an anemia, a nervous disturbance or cardiac dilatation.

Palpation.—Embracing not only the cardiac region, but the blood vessels, gives evidence as to the rapidity of the heart's action, its regularity, the presence or absence of a thrill over the cardiac region. The synchronous action of the heart and the arterial pulse must also be observed, and this is important for more than once it has fallen to my lot to observe a radial pulse of 60, regular, full and moderately strong in an individual whose heart was pulsating regularly 120 times to the minute. So weak was every other systole of the heart that only sixty were recognized by the finger on the wrist.

The condition of the peripheral vessels themselves is a most important element in diagnosis and prognosis, and can only be told by palpation or guessed at by inspection.

Percussion.—The area of cardiac dulness is a most valuable sign. The normal area of the cardiac dulness is certainly different within certain limitations to different equally competent observers. For myself, I place the normal area of deep cardiac dulness at the third interspace above, midsternum or left border of the sternum to the right, never farther to the right than mid sternum, and just inside of the mid clavicular line to the left. Variations from these lines, if greater, mean either hypertrophy dilatation, or displacement of the heart.

Auscultation.—It appears to me, as I have already stated, that the most valuable sign we get from auscultation is the condition of the heart muscle, as revealed by the character of the first and second sounds of the heart.

The familiar sounds you all remember, as demonstrated time out of memory of lub-dub, are not far wrong for normal heart sounds. The first, "lub," being made up of contraction of heart muscle, of impact of heart against the chest wall and of valve sound.

In cases of dilatation, of degeneration of the heart muscle, in some cases of anemia, the first loud, muscular sound disappears and leaves in extreme cases a mere valvular flap itself often inaudible. This I repeat again, is to me the most valuable single sign, for its appearance means some change in the heart itself, a dangerous condition. If the first sound, on

the other hand, is strong and full, it matters little for the time being whether a murmur is present or not.

Lastly, Murmurs—of which I shall speak later—are always most valuable signs of heart disease, because they frequently show the presence of a valvular lesion which will sooner or later lead to degeneration of the heart muscle.

It must never be forgotten, however, that murmurs so loud that they rival an organic lesion in intensity often are due to blood changes or some other condition entirely independent of the heart itself.

The following case will illustrate the fact well:

In my first year of practice I was called to see a girl of 16 years—pale, weak—with general edema, irregular pulse and loud murmurs over the body of the heart. I announced to the family that we had to deal with an organic heart disease, and that the anemia was the result of this disease. I fortunately put her upon Bland's pill. She promptly recovered, and with her regained color her heart murmurs disappeared. She is now, after 15 years, a buxom woman of 31, without a trace of heart lesions.

Of course, I have long since recognized that I treated a case of chlorosis, and that no heart lesion was present, but no amount of argument will convince the family that the patient did not have heart disease of which I cured her.

These remarks may appear to you extremely fundamental, and anything but original, but I am quite certain that it is only by a repeated application of these principles in every case that will save us from the practice of the digitalis or digitalin man who gives these drugs whenever he hears a heart murmur independently of the condition of the heart muscle, or every time he feels an irregular pulse independently of its cause. And it will save our patients from the untimely death which must come to many so treated.

Let us now concern ourselves with some of the specific heart lesions. It will not be possible for me to speak of the heart conditions of systemic states, which so closely resemble organic lesions of the heart itself, but I have decided to confine myself to those conditions in which the heart itself is organically affected.

Fibroid or Fatty Degeneration of the Heart.—(For present purposes one need not distinguish between the two.) In discussing these most important of all heart lesions, one which is easily recognized in its later stages, but constantly escapes detection in the vast majority of cases until the patient is in great danger of death if not entirely beyond hope of material betterment, the doctor, the family doctor, must bring into play the very essential physical examination for which I have been pleading. I say the family doctor, for it is to him the sufferer first applies with ailments which seem to him trifling. It is the doctor alone who can, if he takes the trouble and has the experience, recognize the first stages of the general fibroid change, of which I take it, the heart lesion is but one, though perhaps the most dangerous lesion, as it is certainly the lesion which gives rise to the most annoying symptoms. The history of such a case is usually as follows: An individual reaches thirty, forty or fifty years of age. He may be a man most exemplary in his habits, a man of

large business or professional interests, who works without ceasing from early morn until late at night, he eats hurriedly all his meals, which consist of anything his taste chooses, very likely taking considerable alcohol to strengthen him while never becoming intoxicated in the least degree. He may be an alcoholic who from early years has either been a drunkard, or, what is still more potent in causing his condition of general fibrosis, taking a number of drinks of spirit daily, frequently on an empty stomach; syphilis may have been contracted and be the cause of his symptoms. These symptoms are about as varied as the number of patients—in very early stages. Vertigo, annoying but not distressing, a tendency to shrink duty in an individual with ambition for work, a slight dyspnea on exertion, an occasional fluttering of the heart, a halt in the pulse, the patient passing proportionately more urine of lower specific gravity than normal.

Later in the stages of fuller or complete development there is distressing dyspnea with much vertigo, cardiac pain, much palpitation of the heart, inability to sustain any prolonged exertion. It is in the early stages when good may be done, by regulating the mode of living, if not by drugs, by the limitation of work and cutting down the amount of alcohol if not advising its total disuse.

The physical signs of such a condition are a pulse which is of high tension, which lingers long under the finger, and which may deceive the unwary by its semblance to a full, strong pulse originated by a strong heart, the arteries may or may not be atheromatous, depending upon the amount of degeneration. The apex beat instead of being forcible and strong, as should be by a pulse of good quality—is weak, may not even be felt with the patient lying down or may not be felt at all. The heart dulness is a little too great, extending somewhat further to the left than normal. The degree of this enlargement depending upon the amount of hypertrophy of the wall due to fibroid change or to degree of dilatation. The heart sounds are abnormal in that the first sound lacks much of its muscular force, and resembles much more closely a second sound. The second sound is distinctly accentuated at the aortic cartilage. In advanced cases the first sound is inaudible at the base of the heart and at the apex is a mere valvular tap, the second sound being often the louder and constantly mistaken for the first sound by the medical student. Usually the cardiac dulness in these advanced cases is too far to the right as well as to the left on account of the dilatation of the heart.

No murmurs are heard except in late stages, when the adventitious sound is due to dilatation or in some cases roughing of the aortic orifice or valve. It must always be remembered, however, that these murmurs are entirely secondary in importance to the valuable signs of dilatation. The urine is apt to contain albumin and perhaps a few casts. If it does, the case is looked upon often as one of Bright's disease simply, and is ill-treated.

My plea is to view these cases early, to observe the changes going on in the peripheral vessels and the heart wall, and endeavor to stop the process at least delay its deadly course.

I shall now briefly refer to cases of endocarditis which are the set of cases mostly termed heart dis-

ease, because they are essentially primary lesions of that organ, other organic changes being secondary to the heart lesion. In these cases I repeat at the risk of tautology the important signs are the condition of the muscle wall, rather than the murmurs which attract attention and are so interesting and instructive. It is of the utmost importance to the proper treatment of our patients that all endocardial murmurs shall be detected—for the reason that these murmurs are an index as to what is fairly certain to occur in the lifetime of the patient. I want to repeat what I have already said more than once, that the mere presence of a cardiac murmur is not an indication that the patient needs digitalis or other cardiac stimulants; such drugs should be used only when signs of dilatation and failing compensation appear.

It will be of value to consider the different valve lesions somewhat in detail, those occurring at the aortic orifice, and at the mitral orifice. Time will not permit me to speak of lesions of the right side nor of pericarditis.

The rules which I have laid down in speaking of fatty or fibroid degeneration are applicable here in the highest degree. We should always begin our observation by inspection, palpation and percussion, and round out our examination by auscultation.

The attractiveness of heart murmurs is so great that being once heard one is apt to think only of the murmur and not of the lesion in the heart which the valve condition has brought about. I think I have yet to direct a student to examine a heart who has not as his first act, taken out his stethoscope—listened anywhere over the body of the heart, if there was no murmur, sat down and said the heart was normal. Therefore, I plead for the order of examination which I have already stated.

Having then satisfied ourselves of the rapidity and regularity of the heart beat—of the presence or absence of a thrill, etc., and of the size of the heart, we auscult. A murmur may be heard at the aortic cartilage, which is conducted into the vessels of the neck. The murmur may be very slight, low pitched and scarcely heard or so loud that it drowns all the normal elements of the first sound. If it is not due to a blood change or functional cause, it means one or two things. Either there is a roughness of the aortic orifice or of one of the aortic valves *without stenosis* of the aortic opening; or it is due to true mechanical obstruction of the aortic orifice aortic stenosis. The first is a condition which may exist during the rest of the patient's life, and never cause any disturbance, or it may be due to the general fibroid change going on in the patient's system.

The second condition, that of aortic stenosis, is one of the gravest primary heart lesions. If the murmur is due to a simple roughing of the aortic orifice, the heart's action will be regular, full and forcible. The muscular element of the first sound unchanged, there will be no change in the second sound of the heart. The heart dulness will be normal. If, on the other hand, the lesion is due to actual stenosis of the orifice, the first sound of the heart may be unusually loud and strong, owing to the hypertrophy of the heart, the cardiac dulness

will be greatly increased to the left, the apex beat often being in the sixth interspace. The right side will be unchanged unless the case is so advanced that dilatation is taking place, when the area of cardiac dulness will be increased also to the right. The radial pulse will be small.

The vast majority of systolic murmurs which are heard at the aortic orifice are due simply to aortic roughening and not to any true valve change. They are often only a senile change, but may be of great prognostic value, as shown by the following case, of which I could quote duplicates:

A lady of good family was seen by me some eight years ago suffering from neurasthenia. Notes made at the time of the examination show that at that time her heart was perfectly normal. In the course of two or three years she developed a systolic murmur at the base of the heart. There was no change in the size of the heart nor in its rhythm for two or three years more. Two years before her death she developed a murmur in the mitral region, indicating a valve change there. At the end of another year she showed signs of cardiac failure and died in a few months thereafter of that condition.

In this case I am convinced that the murmur which developed first at the aortic cartilage was the first indication of a slowly developing endocarditis. Since that time I have been most suspicious of such murmurs occurring under observation in an otherwise normal individual.

Usually, however, I repeat, a murmur heard at this region is indicative usually of some atheromatous change rather than an endocarditis and does not call for treatment unless other physical signs are present.

Another change at the aortic orifice is that of *aortic regurgitation*. This condition is much more common than aortic stenosis, and when fully developed there can be no question as to the condition present.

There is great hypertrophy of the left ventricle. The apex beat is diffuse, and felt often in the sixth interspace outside of nipple line. The right side of the heart is but little changed unless dilatation is taking place, when the line of cardiac dulness extends to the right of the sternum. There is a long drawn usually high pitched murmur with the diastole, which is conducted down the left edge of the sternum toward the xyphoid cartilage. The murmur is best heard often at the left third interspace near the sternal line. The peripheral vessels pulsate markedly, and there is usually a water hammer pulse. That is a quick full pulse of low tension.

Such cases are, as I say, usually easily diagnosed. They are to be distinguished principally from aneurysm of the arch of the aorta, in which condition there may also be a diastolic murmur. There is usually, however, an abnormal dulness under the sternum in aneurysm. The murmur in aneurysm, I believe, is best conducted down the *right* side of the sternum instead of the left. There is relatively little hypertrophy of the heart. In this condition again I think a diagnosis is of the utmost importance that the habits of the patient may be so regulated that he may establish a proper compensation and not bring about a dilatation of the heart instead of a hypertrophy, which is life-saving. It is only when a dilatation is taking place as indicated by a failure in the strength of the first sound by a wavy impulse, by a dulness extending to the right of the sternum, that drug treatment will be indicated.

As you all know, a patient may live for years with such a condition, all that is necessary being a well-regulated life. To give digitalis because the murmur exists is to cause or hasten harm.

Lesions at the mitral area are of two sorts. There is either a stenosis of the orifice preventing the blood from freely entering the left ventricle from the auricle, or there is some lesion of the valve or orifice which allows the blood to flow back into the auricle instead of onward into the aorta.

In mitral regurgitation of any degree of severity there is hypertrophy of the heart to the left, an accentuated pulmonary second sound, and a systolic murmur of varying pitch conducted into the axilla.

Here, as in all other forms of cardiac disease, the prognosis as to probable length of life and as to the necessity of immediate treatment depends largely upon the character of the first sound and the dilatation of the heart—its size compared with its force. No immediate danger is to be looked for if the heart is regular, the sound good and strong. However, if a murmur which has been loud, begins to disappear, it is often the first danger sign, and calls for immediate interference. I have at present an old lady under treatment for colicolithiasis, who has a mitral regurgitation. When she is in good condition, the murmur is loud and well heard. Immediately she begins to fail, the murmur becomes less audible, until it can scarcely be heard.

In mitral stenosis we have the lesion which, to my mind, is the most difficult to treat in the entire category of cardiac valvular lesions when the heart begins to fail. Here there is hypertrophy of the heart upward and to the right. The right border of heart dulness is to the right border of the sternum or beyond it. The upper border is to the upper border of the third rib or even to the second rib. The left side is but little out of normal line. There may be a marked thrill felt just before the systole, a presystolic thrill. On auscultation there is heard a rough, short, loud murmur just in the region of the apex beat or above it, heard just before the first sound, that is presystolic in time. The first sound is much accentuated, being loud and sharp. The second pulmonary sound is likewise accentuated.

Attention to the peculiar loud accentuated character of the first sound in connection with the peculiar shape of the heart will lead one to suspect a mitral stenosis whether there is a murmur heard or not. And such a diagnosis is quite within the range of possibility, as shown by the following case:

I was called to see a lady suffering with a furious hematemesis. By exclusion and on the grounds of a heart with the right border far too greatly out, the upper border much too high and the peculiar loud valvular first sound which was about the only sign given by auscultation, I made a diagnosis of mitral stenosis as the cause of the bleeding. This was confirmed later by the reestablishment of compensation and the appearance of a loud presystolic murmur.

One reason why this presystolic murmur is so often mistaken for anything else than a presystolic murmur is the *name* presystolic. Certainly the name is confusing. If one will remember, that there are but two sorts of murmurs—systolic and diastolic, and that the murmur of mitral stenosis is *diastolic*, occurring late in diastole, just before the first sound, as distinguished from the murmur of aortic regurgi-

tation which lasts through the whole of diastole, I think there would be less confusion.

The lesion of mitral stenosis is the one which when failure of compensation begins gives rise to the distressing dyspnea—pulmonary edema, hemorrhages from the various mucous membranes, irregular pulse, enlargement of the liver. The seriousness of these symptoms, the bad prognosis when they exist, makes these to me such hopeless cases.

One parting word in regard to the murmurs which exist in this valvular division: A loud, strong murmur, as a rule, means a heart which is well compensated. A murmur loud when the case is first seen and the heart of normal size, with a strong first sound, and then gradually becoming more faint, means a failing heart.

An irregular heart without a murmur, with much increase of its area of dulness, might readily be mistaken for a fatty or fibroid heart. When the action becomes slower and stronger, however, and a murmur makes its appearance, there is every reason to expect a primary valvular lesion. On the other hand, some of the loudest murmurs make their appearance in a heart much dilated as the result of over-strain and still free from valve lesion. Such murmurs invariably disappear as the heart regains its power.

To conclude: The diagnosis of a cardiac lesion must be based upon the size of the heart—upon its rhythm—upon the character of the first sound, in some cases upon the presence or absence of a murmur. A heart may be much damaged and give no murmur. An extremely loud murmur may be present and yet the heart be fully competent.

GENERAL REMARKS ON PAINFUL AFFECTIONS OF THE FEET.*

By FRANK E. PECKHAM, M. D.

of Providence, R. I.,

Orthopedic Surgeon to the Rhode Island Hospital.

The treatment of painful affections of the feet has been pretty thoroughly elaborated especially as regards its mechanical aspect. Good orthopedic shoes can now be obtained with very little difficulty in most cities. The gymnastic exercises, which are particularly beneficial, have been demonstrated; many cases with contracted tendo Achillis can now be markedly improved by gradual stretching with a Shaffer apparatus, and every orthopedic surgeon has his own particular method of mechanically supporting the arch which is so necessary in a large proportion of the cases. In the effort to increase the efficiency of treatment by mechanical means, the general treatment and the treatment of the patient is often overlooked, and I would now emphasize the other measures, which, although mentioned in writings on the subject, are perhaps not given the importance they deserve. There are many cases of flat feet which still continue to be painful, even after all the measures referred to have been faithfully carried out, and these are the cases which demand something in addition to the routine treatment. A foot that has borne weight all day is hot, tender and painful, and all motion limited. A few minutes of

massage is extremely soothing to such a foot. The pain is relieved, the foot is rendered much more flexible, and the gymnastic work can then be done with comfort. If heat is applied just before the massage, the result is even better, and heat alone without massage is of the greatest value just preceding the gymnastic exercises. In hospital cases I have used the hot air oven in almost every painful case with very much benefit. It has also been of great value in cases of contracted Achilles tendons, where gradual stretching was done, the tendon yielding much more and much easier after an hour in the hot air oven. With patients in private practice, to save expense, I have substituted a pail of hot water for the dry heat with very good results. I would say also that the massage in no case has been done by a professional, but either by the patient himself or some member of the household who has been taught to do it. One word regarding gymnastic work. The tip toe exercise is recommended in about every orthopedic work printed, and when in the acute stage of flat foot I attempted this exercise. When the patient goes upward on to the toes and when he is letting himself down again, the pain and tenderness is increased and the pronation aggravated. The exercises which were most beneficial to me and which have given the most satisfaction in practice are those recommended by Dr. Whitman, and they are better done with the patient sitting and the legs resting across a chair or stool. In a varied practice many cases present themselves which refuse to yield to any of the above methods, and then the physician is compelled to tax his resources. Several cases like the following have presented themselves:

CASE I.—A man in middle life, compelled to be on his feet all day and every day, began to have some pain referred to the arch and dorsum of the foot. This became more and more troublesome until he finally sought advice. The patient was a pretty stout man, the arches were somewhat flattened and a slight amount of pronation was present. Motion in flexion and extension was normal but the inversion was slightly limited: A diagnosis of mild flat foot was made and the treatment consisted of orthopedic shoes, supports for the arches, heat to be applied every night, followed immediately by gymnastic work. At first it was thought that there was some improvement, but apparently after getting used to the treatment he could not make out any alleviation of symptoms, and thought if anything they were getting worse. The pain was extending up the leg and was very much worse at night, interfering with his sleep quite a little. Specific disease was denied, but after some time spent in fussing with the mechanical supports, antispecific (mixed) treatment was begun. There was a marked improvement in the first week, and at the end of a month he considered himself much better and discarded the mechanical supports. The orthopedic shoes were discontinued after the single pair and the gymnastic exercises. I am afraid were very much slighted but he continued to take the medicine quite faithfully for about 6 months when he ceased to report. At that time there was no trouble whatever and he considered himself well.

CASE II.—A girl about 14 or 15 years of age, who had been working in the mill very steadily until her feet became so painful that she gave up her work and sought medical advice. There was some flattening of the arch and some slight pronation. The pain was referred to the dorsum and extended down to the 3d and 4th toes. Pressure revealed tenderness along the dorsum of the foot and over the ends of the metatarsals. The pain in this case was much worse at night, interfering with sleep. No history of specific disease was obtainable and none suspected. The patient was sent into the hospital and the treatment was absolute rest in bed, daily hot air baths and gymnastic work. There was very little improvement in the symp-

*Read before the American Orthopedic Association, at Niagara Falls, June, 1901.

toms even after 2 or 3 weeks. As in the other case specific (mixed) treatment was then begun with immediate improvement. She was gotten up with orthopedic shoes applied and exercises continued, but the important thing was the IIg and the KI. She ceased to report after 3 or 4 months, but at that time was apparently all right.

There is another class of cases in which I have only seen three.

CASE III.—A man past 50 years of age was referred to me for hot air treatment on account of a very painful foot. Examination revealed a fairly good arch. Motion in all four directions could be made but it caused some pain. The pain was referred to the dorsum of the foot extending down to the 3d and 4th toes. At times it would extend up the leg. The foot was tender to the touch and he was already wearing very wide shoes so that they would not press on the foot anywhere. Flat foot was excluded but it was impossible to completely exclude metatarsalgia. There was no rheumatic history and specific disease was denied. As he was sent to me to be baked I gave him a hot air bath, which did not seem to do him any particular good. Two or three days later, when he returned, he happened to tell me that he was very thirsty most of the time and drank a great deal of water and consequently passed a great deal of urine. An examination of the urine then and there showed a large amount of sugar present. It is needless to say he did not get a second hot air bath. A year or more later I heard from one of his neighbors that the two toes affected gradually turned black and dropped off.

CASE IV.—A man of about 30 or 35 years of age, a weaver, came to the Out-Patient Department of the Rhode Island Hospital complaining of painful feet. He was of necessity on his feet all day. Examination revealed no especial flattening of the arch and all motions were good. On questioning he acknowledged being thirsty and drinking a great deal of water. The urine showed a large amount of sugar. The patient was referred to the Medical Department and never returned for treatment.

CASE V.—A woman, about 38, consulted me on account of painful feet. The feet were so tender that she was practically unable to wear shoes. There was no particular area to which pain was referred, but rather there was a condition of tenderness all over the foot which was very much aggravated by contact with shoe or stocking. Although the arch was not as high perhaps as the average, yet no especial flattening was made out. Further questioning showed that this patient was drinking large quantities of water, was passing large quantities of urine and was rapidly losing flesh. It was found also that large quantities of sugar were being ingested daily, a tablespoonful being used to sweeten each cup of tea, and many cups taken every day. In many other ways also an enormous amount of sugar was used. Examination of urine showed it to be heavily loaded with sugar. No treatment was directed to the painful feet but the ingestion of sugar was stopped in every possible way, the appropriate remedies prescribed, and a marked improvement in the foot symptoms, as well as other general symptoms, followed almost immediately.

REPORT OF A CASE OF RAYNAUD'S DISEASE.

By BENJAMIN F. LYLE, M.D., and JOHN E. GREIWE, M.D.

of Cincinnati, O.

The following case is reported on account of its rarity, and because a fatal termination is so infrequent as to have rendered its pathological nature only problematical.

E. L., male, white, aged 35 years, married, a native of Austria, lived in this city twelve years, occupation tailor, duration of illness indefinite. Was admitted to Cincinnati Branch Hospital for Consumptives, May 5th, died May 30th, 1900.

Father died of acute rheumatism, mother of puerperal fever. Has two brothers and two sisters, all in good health. Patient had not been sick since childhood. Was intemperate and denied having syphilis. From his friends I learn that his mental equilibrium was unsteady for several years past; previous to that time he was in good mental and physical condition and followed his occupation industriously.

At times, particularly when inspired by the effects of al-

cohol, he would entertain his friends with accounts of his future grandeur when his prospective, though imaginary legacy would arrive. These occasions were frequently followed by a state of moroseness and a desire to withdraw from the company of his friends.

Shortly before his demeanor became noticeable he married. His wife started him in business; but his indifference to work and increasing fondness for drink compelled her in a short time to close the shop. He was then set adrift. Fortunately, he fell in with a Good Samaritan who permitted him to lodge in his shop and furnished him with food. His repugnance to the presence of other people finally became so marked that he could not be persuaded to leave the shop. He never seemed sick, but complained of rheumatism in the legs. This condition interfered some with his ability to walk particularly when the pavements were slippery. His friends also state that he always complained of feeling cold, which sensation was most noticeable in the legs, and he would enjoy heat that would be unsufferable to others. He never had difficulty in walking in the dark, nor did his friends learn of the condition of his feet; although he was not able to walk when admitted to the hospital.

Patient when admitted was weak and anemic and very nervous and irritable. His memory seemed also to be quite defective.

Temperature, 98.6; pulse, 120; respirations, 38.

Tendon reflexes normal.

Examination of lungs showed slight consolidation of both apices.

Urinalysis: Amount, 1000 c. c.

Color, amber, spec. gravity, 1018, reaction, acid; urea, 4.2%; centrifuge examination: Chlorides, 9%; phosphates, 5%; sulphates, 1.2%; albumen, 0; sugar, 0.

The trouble in the feet was first noticed May 2, as an erythema of the toes of the left foot; the next morning this was replaced by cyanosis; but in the evening it again became red and blisters formed on the toes. He complained of no pain except when attempting to walk.

May 4, the tip of the large toe became black. He was admitted to the hospital on May 5. The left foot was then edematous and cyanotic, except the toes which were of a purple color. The anterior half of the right foot was swollen and cyanotic. The toes of the left foot were devoid of sensation. The temperature of the feet, hands, ears and tip of the nose was materially reduced.

On the upper lip was a gangrenous spot about the size of a dime.

May 7, the skin of both feet became more cyanotic, the toes of the left being purple. Blisters had also formed on the toes and soles of both feet.

May 10, discoloration of the feet less noticeable, toes more sensitive, two ulcers were now seen on skin over fibula of left leg each the size of a half dollar. Two gangrenous spots were also found on the scalp each the size of a dime. The fingers of the left hand and elbow had become cyanotic.

From this time until death occurred, the local conditions did not change materially, though the patient seemed very nervous and irritable and at times refused food, making it necessary to employ the stomach tube.

Death was due to exhaustion and edema of the lungs.

Post-mortem examination showed a fibroid condition of the apices of both lungs, edema of the remaining portions, a large quantity of pericardial fluid, and a fatty liver.

The pathological changes in the cord and extremities will be considered by Dr. Greiwe.

The above case was examined by Dr. F. W. Langdon some days before death. He concurred in the diagnosis and could find no trace of any disease of the peripheral nerves or of the spinal cord.

Pathological Report, by Dr. Greiwe.

It is often said, in many obscure affections, that the pathologist and his findings are the court of last resort. In the subject before us, however, we certainly cannot lay claim to any such high position. Owing to the nature of the trouble in most cases, at least so far as our present knowledge goes, the clinician will have to bear the greater burden of

proof. Authentic cases of Raynaud's disease rarely reach the hands of the pathologist. As a matter of fact, we can sum up the cases examined post-mortem on the fingers of one hand. It is equally true that the great majority of cases which have reached the hands of the pathologist up to the present time, in spite of the fact that the clinical diagnosis of Raynaud's disease had been made, post-mortem findings have demonstrated lesions of quite a different nature.

The greatest difficulty in the matter before us, is to say just where to draw the line, clinically and pathologically, between Raynaud's disease and the many other affections which simulate this trouble. Raynaud himself, in 1862, defined it as a disease of the *extremities*, in which there was

- (1) Local syncope.
- (2) Local asphyxia.
- (3) Symmetrical gangrene.

If my interpretation of this definition is correct, we are to look upon such cases as the same disease with only a difference in degree.

Since the time of Raynaud, many important contributions have been added to our knowledge of the clinical manifestations of the disease, but comparatively little has been added to our knowledge of the pathology of this affection. In my opinion one important step, both from a clinical and from a pathological point of view, has been made, viz.: that we can still retain the idea that Raynaud's disease is a symmetrical disease, but that the manifestations are *by no means confined to the extremities*.

In the second place, I believe that the conditions which I have found in this particular instance support the above view. Furthermore, although we have an involvement of the large arteries, I find the essential lesion in the smaller arteries, i. e., in the arterioles.

The appearances of the extremities, and the gangrenous patches on the trunk, have already been described in the clinical report of the case.

I shall confine my attention to the microscopic conditions found in the neighborhood of the gangrenous areas, to the condition of the blood vessels and of the peripheral nerves, and to the lesions found in the spinal cord.

In the specimen taken from the gluteal region in the immediate neighborhood of one of these gangrenous masses, I find a considerable dilatation of the veins, the vessels being crowded with blood. The small arteries are very narrow, and surrounding the arteries, I find a decided small round-celled infiltration. This round-celled infiltration can be clearly traced along the side of the vessel wherever it happens to be cut in its long diameter. In all probability, we are to look upon these changes as those of an inflammatory nature—as an effort of defence and repair—and consequently, we have here nothing of a specific nature. We would naturally expect such a state of affairs, in any area, where a reaction is taking place.

So far as I have been able to discover, the walls of the veins have undergone no change except that of dilatation. There is no change in the internal coat.

As to the small arteries, while some are normal in appearance, others have undergone a change of the intima. There is a distinct proliferation of the endothelial cells. This state of proliferation of the endothelial lining is well marked in many of the smaller arteries. It is best seen in the smaller arteries of the pia-mater of the spinal cord, and even in the smaller arteries of the spinal cord. In no instance have I found a complete obliteration of the lumen of the vessel.

The larger arteries are for the most part normal in appearance. In one instance only, sections of the anterior tibial artery show a beginning localized endarteritis, occupying about one-seventh of the circumference of the artery. In this area I find a distinct proliferation of the endothelium, causing a decided projection into the lumen of the vessel. Beneath the proliferated endothelium there is a decided round celled infiltration in the intima.

Although I find such a change in one of the larger blood vessels, it is not sufficient to interfere seriously with the circulation through the artery.

The peripheral nerves have undergone no change.

The most marked changes in this particular case are those which I find in the spinal cord.

Curiously, the changes are bilateral, symmetrical, and since this condition is, so far as my knowledge goes, found for the first time in the history of a true case of Raynaud's disease, I wish to call special attention to the changes here recorded.

Sections have been made at all levels of the cord. The pia mater of the spinal cord is for the most part normal. Here and there I find a slight thickening and a small round-celled infiltration in the meshes of the pia. The arteries contained within the pia, have undergone pathological changes. The larger vessels show very slight alteration. The smaller vessels (arterioles) show a proliferation of the endothelial cells and a consequent narrowing of the lumen. I find no definite change in the media or in the adventitia, but there seems to be an unusual amount of fibrous tissue immediately surrounding the arteries.

The veins are practically in the same condition of dilatation such as was found in the skin and in the subcutaneous tissue adjacent to one of the gangrenous patches. I find however, that the dilatation of the veins is most marked in the grey matter of the spinal cord, in the lumbar region. I am well aware that similar conditions are frequently found in the cord under otherwise normal circumstances. For this reason, I lay no special weight upon this finding. There is a possibility however, that there is some connection between this rather excessive dilatation and the sclerotic changes in the white substance.

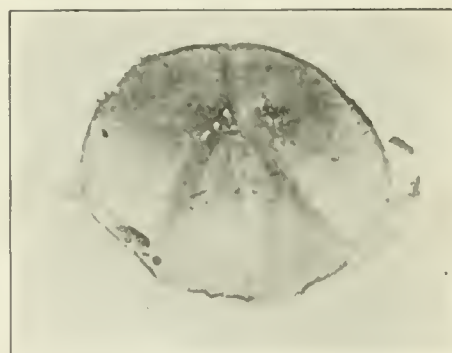


FIGURE 1.—Degeneration in the lateral columns and in the columns of Goll

Excepting this dilatation of the veins in the grey matter surrounding the central canal in the lumbar region, I find that this portion (grey matter) of the cord is normal in appearance throughout. The motor cells in the anterior horns of the cord, are well preserved, they stain well and in no specimen have I been able to discover any deviation from the normal.

In the photographs distinct changes are evident in the white substance of the cord. The sclerosis is bilateral and more or less symmetrical. On the right side of the cord, it is as a rule somewhat more marked and covers a larger area than on the left side.

It will be noticed also, that the changes in the lateral columns are not strictly confined to any of the well-known tracts of fibres, such as we have in a systemic degeneration. Besides the sclerosis of the lateral columns, I find that the posterior columns are also involved, and curiously, in this part of the cord the changes are pretty uniformly confined to the columns of Goll, whereas the columns of Burdach are but very little affected. Indeed, from a macroscopic examination of the stained specimens, one would be led to believe that only the columns of Goll were involved. Microscopically, I notice very slight

changes of a sclerotic character in the columns of Burdach. These changes, however, are not uniform in the last named columns throughout the length of the cord. The anterior columns are not at all affected, and in every specimen, the color with the Pal stain is well brought out. The sclerosis of the lateral columns is found in the lumbar, in the dorsal and in the cervical regions. The most marked alteration is found in the dorsal portion of the cord.

The changes are, I think, well defined in the photographs, and they extend from the periphery of the cord to the horns of the gray matter. Microscopically, thick strands of fibrous tissue can be traced from the pia into the white substance of the cord, compressing and destroying the longitudinal fibres. Wherever the sclerosis is best established, there can also be found slight thickening of the pia, and there, too, I find the condition of endarteritis most marked.

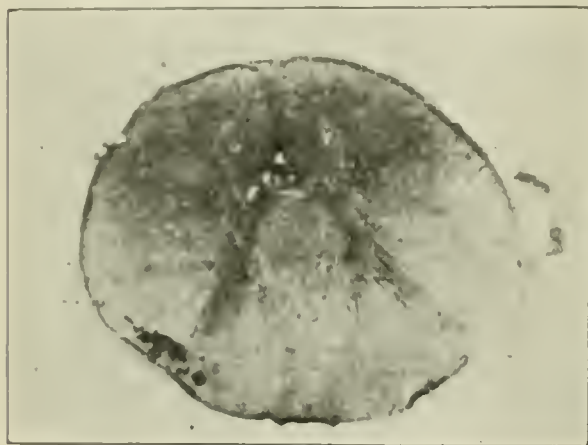


FIGURE 2.—Degeneration in both lateral and both posterior columns.

The photographs which accompany this paper explain the sclerosis found in the spinal cord.

The changes here recorded in the microscopic examination, are certainly interesting in view of the fact that we have always presumed in Raynaud's disease, that the disease is one of nervous origin. Whether the alterations found in the spinal cord in this case are to be looked upon in the nature of cause or effect, is a question which I think can easily be answered. To my own mind, they do not stand in the relation of cause. We know of many instances of more marked sclerosis without any evidence of Raynaud's disease. We cannot explain the trophic lesions of this disease by the changes which I have here recorded. I am inclined to the belief that the changes in the spinal cord are the result of changes in the arteries themselves, and that we have here only another illustration of degeneration resulting from changes in the nutrition of the parts. Just as we may and do have various disturbances resulting from a change in the small arteries of the extremities, so in this case we have changes in an internal organ.

In support of this view, I should like to refer to an undisputed case of Raynaud's disease, reported by Dr. D. Goldschmidt: *Gangrène Symétrique et Sclérodermique* *Revue de Médecine*, 1. VII., 1887.

The case mentioned here was certainly one of Raynaud's disease. The autopsy was conducted by Prof. von Recklinghausen. For a complete history and for a full report of the autopsy, I refer the reader to the original article.

The points of special interest to me are that von Recklinghausen reports a distinct endarteritis of the smaller vessels, and a change (hyaline degeneration) in the walls of the smaller veins. Furthermore, he finds necrosis and sclerosis in different parts of the skin of the extremities, and sclerotic changes in the lungs, i. e., small areas of sclerosis surrounded by hyperemia. These sclerotic areas,

small in their dimensions, were found scattered throughout both lungs. Von Recklinghausen, in his report, calls special attention to these changes in the lungs, and he is inclined to look upon them as evidence of a change similar in character to those which he found in the skin of the extremities.

In view of these facts, I believe that we have every reason to accept the view, that the changes which I report in the spinal cord are of the same kind which von Recklinghausen found in the lungs, and, consequently, they are to be looked upon as the effects of Raynaud's disease, which is a disease of blood vessels.

If such a view can be maintained, we can no longer look upon Raynaud's disease as a disease of the extremities, but rather a disease of the *extremities of arteries*, and that we may, as a consequence, have degenerations, not only in the extremities, but in the *internal organs* as well.

In further support of this view, certain clinical facts which have been developed in recent years in connection with Raynaud's disease, may be cited. Clinically, it is now well known that during the paroxysms which occur in this affection, there is not only a narrowing of the lumen of the larger arteries, but distinct changes in the calibre of the vessels in the *fundus oculi* have repeatedly been observed.

For a complete reference to the literature on this subject, I refer to an exceedingly interesting and instructive article on Raynaud's disease, by Thomas Barlow, in "A System of Medicine," vol. VII., edited by Thomas Clifford Allbutt. From the very limited number of cases which have reached the hands of the pathologists, it would certainly be unwise for us to draw any very general and sweeping conclusions. We certainly have need for further observation in this particular direction.

In view of our knowledge of the clinical manifestations of Raynaud's disease, it is evident that such pathological changes as reported in this case, and in the case so carefully examined by von Recklinghausen, are the exception and not the rule. We know that in the great majority of cases the changes in the circulatory apparatus are paroxysmal in character, brought about by some temporary condition, which allows of changes in the peripheral circulation.

The influence of great excitement, of anger, and, furthermore, the beneficial effect of hypnotism, are well illustrated in an article by Dr. Paul Tesdorf:

Beitrag zur Lehre von der Symmetrischen Gangrène.

Such cases are obviously more frequent in literature than the case which has here been presented.

I am led to the conclusion, therefore, that we have, in all probability, two classes of cases:

(1) Those cases in which the exciting cause acts temporarily, and in which, with the cessation of the cause, the symptoms likewise disappear.

(2) Those cases in which the cause (as yet of an unknown character) acts upon the peripheral vessels and causes changes in the calibre of the vessels, by a proliferation of the endothelium.

If any conclusion seems justifiable, it is this, that Raynaud's disease may show lesions, not only of the extremities, but serious changes may occur in the internal organs as well.

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Cyto-diagnosis.—The discovery of the different cellular elements in the cerebro-spinal fluid obtained by lumbar puncture has lately become a means of diagnosing various nervous diseases. Numerous reports upon this method of cyto-diagnosis have been made before the Medical Society of the Paris Hospitals. The first communications were made October 17, 1900, by Widal and his assistants, Sicard and Ravaut. Monod (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, 1901, No. 2) examined the cerebro-spinal fluid of 50 different nervous patients, finding leukocytosis in locomotor ataxia and general paralysis. No cellular elements were found in hemiplegia, alcoholism, peripheral neuritis, or hysteria. Widal, Sicard and Ravaut (*Ibid*, 1901, No. 2) found that the leukocytes seen in tuberculous meningitis were mainly lymphocytes; while in epidemic cerebro-spinal meningitis only polynuclear leukocytes occurred. This was confirmed by Chauffard (*Ibid*, 1901, No. 11) and Boinet and Raybaud (*Ibid*, 1901, No. 19). In general paralysis and tabes they found abundant lymphocytes. They also failed to find cellular elements in typhoid fever, paralysis agitans, chronic chorea, delirium tremens, progressive muscular atrophy or hemiplegia. Sicard and Monod (*Ibid*, 1901, No. 2) found lymphocytes only in syphilitic meningomyelitis. Widal (*Ibid*, 1901, No. 2) also found lymphocytes mainly in meningomyelitis, both when syphilitic and when due to typhoid fever. Nageotte (*Ibid*, 1901, No. 3) believes that in syphilitic meningomyelitis mononuclear leukocytes predominate in the cerebro-spinal fluid, while in non-specific cases, the majority of the cellular elements seen are polynuclear leukocytes. Labbé and Castaigne (*Ibid*, 1901, No. 12) discovered that the polynuclear leukocytes seen in epidemic cerebro-spinal meningitis disappear as the patient recovers. Sicard and Brécy (*Ibid*, 1901, No. 13) report a case of "walking" epidemic cerebro-spinal meningitis, in which polynuclear leukocytes were found during the very acute stage, mononuclear lymphocytes during the sub-acute chronic stage. In this case the osmotic tension rose from 0.54 early in the disease to 0.60 near recovery. Babinski and Charpentier (*Ibid*,

1901, No. 17) found marked lymphocytosis in the cerebro-spinal fluid in tabes of specific origin. Babinski and Nageotte (*Ibid*, 1901, No. 18) report the results of 120 cases of different nervous diseases examined. A "walking" case of epidemic cerebro-spinal meningitis was diagnosed from the polynuclear leukocytes found by lumbar puncture. Lymphocytosis was found in tabes and general paralysis. Lymphocytosis seen in the cerebro-spinal fluid from a woman whose condition had been diagnosed alcoholic polynuritis, showed that the true condition might be tabes. The cerebro-spinal fluid was normal in hysteria, neurasthenia, brain tumor, hemiplegia, paraplegia, chorea, epilepsy, etc. They conclude that a pronounced lymphocytosis is always a sign of diffuse syphilitic lesions, and is found early. Joffroy (*Ibid*, 1901, No. 18) insists upon frequent puncture, as the conditions found change rapidly. Dupré and Devaux (*Ibid*, 1901, No. 20) also found lymphocytosis in general paralysis, as did Siglas, Nageotte and Joffroy (*Ibid*, 1901, No. 20). The results in senile dementia and melancholia were negative. They believe that the cellular elements found in the cerebro-spinal fluid show the existence and the intensity of meningeal reaction. Widal (*Ibid*, 1901, No. 20) considers lymphocytosis a sign of a chronic lesion of the meninges. It is not present with meningismus. Souques and Quiserne (*Ibid*, 1901, No. 22) report a fatal case of tuberculous meningitis in which lumbar punctures showed a continually increasing number of lymphocytes, and low osmotic tension, first 0.51, later 0.55. Cerebro-spinal fluid injected into rabbits caused tuberculosis. The diagnosis was made from the examination of the cerebro-spinal fluid. Bourey (*Ibid*, 1901, No. 22) and Faisans (*Ibid*, 1901, No. 23) reported similar cases, settled by cyto-diagnosis. Laignel-Lavastine (*Ibid*, 1901, No. 22) found that leukocytosis exists early in general paralysis; that when cachexia develops, the number of leukocytes varies; that three-quarters of the leukocytes found are lymphocytes; and that when many polynuclear leukocytes are found with lymphocytosis, in tuberculous meningitis, meningeal suppuration has occurred. He also found that, while lumbar injections of cocain, for sciatica or the gastric crises of tabes,

may produce temporary amelioration, they also cause leukocytosis, from the meningeal irritation produced by the puncture. Achard and Lanbry (*Ibid*, 1901, No. 23) report a case of supposed tuberculous meningitis, in the cerebro-spinal fluid of which a moderate lymphocytosis occurred. Autopsy revealed a cerebellar tumor, however. They believe that for an exact diagnosis, the number of leukocytes must always be counted. Cyto-diagnosis has also been used in herpes zoster. Brissaud and Sicard (*Ibid*, 1901, No. 10) found many mononuclear leukocytes and decreased osmotic tension. The French physicians are still at work collecting statistics which they hope will lead to yet more important general conclusions.

What Koch Really Said.—There seems to be some confusion, both in the professional and in the lay mind, as to what Professor Koch intended to teach in his recent address. A restatement of his position is not undesirable—especially with reference to possible interpretations of his remarks. Such a restatement is admirably made, with running criticisms, in a recent circular issued by Veterinary Surgeon Gresswell, who is Chairman of the Sanitary Committee of the National Live Stock Association. We abstract his main conclusions.

Dr. Koch failed in nineteen cases to convey human tuberculosis to bovines, but in no instance failed to convey bovine tuberculosis to bovines in a similar manner. He had not attempted, for obvious reasons, to convey either bovine or human tuberculosis to human subjects. There is not on record a case of experimental inoculation of a human being with tuberculosis, either bovine or human (although, as Dr. Leonard Pearson pointed out recently in this *Journal*, there have been a few accidental cases of inoculation from cattle). Although there is very suspicious evidence of the conveyance of both human and bovine tuberculosis to man, there is no absolute proof of one more than the other. In other words, the proof of contagion from man to man is no better than from bovine to man. It therefore seems that the only *positive* result obtained by Koch was that bovine tuberculosis is communicable to bovines. This seems rather a narrow ground upon which to build a great superstructure of doctrine and practice. Moreover, as Surgeon Gresswell points out, bovine tuberculosis is communicable to other animals, just as is human tuberculosis. The dog, sheep, cat and monkey have been inoculated with the bovine bacillus.

It is thus seen that Koch advances no positive proof that bovine tuberculosis is not communicable to man. He simply infers that as bovines cannot be infected with the human tubercle bacillus, therefore the converse is true, i.e., that man cannot be infected

from cattle. His inference that bovine tuberculosis is not communicable to man because so few cases of direct intestinal infection occur, is a weak one when it is recalled that intestinal disorders in children may be caused by the toxins in milk as well as by the bacilli themselves. It is true, however, as veterinarians have observed, that calves suckled by tuberculous cows are prone to die of mesenteric tuberculosis. The bovine bacillus is well known to be more virulent than the human form, and this fact may account for the greater facility of inoculating with it. It is nevertheless true that in parasitic life those parasites inhabiting one species may be unable to perpetuate themselves in animals of a different species.

It is noteworthy that this circular is issued by an official of the National Live Stock Association, and is an appeal for caution against the hasty or premature adoption of Koch's views.

In conclusion, we desire to point out as our own contribution to this discussion that Koch's experiments on swine seem to prove mainly that bovine tuberculosis is more virulent than human tuberculosis for these animals. This is only additional proof that the tubercle bacillus, taken from the cow, is the most virulent of all forms, and therefore most to be dreaded. May not this apply in the case of man as well as in the case of swine?

The Open-Air Treatment of Phthisis.—The danger of adopting "fads" in therapeutics is never an imaginary one, and tuberculosis is especially exposed at present to this risk. The open-air treatment, however, is so well vouched for, and is so in accord with reason and experience, that we may really believe it constitutes an advance in therapy. Dr. Hector Mackenzie, of London, is one of the firmest advocates of this plan, and has just published his views in the July number of the *Practitioner*. Dr. Mackenzie argues that an open-air treatment should be what its name implies—consequently he advises that tuberculous patients be kept in the open air during sunshine and storm, during heat and cold, during day and night. His most striking cases were kept on an open balcony at St. Thomas Hospital for months. And all this, it is to be remembered, was done during the changes and inclemencies of a London autumn and winter. A patient, for instance, with a tuberculous cavity in the right upper lobe, with hemoptysis, fever and rapid emaciation (a patient, in other words, who was in a rapid decline), was put out of doors in his bed, and kept there constantly night and day for six months. In a month's time his temperature became afebrile, his appetite returned, his sputum diminished, hemoptysis ceased, and his weight began to increase. He gradually gained twenty-eight pounds and acquired a com-

plexion of red and tan. At the end of the six months he left the hospital restored to health. This case is almost too favorable to be accepted as a criterion. It inspires a hope that is too optimistic. The reader naturally fears that only a few cases can do so well. But Dr. Mackenzie supports his position so plausibly that he is likely to make converts, and we trust other as favorable cases will soon be reported, especially from this country.

The requisites for this treatment are simple in the extreme. The patient is kept warm in bed, not only with blankets, but with such other aids, if needed, as hot-water bags, gloves and a woolen cap. He is fed almost to excess. This feeding is especially a feature of the Nordrach treatment in Germany, where the repasts are on a Gargantuan scale. The treatment, in fact, may fail if the patient is not literally bullied into eating heroically. Moreover, the patient is isolated and not allowed to talk except to doctors and nurses.

As for the patients themselves, they are said to like the treatment and to enter heartily into the spirit of it. Here is where suggestive therapeutics comes in. Dr. Mander Smyth, himself a victim, tells how at Nordrach he would awaken at night to find an inch of snow on his coverlid. The rationale of the treatment is plain: fresh air is stimulating, appetizing, roborant, soporific and alterative. What more can be asked of one agent? At the Mill Road Infirmary, in Liverpool, 824 cases received open-air treatment, and of these cases 232 patients were so much improved as to be able to return home and resume work, and 83 patients were completely cured. And this was in the very center of Liverpool, without a blade of grass in sight.

Tuberculosis of the Conjunctiva.—The healthy conjunctiva absorbs infectious materials into the economy with difficulty. As an illustration of this may be taken diphtheritic conjunctivitis, which frequently exists without systemic involvement, unless there follows a transportation of the infection through the lachrymo-nasal passages. When tuberculosis of the conjunctiva exists, it is sometimes found that one lid is the seat of a typical tuberculous process, while the other lid may not only remain exempt in spite of the mutual contact, but may become the seat of a chronic hyperplasia without a demonstrable tubercular lesion. Such a case was not long ago reported by Ulthoff (*Berliner klin. Wochenschrift*, Jahr. 37, No. 50, p. 1145), in which microscopical examination showed with certainty the presence of tuberculosis of the lower lid, while the upper lid was in a condition of chronic hyperplasia, without any tuberculous changes. This presents the interesting pathological problem, what agent, directly or indirectly depend-

ent upon the tuberculous area produces this hyperplasia? Is it the specific action of the toxins, is it the long-continued irritation of the toxins without any specific toxicological action, or does a mixed infection cause this condition? That changes, which are probably not tuberculous, may exist in tissues adjacent to tuberculous areas, is illustrated in meningitis, pleurisy, and arthritis. Valude's careful experiments on animals seem to show that the healthy conjunctiva is one of the most resistant portals for the entrance of the tubercle bacillus.

Cysts of the Omentum.—The diagnosis of abdominal tumors is one of the most difficult of all problems in medicine. It may be a question whether any man who practically discovers a new kind of abdominal tumor, or at least studies a case of this nature so carefully that he presents it in a new and conspicuous light to the medical profession, should be regarded as altogether our benefactor. Dr. Abraham Jacobi has certainly, however, been a benefactor to medical science in many ways, and his description of a cyst of the omentum, read before the Association of American Physicians, and subsequently published in the *New York Medical Journal*, is a valuable contribution to current medical literature. It calls the attention of many of us clearly to the fact that such a tumor may exist, and may render the differential diagnosis more difficult.

Cysts of the omentum are, of course, rare, but this fact is small consolation to the physician to whom is presented the task of determining the nature of some intra-abdominal growth, that has baffled, perhaps, a number of his colleagues. For who can tell what moment the rarest of rare cases may not be before him? Moreover, a correct diagnosis is of the utmost importance, because the treatment of this cyst is comparatively simple and successful. In the present instance (the patient was a girl 7 years of age), after repeated tapping, laparotomy was performed, and a large multilocular cyst of the great omentum was readily removed entire, with perfect recovery. The diagnosis was not made until the operation, but Jacobi implies, although he does not definitely state, that in cases of tumor in the abdomen from which fluid can be removed by paracentesis, and which rapidly refills, when there is no alteration in the temperature, either from the absorption of fluid, or from tapping, a certain degree of suspicion is justifiable.

Dr. Jacobi is to be warmly congratulated or having had the opportunity of observing this extraordinary case; and, after all, we think it just as well that the profession should be bothered a little more by having its attention called to this form of tumor.

The Resistance of the Larvae of Mosquitoes to Intense Cold.—The ability of the very lowest vegetable forms of life, such as the various bacteria, to resist intense cold has been proven in many instances. The subject, as can readily be seen, has direct practical importance. Cold seems to be a very uncertain agent indeed for the destruction of many of the pathogenic bacteria, although it may suspend their activities—as in the case of yellow fever (if the parasites of this disease are really bacteria). It now seems that not only these lowly vegetable forms, but also some lowly insect organisms (which are, however, high in the biological scale above bacteria) can successfully resist a very low freezing temperature. This has recently been discovered in an unexpected way in the case of the larvae of the mosquito; and as these insects are now of extreme significance in pathology, this whole subject has direct interest for medical men.

Dr. J. B. Smith, State Entomologist of New Jersey, relates, in the *Entomological News*, that in the leaves of the pitcher plant (*Sarracenia purpurea*), growing in swamps and bogs in that State, the larvae, or "wrigglers," of mosquitoes have been found in abundance. Late in November, 1900, Dr. Smith found some of these larvae still alive in these plants, and concluded that they must soon perish so late in the season, as larval hibernation of the mosquito was unknown to him. In the following January, after a bitter cold spell, during which the thermometer registered 2° below zero, Mr. J. T. Brakeley procured some of the leaves of these pitcher plants, and removing the solid lump of ice from the interior of each one, and holding it to the light, saw that numerous larvae were imbedded in it. These he proceeded to thaw out, and found to his surprise that they all revived and resumed their active functions of moving, feeding, etc., as soon as they were liberated from the ice. He sent several jars, containing these larvae, to Dr. Smith, who watched them during several months, and has recorded his observations in a paper of great interest.

Dr. Smith found that these larvae, thus thawed out and kept indoors during the winter months, were very slow to develop into the pupal stage. This development usually takes place in a very few days in normal conditions, but Dr. Smith did not observe it in his larvae for many weeks. In the meantime, however, these wrigglers continued active. Finally, in March, by maintaining a constant high temperature in the jars (80° to 90°), Dr. Smith forced some of the larvae to develop, and so obtained a few perfect insects of the variety of Jersey mosquito known as *Culex pungens*.

All this is of extreme interest—not more to the entomologist than to the physician. The ways of

mosquitoes are of great importance to science. Dr. Smith calls attention to the now rather well-known fact that in the Arctic regions mosquitoes are found in great clouds during the short summer, and make life unbearable to man and beast. It would seem probable that these Arctic mosquitoes hibernate in the ice in the larval stage. None of the larvae of the *Anopheles* were observed among Dr. Smith's specimens, but it seems to us reasonable to suppose that the larvae of these malarial mosquitoes may be equally resistant to cold. Some of Dr. Smith's specimens were the larvae of *Aedes*, a smaller genus of the mosquito family.

The Registration of Stillbirths.—Now and again the attention of the profession is called to some irregularity in the registration of infants that are stillborn. This is especially true of England and the continent, although it cannot be claimed that we in this country have by any means arrived at a degree of perfection in this respect. It is a matter of congratulation, however, that in this city within recent years it has become compulsory not only to make a return of all stillborn children, but that each blank must be made with a special name, thereby rendering still more accurate the vital statistics of the community. To those who will give the matter serious attention it will be quite obvious that more important aspects are concerned than would at first sight appear. It is not merely for the purpose of perfecting the country's vital statistics, important as this undoubtedly is, that careful registration is imperative, but there is a medico-legal side of the question that deeply concerns the welfare of the country. Under lax laws and regulations the nefarious craft of the criminal abortionist and incompetent and conscienceless midwife is so protected that crime becomes rampant, and open defiance of moral legislation results. In England, as was testified to recently in an editorial note in the *British Medical Journal*, the matter has advanced to such a degree of laxity that children who die within 24 hours of birth are constantly received in the cemeteries and buried as "stillborn." This is undoubtedly a boon to the indigent among the people who are thereby spared the expense of a funeral service, but the dangers of such a course are evident. Not only may the products of criminal interference thereby be legally (?) disposed of, but infanticide is actually fostered and the way made plain and easy for evasion of an important safeguard of the stability of the people. There is already enough of ill resulting from the countenancing of incompetent midwives without magnifying their evil effects by opening to them a safe way for increasing their ill-gotten gains through illegal con-

cealment of births and deaths. After the period of fetal viability has been reached, legislation that would make compulsory under penalty of fine or imprisonment or both the registration of a premature birth is most desirable. Such children, designated by a Christian name and the surname of their father, should receive legal interment, and the records of births and deaths thereby be rendered so much the more complete for the given community. It would be gratifying and, we believe, beneficial in results, both statistically and morally, if some method could be devised whereby an accurate registration of all ovular and embryonic births prior to the period of viability could be obtained or even made compulsory. In order to arrive at some satisfactory and accurate records of fecundity, the many prematurely ended pregnancies must be taken into consideration.

Simple Acholuric Jaundice.—Gilbert and Lereboullet, who have examined hundreds of cases of simple acholuric jaundice, include under this head all cases of jaundice with acholuria, or with minute, intermittent choloria. By the most exact tests only a trace of the biliary pigment is found, or none at all. While the acholuria is scientifically not absolute, it is, clinically. In all these cases a chronic obliterating angiocholitis occurs. They separate these cases into two types, subicteric cholemia, with marked jaundice, which is the most common form, and anicteric cholemia, with little or no jaundice. The biliary pigment is always found in the blood serum, even though jaundice has disappeared. The condition often exists in many members of one family. From the many examinations made, there seems to be no disease of the liver which is not at some time accompanied by cholemia. Hemorrhages are seen all over the body. The dyspeptic form of the disease is the most frequent, and occurs generally in the family whose history shows many cases of liver disease. There are pain, in the epigastrium, after eating; dilatation of the stomach; and slight hyperchlorhydria. The jaundice may be absent; it may only affect the face; the body may be yellow; and finally the eye-lids will show a deep icterus. Salkowski's method will reveal bile pigment in the blood serum; and this will be absent from the urine. Slight melancholia may exist, gastrointestinal hemorrhage, urticaria, pruritus, rheumatic pains, etc. Occasionally intermittent fever is noted, and a slow pulse is the rule. Rarely the dyspepsia exists first, generally the two appear together, or the dyspepsia follows the jaundice. The diagnosis is not difficult. The dyspepsia is secondary. A diet of skimmed milk should be ordered first for two weeks, then two weeks of soft food, and then only can solid food be given. Bismuth, prepared chalk, etc., will do good. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, May 23, 1901, No. 17). In the discussion which followed, Chauffard said that he considered those cases in which some slight biliary pigment was found in the urine hypocholeoric, not acholuric. [M. O.]

The Abolition of the Pupillary Reflex to Light a Sure Sign of Syphilis.—Babinski and Charpentier report four cases of syphilis in all of whom the pupils showed the Argyll-Robertson reaction, failure to react to light. They believe that not only is this a certain sign of syphilis, hereditary or acquired, but that it also shows, even in the absence of all other symptoms, the approach of locomotor ataxia, general paralysis, or confirmed cerebrospinal syphilis. The time to elapse before the other symptoms appear is variable. Other observers reported cases which showed that the Argyll-Robertson pupil was often followed by the appearance of more severe syphilitic manifestations. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, May 23, 1901, No. 17). [M. O.]

Reviews.

A Treatise on Orthopedic Surgery.—By Royal Whitman, M. D. Lea Bros. & Co., Philadelphia and New York. 1901.

The author, in the preface, says that this work is designed for students and practitioners of medicine, but hopes it may prove of interest to those who confine their work to the specialty of orthopedic surgery. The work is based upon clinical experience and investigation, and contains numerous statistical tables, both original and quoted from other sources. It contains large numbers of good original illustrations, mostly photographs of patients, illustrating with great clearness the various stages and types of deformity. Much attention is paid to the etiology and anatomy of deformities. Thus the discussion of the deformities of the foot is prefaced by a discussion of the anatomy of the foot and its arches, its functions, and from this the effect of improper posture and the various pathological changes leading to deformity and disability are demonstrated. Symptomatology and treatment are dealt with with equal thoroughness, the latest contributions to mechanical and operative treatment being fully considered. Among the special articles it might be mentioned that the author is decidedly conservative in his discussion of the treatment of spinal abscess. The endorsement of the benefits of the plaster-of-paris jacket in the treatment of Pott's disease, especially in conjunction with Bradford's frame, impresses us favorably, although the recommendation of the old jury mast with its inefficient extension and poor fixation in the treatment of high spinal caries is disappointing. While he does not condemn Calot's operation of forcible correction of kyphosis, he leaves the final judgement to be given later. Goldwaite's method of gradual correction receives its just praise. The chapter on sacro-iliac disease is too brief considering its importance. The discussion of the relative merits of the traction as contrasted with the fixation splint in the treatment of coxalgia, the so-called American and English methods, is very good and furnishes many data not usually obtainable in text books. The author while admitting that excision is seldom needed in cases of coxalgia properly treated, also believes that in hospital cases it is often postponed to too late a period both as a life saving and function preserving operation. The articles upon congenital dislocation of the hip, and coxa vara, are beautifully illustrated with very instructive photographs and skiagraphs. His views on congenital dislocation are in accord with the most recent ones on this subject: open operating being recommended when the Lorenz bloodless operation fails. There are a number of subjects discussed which are only indirectly orthopedic in nature, and there might be mentioned injuries of the epiphyses, infantile scurvy, fragilitas ossium, acromegaly, and other trophic or neuropathic bone diseases, which subjects are, however, discussed only superficially and briefly. The book approaches near the standard of the ideal orthopedic surgery, and appears to us to be the most up to date book upon this subject in the English language. [H. R. W.]

Compendium der Physiologie des Menschen.—Zweite verbesserte und vermehrte Auflage. Von Dr. Paul Schultz. Verlag von S. Karger, Berlin. 1901.

A compend of the essential facts of the different branches of medical science as taught in most medical schools seems to be necessary to the present day student. The various text-books are so large, the time for reading so limited, that the student is compelled from necessity to have at hand a small book to which he can refer and obtain without difficulty the facts he especially desires. It would appear that the compend is a necessary volume, even in Germany. The present volume is one of a series, some of which are intended for students during their attendance on lectures, others for preparation for state examinations. In the preface the author states that brevity and clearness in the presentation of the facts recognized at the time should be the essential characteristics of a

compend. An examination of the various chapters will convince one that the author has succeeded in accomplishing this. All the essential facts of the subjects are presented in a clear, compact form, easy of apprehension by the busy student. To those students who read German this volume will be a valuable companion for reference and for preparation for examination. [A. P. B.]

Annual Report of the Smithsonian Institution for the year ending June 30, 1899. Government Printing Office, 1901.

This is a very excellent publication, and one to which we can refer with pride, because it is published by our own Government for the purpose of facilitating the knowledge of scientific progress. The contents consist of 140 pages, devoted to reports, expenditures, etc., and an appendix of more than 500 pages consisting of a "miscellaneous selection of papers (some of them original) embracing a considerable range of scientific investigation and discussion." Among the most interesting of these are the papers on Radio-Active Substances, by H. C. Bolton; the "People of the Philippines," by Rudolf Virchow, "A List of Native Tribes of the Philippines, and of the Languages Spoken by Them," by Blumentritt, and an article on "Von Zeppelin's Dirigible Air Ship." The latter is a reprint. But many of the other papers are of even more scientific importance. We note with regret that no bison were born in the Zoological Park during the year 1899. It seems as though this magnificent animal were doomed to extinction. [J. S.]

Transactions of the Southern Surgical and Gynecological Association, Vol. XIII. Thirteenth Session, held at Atlanta, Ga., Nov. 13-15, 1900. 436 pages. Published by the Association, 1901.

The thirteenth volume of these transactions is rich in valuable and suggestive papers. Among the topics are: Medullary Narcosis, by W. L. Rodman, M. D.; Excision of the External Carotid Artery for Inoperable Sarcoma of the Face, by Wm. Perrin Nicholson, M. D.; Resection of the Rectum per Vaginum, by John B. Murphy, M. D.; The Surgery of the Gasserian Ganglion, by Wm. Neff, M. D., and Resection of the Cervical Sympathetic for Glaucoma, by Howard J. Williams, M. D. Papers are also presented by such well known writers as J. McF. Gaston, Jr., W. P. Manton, Geo. J. Engelmann, A. Morgan Cartledge, and George Henry Noble. The book is full of valuable information and is a worthy successor to the volumes that have preceded. [W. A. N. D.]

Transactions of the Associated Physicians of Long Island, January 1900 to June 1901. Vol II.

This neatly printed, artistically gotten up and tastefully illustrated volume contains papers to the number of eight, read at the second and third annual meetings of the Association in January 1900 and 1901, and the seventh and eighth regular meetings of June and October, 1900, together with a record of the executive transactions, the revised Constitution and an accurate list of members. An attractive title-page and a device for an Association seal are originally designed by members. [A. A. E.]

Transactions of the American Pediatric Society. Twelfth Session, held at Washington, D. C., May 1, 2 and 3, 1900. Edited by Walter Lester Carr, M. D., Vol. XII. Reprinted from the Archives of Pediatrics.

Except for convenience of preservation and reference there seems to be no special need for the republication of the 23 interesting and valuable essays contained in this volume, as they have already been once published. Nothing but praise can be accorded the papers themselves, which represent the labors of men actively and intelligently engaged in the study of the subjects discussed. [A. A. E.]

Correspondence.

VACCINATION REQUIRES ASEPSIS.

By FREDERICK GRIFFITH, M. D., of New York.

Surgeon to Bellevue Dispensary; Fellow of the New York Academy of Medicine.

To the Editor of the Philadelphia Medical Journal:

It is sounding the old theme, when I say that attention to details is most necessary to highest success in medicine and that the neglect to put in practice the commonest principles of present day medical science is the cause far more often of failure than foolhardy attempts at unreasonable procedures.

The neglect of these principles has brought the following cases before me during the past month.

By requiring children to show well-marked vaccination scars before being permitted enrollment in the public schools of the city the authorities seek to avoid one channel of disseminating smallpox; but every year there is such an increase in the number of children born, besides those under school age that advantage is taken of every opportunity to vaccinate, as in one of the instances in this report where a child taken sick with scarlet fever gave rise to a call from a district health officer and the vaccination of ten remaining children resident in the large double tenement occupied with their parents.

The first case was that of a little girl aged three years who was one of ten to be vaccinated at the same time.

She had been vaccinated, for the first time, three weeks before, upon the left arm at the insertion of the deltoid muscle.

Over an area of two and one half inches wide by four inches long were scattered pustules, some umbilicated, confluent and distinct with broad inflammatory areas surrounding. The contents was a creamy pus.

In the centre of the area was a circular, brown discoloration the size of a silver dollar, bounded by a whitish ring.

The discoloration turned the color of and looked much like a piece of old, tanned leather, as it sloughed away during the course of the following week.

The pustules broke down the surrounding cellular tissue leaving a suppurating area which healed slowly by granulation.

There was no involvement of the axillary glands nor was there any constitutional reaction.

There was evidently no discomfort or pain felt as the child never voiced complaint, excepting during the removal of early dressings, from fear. The treatment consisted in washing with hydrogen di-oxide and the application of narrow strips of rubber tissue, laid on shingling fashion to allow the oozing to penetrate to a light, dry gauze dressing.

Of the other two cases; one was in a child of two years; without any glandular involvement an abscess formed upon the back of the arm, three inches from the site of vaccination.

Opening the abscess cavity I curetted one half an ounce of green streaked pus and slough.

After washing out the cavity with hydrogen di-oxide I drained with a small loose twist of rubber tissue, applying light gauze to complete the dressing.

The third case was one of less degree of infection and occurred in a second child of the ten, vaccinated.

To lessen the danger from infection to a minimum, district health officers should order that children to be vaccinated, be brought at a specified time to a nearby surgical dispensary where the part to be treated may be made as aseptic as for an operation. No difficulty would arise from failure of co-operation upon the part of the attending surgeon if the matter be set before him, as by a little interest at this time he can save the child the dangers from pus infection and himself the subsequent care, the inspector taking no further notice of the case.

The value of hydrogen di-oxide and the use of rubber tissue in these as well as all other suppurating wounds cannot be overestimated.

The hydrogen di-oxide used in full strength or dilute, according to the pain caused, cleans the wound; the rubber tissue, in strips acting to reduce the irritation of the dressing of absorbant gauze.

THE PROBLEM OF ANESTHESIA.

By S. OILMOND GOLDAN, of New York

To the Editor of the Philadelphia Medical Journal:

In the Philadelphia Medical Journal, July 13, 1901, you describe editorially a new method of anesthetization by Braun.

This is not a new method at all but simply an elaboration of the Junker method of administering chloroform, and introduced by Tyrrell London (*Trans. Soc. of Anaest.*, 1898, Vol. 1, p. 1) as the double bottle method. The method like many others is a most useful one in experienced hands but should not be advocated for occasional administrators or hospital internes as distracting attention from the patient to the apparatus. "The problem of anesthesia will not stay down" until it is solved, and that properly. You say ether is not an ideal anesthetic; neither is nitrous oxide or chloroform, but when the profession realize each and all of these anesthetics have their particular and definite indications and adaptability, and correct methods are employed in selecting and administering each of them, the subject of anesthesia will near solution, as near at least as such a subject can.

In spite of the fact that the introduction of anesthetics was one of the two great factors by which surgery has advanced to its present state, anesthetization is practically where it was fifty years ago. To the minds of most, anesthetization begins and ends with a towel and paper inhaler and a can of ether. Is there then, any surprise that "the subject will not stay down." It can further be said that the symptoms mentioned in your editorial as usually those developed during etherization are owing to its improper and not proper administration—they are properly the exception and not the rule. Why blame the anesthetic?

To use either one of our three anesthetics to the entire exclusion of the others would increase the mortality greatly both immediate and remote; to use each and all of them in their proper place would likewise reduce mortality. When, oh when, will the profession realize this fact? Is it right to give chloroform for insignificant operations as tooth extraction, abscesses, etc., and have the patient die, when nitrous oxide would have answered?

It is safe to say there are exceedingly few in this country who have a thorough practical experience in the administration of our three anesthetics, gas; ether; chloroform.

Further you say chloroform has few of the disadvantages of ether but has a fatal effect of frequently causing cardiac or respiratory paralysis—the probable truth of the matter is, it is most frequently vasomotor paralysis and only secondarily cardiac and respiratory—due to what—chloroform? No; but overdosage due to improper administration. The safest conceivable method of administering anesthetics would be unsafe in inexperienced hands. I have in more instances than one said this, but it seems to be most frequently lost sight of.

The principles governing the safe administration of chloroform are extremely simple—how many know them? Probably not one in a hundred, and if known rarely followed. So, why blame the anesthetic? Always an interesting question, why the fatalities early in chloroformization?—not infrequently it is said to be fright—but many patients are frightened during etherization and very rarely do any die. Fright is always accompanied by more or less holding the breath and more or less though not necessarily visible asphyxia—when breathing does commence so large a quantity of the anesthetic is taken in as to cause sudden death—not fright, but overdosage, though the amount of the anesthetic may be amazingly small. In connection with this it is simply necessary to remember that but 24 minims of chloroform if given in a certain manner, produce complete anesthesia.

Ought this not to teach that chloroform should not be given to a frightened patient, and, if necessary, ether, or gas and ether, should precede it—that to give chloroform to a struggling and oftentimes forcibly restrained patient is the very worst possible thing to do—it is simply trifling with life.

An absolute essential for chloroformization is normal regular breathing. Enter most clinics and note the manner in which this anesthetic is administered and say whether it is surprising that fatalities occur. Rather is it not surprising that mortality is not even greater than it is?

OIL OF PENNYROYAL AS A REMEDY AGAINST MOSQUITOES.

By V. H. McKNIGHT, M. D., of Lima, Ohio.

To the Editor of the Philadelphia Medical Journal:

Now that the annihilation of the mosquito seems to be fairly resolved upon, is it generally known that the Oil of Pennyroyal is antagonistic to them, that they will avoid sleeping people who have it about the bed?

That seems to be a fact, and if the fact can be better proven, can it be utilized in the war against the mosquito?

Broncho-pneumonia with Pulmonary Sclerosis.—Evaristo Lafforgue, in *Medicine Moderne*, (1901, No. 16), describes a case of broncho-pneumonia in a man of 60, who had always taken too much absinthe. He was greatly depressed, seemed very old, and talked unintelligibly. He felt very weak, with pain at the base of the chest. He coughed much, with dark, mucopurulent expectoration. The dyspnea with the cough was intense. Dulness, with subcrepitant and crepitant rales, was found over the left base posteriorly. Over the rest of the chest were rales of all kinds. Anteriorly emphysema was noted. Arteriosclerosis was marked, and the heart hypertrophied. He was constipated, and the urine contained albumin. A week later he died, asphyxiated. At the autopsy the lungs showed localized emphysema with small hemorrhages and abscesses, marked sclerosis, and disseminated broncho-pneumonia. The heart was hypertrophied, with myocarditis. The kidneys and liver were sclerotic and atrophic. Pneumococci and influenza bacilli were found microscopically. The presence of the pulmonary sclerosis gave the broncho-pneumonia a special character. It localized the areas, causing the infection to develop and to spread. It also caused suppuration and necrosis in these closed areas, with localized hemorrhages and emphysema. As it gradually destroyed all the air spaces, dyspnea and asphyxia followed. [M. O.]

Pneumothorax Treated by Pleurotomy.—At a recent meeting of the Medical Society of the Paris hospitals (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, 1901, No. 1.), Dr. L. Galliard reported the case of an Italian woman aged 25, who had been coughing for over two weeks. On admission to the hospital, dyspnea and cyanosis were extreme, and there was slight fetid, mucopurulent expectoration. Examination showed partial right-sided pneumothorax, dorso-axillary in position. No succussion splash could at any time be obtained. Exploratory puncture gave a seropurulent fluid, which contained pneumococci. There were at no time any signs of tuberculosis. As suffocation was marked, pleurotomy was performed, drainage and gauze being left in the wound. The dyspnea disappeared and she grew gradually better. But the pneumothorax increased. She returned to Italy, after having a simple pneumothorax for 38 days, for no liquid was ever found in the pleura. Galliard explains the condition by supposing a previous pneumonia, which had opened into the pleura. No tubercle bacilli were found in the sputum. The expectoration, which had been purulent and fetid, became clean mucus, without pus having been evacuated from the lung or pleura. Dr. Chaffard related a similar case which, at autopsy, showed an interlobar empyema as the cause. He suggested that this might also have been the case in Dr. Galliard's patient. [M. O.]

Syringomyelia With "Thorax en Bateau" and Tropic Disturbances Resembling Myxedema.—In the *Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, (1901, No. 10), Paul Sainton and Jean Ferrand report the sixth case of "thorax en bateau," in a woman of 56, with syringomyelia, which had begun over 30 years ago. All four extremities are now affected, and there is some scoliosis. There is no pain, and she feels pins, but the thermic sense is abolished. There is some atrophy of the muscles, the upper sternum sinks in, forming the "thorax en bateau," and the skin is thick, almost myxedematous. The deformity of the sternum is due to a tropic bony change, like osteomalacia. The myxedema-like changes are secondary to the long standing syringomyelia. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Resignation of Dr. J. Madison Taylor.—Dr. J. Madison Taylor has resigned from the Professorship of Diseases of Children in the Philadelphia Polyclinic, where he has taught post-graduate students for about 15 years.

Dr. J. L. Forwood, Chester, has been re-appointed a member of the State Quarantine Board.

New Site for the Veterinary Department of the University of Pennsylvania.—It is reported that the University of Pennsylvania Veterinary Department will be moved to Thirty-ninth and Woodland avenue, instead of to the Flower Farm, on the West Chester Pike, as formerly intended. The reason assigned for the change in plans is that the department would be too inconvenient for the public on the West Chester Pike, and too far from the University for the students. It is also stated that the work on the new \$60,000 buildings will begin in October.

Resolutions by the Medico-Legal Society of Philadelphia.—The following resolutions were adopted at a recent meeting of this society:

Whereas, the advertising of abortionists and their drugs as well as other disreputable secret medicines has for years been a notorious disgrace to the newspaperdom of this city—an evil seemingly without redress, and

Whereas, The Philadelphia "Times" under its new ownership has declared for a high ethical plane, avoiding all sensationalism while at the same time furnishing "all the news that is fit to print," excluding all medical and other questionable advertisements—so as to make it indeed a newspaper fit for the family circle, therefore be it

Resolved that the Medico-Legal Society of Philadelphia highly approves of the advanced stand taken by "The Times" and urges upon the medical profession generally its active support in aiding to carry out that journal's elevated ideals.

Resolved, further, that the medical periodicals of this city be requested to publish the foregoing in their next issue and that, at the coming meeting of this organization, the Secretary report as to which of these, by printing it, have assisted in furthering so desirable a public movement.

The White Haven Sanitarium for Consumptives has been opened for the reception of patients, of which but 20 can be admitted at present.

Marcus Hook for Carlisle.—The Board of Health of Carlisle has secured the right to use the quarantine buildings at Marcus Hook for small-pox cases.

Vital Statistics of Philadelphia for the week ending July 6th, 1901:

Total mortality	447	Cases.	Deaths.
Inflammation of the appendix 1, bladder 1, brain 13, bronchi 5, heart 5 kidneys 19 larynx 1, liver 1, lungs 16, peritoneum 1, pleura 1, stomach and bowels 45, veins 1 marasmus 36, inanition 21, debility 3.....	170		
Tuberculosis of the lungs	70		
Apoplexy 16, paralysis 3	19		
Heart-disease of 26, fatty degenera- tion of 2	28		
Uremia 18, Bright's disease 6, dia- betes 7	31		
Carcinoma of the bowels 1, breast 1, stomach 7, uterus 2, liver 3....	14		
Convulsions 7, puerperal 1	8		
Diphtheria	36		
Softening of brain	5		
Typhoid fever	117		
Old Age	10		
Scarlet fever	33		
Abortion 1, alcoholism 1, burns and scalds 1, casualties 10, cholera in-			

fantum 27, cholera morbus 1, cir-
rhosis of the liver 3, consumption
of the bowels 1, cyanosis 2, di-
arrhea 1, drowned 8, dysentery
6, epilepsy 1, gangrene 2, hernia 1,
jaundice 2, locomotor ataxia 1,
malarial fever 1, neuralgia of the
heart 1, obstruction of the bowels
2, puerperal fever 1, purpura hem-
orrhagica 1, rheumatism 1, scler-
osis of liver 2, septicaemia 3, sui-
cide 4, sunstroke 2, teething 2,
tetanus 1, ulceration of stomach 1,
whooping cough 14

Cases. Deaths.

105

NEW JERSEY.

Ex-Governor Newell Dead.—Dr. Wm. A. Newell, ex-Governor of New Jersey and Washington Territory, died on August 8th, aged 84, at his home in Allentown, N. J. Governor Newell, who was a practicing physician, was born in Ohio, and came to New Jersey when quite young. He was a member of Congress from that State from 1847 to 1851 and during that time was instrumental in establishing the life-saving system of the Federal Government. He was elected Governor of New Jersey in 1856 on the Republican ticket and was again a candidate against General McClellan, but was defeated. During the administration of President Hayes, Dr. Newell was appointed Governor of Washington Territory, and from that time until about three years ago made Washington his home.

NEW YORK.

Gastrectomy on a Dog.—At the New York Veterinary Hospital an operation for complete removal of the stomach, for malignant disease, was recently performed on a fox terrier, which was a great pet in the family owning it. The animal is reported to have made an excellent recovery.

University of Buffalo.—The Medical Department of the University of Buffalo has received \$50,000 for the purpose of erecting a laboratory to be devoted entirely to research work. It will be known as the Gratwick Research Laboratory.

Dr. Alvin A. Hubbell, for several years associate editor of the *Buffalo Medical Journal*, has resigned from the editorial staff of that journal.

WESTERN STATES.

Dr. Sanford Riddell, of Chippewa Falls, Wisconsin, one of the oldest physicians in that State, recently died from apoplexy while attending the meeting of the Inter-Counter Medical Society, at Duluth.

Crusade Against Mosquitoes in Chicago.—It is reported that the Castor bean plant which was found by Professor Frederick Starr, of the University of Chicago, to be quite efficacious in driving away mosquitoes, will be employed in Chicago, for banishing the pests from the parks of that city.

The Oklahoma Medical Association.—The Oklahoma Medical Association will convene at Oklahoma City, November 13th, 1901. Dr. R. D. Love, of Perry, Okla., is president; and Dr. E. O. Barker, of Guthrie, is secretary and treasurer.

A Medical Martyr.—T. L. Monson, State Dairy Commissioner of Colorado, professes himself ready and willing to be inoculated with the germs of animal tuberculosis and submit to any test that may be imposed by a committee of surgeons and specialists, provided a suitable provision is made for his family in case the experiment should have a fatal termination. He is an ardent advocate of the theory advanced by Koch regarding the reciprocal communicability of bovine and human tuberculosis.

Rocky Mountain Sanitarium.—An organization has been formed at Denver, of physicians and others with the object of establishing an industrial sanatorium in the Rocky Mountains.

A Kansas Decision.—The Kansas State Board does not regard the Physio-Medical Institute, of Kansas City, as standard, and the attorney general upholds its decision.

The Bacillus Polymorphus.—Dr. C. J. Keenig, formerly

of San Francisco, but now of Paris, is reported to have discovered a new bacillus, which he has named the "Bacillus Polymorphus," occurring in what is claimed to be a new disease of the throat, which has been given the name "Eroso Membranous Angina."

Dr. Charles F. Dutton, who has been Professor of the Theory and Practice of Medicine in the Cleveland College of Physicians and Surgeons for seventeen years, recently resigned.

The American Association of Official Surgeons will hold its next annual meeting in Chicago, September 18th and 19th, 1901.

The Lane Medical Lectures.—We are requested to call attention to the sixth course of the Lane Medical Lectures in Cooper Medical College, inaugurated in 1896, will be given in 1901 by Mr. Malcolm Morris, F. R. C. S., Edinburgh, the subject to be: **The Pathology of the Skin in Relation to Certain Social Problems.** These lectures will be given on the days and hours as follows: September 2, 11 A. M., Introductory; Social Aspects of Skin Diseases; General outline of the subject. September 2, 8 P. M., Inoculable Diseases of the Skin; Animal Parasites; Scabies, pediculosis; Vegetable Parasites; Ringworm; Favus; Recent Researches in Fungi producing them; Need of Special Schools for Ringworm Children; The Hygiene of the Barber's Shop. September 3, 11 A. M., Local Inoculable Diseases; Contagious Impetigo and Syphilis; Boils; Carbuncles; Acne; Actinomycosis; Elephantiasis; their Prevention and Treatment. September 3, 8 P. M., General Inoculable Diseases of the Skin; Tuberculosis; the Part Played by the Skin in its Dissemination; the Crusade for its Extirpation. September 4, 11 A. M., Lupus; the Light Treatment; other Modern Treatments. September 4, 8 P. M., Syphilis; the International League; Leprosy in the Past and in the Present. September 5, 11 A. M., Affections of the Skin dependent on Nerve Disorder; Prurigo and other Itching Affections; Mental effects of Cutaneous Irritability; Skin Diseases in the Insane; Erythema; Lupus Erythematosus; Rosacea; Herpes Zoster; Pemphigus. September 5, 8 P. M., Hysterical Edema; Feigned Eruptions; Stigmata; Bloody Sweat, Dermographism; Diabolic Marks. September 6, 11 A. M., Diseases of Unknown Causation; Eczema; Psoriasis; Pityriasis Rubra. September 6, 8 P. M., Malignant Diseases of the Skin; Epithelioma Cutis; Rodent Ulcer; Röntgen Rays Treatment; Mycosis Fungoides.

SOUTHERN STATES.

The East Tennessee Medical Society will meet in annual session at Newport on Thursday, September 26th, continuing two days. Dr. D. M. Miller, of Indian Springs, is President, and Dr. C. J. Broyles, of Johnson City, Secretary.

Dr. J. H. P. Wise died July 9 at Morgan City, aged 56 years, after twenty years of practice at that place.

Election of Officers at Tri-State Medical Association.—The Tri-State Medical Association, composed of physicians of Western Maryland, West Virginia and Western Pennsylvania, elected the following officers at its recent meeting at Cumberland, Md.: President, Dr. William F. Barclay, Pittsburg; vice-presidents, Dr. Henry W. Hodgson, Cumberland, Dr. Frank L. Baker, Burlington, W. Va., and Dr. Bruce Lichty, Meyersdale, Pa.; recording secretary, Dr. Percival Lantz, Alaska, W. Va.; corresponding secretary, Dr. Frederick W. Fochtman, Cumberland, and treasurer, Dr. E. B. Claybrook, Cumberland.

Mississippi Valley Medical Association.—The next annual meeting of the Mississippi Valley Medical Association, under the Presidency of Dr. A. H. Cordier, of Kansas City, bids fair to eclipse all previous ones in attendance as well as scientific merit, as the following preliminary program will show: Put-in-Bay is an ideal place of meeting, the Hotel Victory a magnificent meeting site. The address in Medicine will be made by Dr. Frank Billings, of Chicago; the address in Surgery by Dr. Reginald Sayre, of New York City. The profession is cordially invited to attend this meeting. No title can be received after August 20th for publication on the final program.

Crusade Against Mosquitoes.—The New Orleans Board of Health has decided to begin a campaign against mosquitoes. Beaumont oil can be obtained at a minimum cost and will be used extensively. The Board will issue circulars to householders asking their coöperation.

The Presbyterian Hospital, Atlanta, has been open since

a month with a beginning capacity of 25 to 30 beds. Its medical staff consists of Dr. Marion McH. Hull, chairman, and Drs. Stephen T. Barnett, Cyrus W. Strickler, James N. Ellis, Edward G. Davis, Miller B. Hutchins, Michael Hoke, John L. McDaniel, James McF. Gaston, Jr., Arthur G. Hobbs, James M. Crawford, and Walter B. Emory.

CANADA.

Meeting of the Ontario Medical Association, held at Toronto, June 19th and 20th. (Conclusion.) Discussion on Gastric Ulcer.—*Surgical Aspect.*—Dr. Henry Howitt, Guelph, conducted this part of the discussion and said, did it never strike you as being peculiar that the best remedies, nitrate of silver and so forth, are germ destroyers? He first took up the procedures for dealing with the ulcer or its results, in which perforation is not a factor. In all the operative procedures it was essential to prevent infection of the wound, the stomach should be thoroughly washed with aseptic water, by means of a siphon tube, immediately before the anesthetic is administered. It is not necessary to make the abdominal incision extensive, the length of the incision would depend upon the amount of contraction and it is sutured in such a manner that when closed the line of union is at right angles to the original incision. This gives excellent results when properly done. Adhesions render this ideal operation impracticable. The first successful operation was performed in Toronto, 1894, by Dr. Atherton. Up to last September in the neighborhood of 300 operations were reported with a mortality of a little over 45 per cent. Dr. Howitt then referred to cases in his own practice. With regard to the treatment, Dr. Howitt said that as soon as we are satisfied that perforation has taken place, referring to acute cases, he believes it is good practice to give morphia hypodermically, and it further lessens the amount of the anesthetic in the opinion of many. Success largely depends on the shortness of time before operation; delay is dangerous. It is Dr. Howitt's practice to eviscerate the bowels; one or more small incisions in the prominent coils soon overcome the distension, and each one is closed before another is made. Attention is now turned to the stomach and the part brought into the wound. The ulcer is incised and the opening closed with two or three layers of sutures. When the trouble is in the posterior wall it may be impossible to excise it, in which case it can be generally inverted and closed by layers of sutures. The abdominal cavity should be thoroughly flushed with a stream of saline solution. When drainage is necessary the tubes or gauze should not be introduced through a large wound. The object should be to have primary union to take place in the incision.

Vaginal Section, Exploratory and Operative.—Dr. T. Shaw Webster read a paper with the above title describing several operations performed in that way, one being for ectopic gestation. He reported good success in them from the vaginal route.

The Roentgen Rays in the Diagnosis of Urinary and Biliary Calculi.—This paper, X-ray photos and specimens of calculi, which proved a very interesting demonstration, was presented by Dr. S. Cummings, of Hamilton.

Preliminary Report on the Relations of Hyperchlorhydria to "Bilious Attacks," Some Forms of Eczema, Gout and Muscular Rheumatism.—Dr. Graham Chambers, Toronto, stated that on several occasions he had examined the gastric contents of patients of apparently normal digestion and found hydrochloric-acid, although in some of them there was a history of "bilious attacks," which were probably attacks of hyperacidity. He considers that the gastric distress, which is present in these cases, is more or less due to the hyperesthesia of the mucous membrane of the stomach, as well as to the excessive acid contents. The commingling of these two neuroses, hyperchlorhydria and hyperesthesia gastrica, makes an investigation into the relations of the former to "bilious attacks," eczema, muscular rheumatism and gout a very definite one, but he cannot but think that a general irritable condition of the gastric nerves must produce some changes in the sympathetic and cerebro-spinal centres, which would no doubt lead, or tend to lead, to diseases in other organs. Dr. Chambers' attention was first called to this subject about two years ago, when he observed that the internal treatment, both dietetic and medicinal, which he was accustomed to give in cases of hyperchlorhydria, was approximately the same as that which he was using in some forms of acute eczema, and in both cases it gave

very satisfactory results. In his experience "bilious attacks" are very frequent in cases of chronic hyperchlorhydria; he has also found that symptoms of indigestion are of frequent occurrence in eczema, and are usually of a character which indicates hyperchlorhydria. He has examined the gastric contents of six cases of eczema, with symptoms of dyspepsia, and in five of these there was an excess of HCl in the gastric contents. He gave notes of cases in illustration of his researches. "Acidity" is a common symptom in gouty subjects, and Dr. Chambers believes that a thorough investigation of the subject would prove that the "acidity" of the gastric contents is not due to organic acid at all, but that hydrochloric acid will be found to play an important part in it. With regard to muscular rheumatism, we know very little about the etiology of it. Clinically, we have found that muscular rheumatism and gout are in some way related; and in regard to relations of hyperchlorhydria and muscular rheumatism, Dr. Chambers has observed that they are frequently associated, but whether the muscular rheumatism is the result of the hyperchlorhydria, he is at the present time unable to say.

Medical Treatment of Surgical Tuberculosis.—Dr. W. B. Thistle, Toronto, said: It is important to remember this fact, that there is no difference in the nature of the disease, whether considered surgically or medically, and especially is this so when we come to consider treatment. We hear on all sides that it is a curable disease, and complete cure often now happily results from medical treatment. Dr. Thistle has observed that tubercular cases requiring surgical treatment in the great majority receive little or no medical treatment. The subject of surgical tuberculosis should have the fullest advantage of sunshine and fresh air as well as those suffering from the disease in its medical aspect.

Treatment of Post-Operative Peritonitis.—By Walter McKeown, Toronto. The paper suggested that this condition should be treated by the use of decinormal salt solution, either subcutaneously or intravenously, and enemata of strong solutions of sulphate of magnesia. The toxins will dialyze; the antitoxins will not. If, then, the toxins can be eliminated with sufficient rapidity, the disease will limit itself as a result of the formation of antitoxin together with the plugging of the peritoneal lymphatics. The blood is diluted by the addition of the salt solution, and this is drawn out into the rectum by means of a higher osmotic pressure carrying the toxins with it. He claims that even with a condition of paralysis of the bowel, toxins will dialyze in this way. He suggests that if a patient were placed in a salt bath, the toxins would probably osmose directly through the skin. That osmosis does not take place from without in through the skin, does not prove that the reverse process will not occur. Osmosis is known to take place much more rapidly in one direction through the shell membrane of the egg than the other.

The Following Officers were Elected: President, Dr. N. A. Powell, Toronto; First Vice-President, R. Ferguson, London; Second Vice, R. W. Garrett, Kingston; Third, L. C. Prevost, Ottawa; Fourth, R. L. Turnbull, Goderich; General Secretary Harold C. Parsons, Toronto; Assistant, George Elliott, Toronto; Treasurer, A. R. Gordon, Toronto.

Resolution on Vaccination.—Resolved, That the Ontario Medical Association desires hereby to re-assert the opinion of the medical profession of this province:

1st. That the principles of Jennerian vaccination against smallpox, which have been now attested by the experience of more than a century, are scientifically correct.

2nd. That in order to carry out the protection through vaccination against smallpox it is necessary that the lymph used in the operation be of normal quality, and that this can be shown only by a proper amount of systemic reaction to the vaccine, as determined by the character of the vesicles, and that the absence of a normal reaction, as shown by the presence of vesicles, is no positive evidence of the immunity of the person either against vaccinia or smallpox.

3rd. That this Association emphasizes the urgent necessity that the scarification of the skin be sufficiently extensive to secure such reaction, and to this end recommend that from three to five insertions each of a quarter of an inch square be made in each vaccination. This was carried.

Women's Medical College of Toronto.—Dr. Graham Chambers has been appointed Professor of Dermatology and Assistant Professor of Clinical Medicine.

Surgeon Major I. Knight Riddall, of Toronto, Canada, has been recommended for the V. D., a new decoration for the officers of the "Colonial Auxiliary Forces" which Her late Majesty the Queen was graciously pleased to institute. The doctor has served in the Canadian Military Forces for over twenty-six years consecutively, receiving during that time the Medal for 1866, and in his younger days served in the "Army Hospital Corps," at the Crimea in 1855 and 1856, receiving the Medal and Clasp for same.

Dr. F. W. Harvey has been appointed surgeon to the Ophthalmological Department of the Royal Victoria Hospital, of Montreal.

MISCELLANY

Medical Schools Ordered in Turkey.—The Sultan of Turkey has ordered the establishment of medical schools at Bagdad, Damascus, and Smyrna.

A Unique Contest.—According to an exchange, it is said that Dr. Tanner, of fasting fame, now sixty-eight years old, has challenged the brewers of Denver to a fasting contest. Six men are to drink beer only, and he is to drink water. The brewers have agreed to the contest.

Thermometers in Guatemala.—The natives of Guatemala who suffer from torpid livers, regard metallic mercury as a specific, and it is reported that some of them will resort to stealing thermometers for the purpose of obtaining the mercury.

Melena Neonatorum.—Holt reports a case of frequent and persistent vomiting of blood in a robust new-born infant, apparently cured by the administration of suprarenal extract in grain doses every hour.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 days ended August 8, 1901.

- J. M. GASSAWAY, surgeon, relieved from duty at San Francisco, Cal., and directed to proceed to St. Louis, Mo., and assume command of the service, relieving Passed Assistant Surgeon W. G. Stimpson—August 21, 1901.
- W. P. McINTOSH, surgeon, to proceed to Jasper, Georgia, for special temporary duty—August 8, 1901. Granted leave of absence for 30 days from August 24—August 8, 1901.
- W. G. STIMPSON, passed assistant surgeon, upon being relieved by Surgeon J. M. Gassaway, to proceed to San Francisco, Cal., and assume command of the service—August 2, 1901.
- J. A. NYDEGGER, passed assistant surgeon, granted extension of leave of absence, on account of sickness, for thirty days from August 10—August 7, 1901.
- J. M. HOLT, assistant surgeon, granted leave of absence for one month from August 15—August 2, 1901.
- E. B. HALLETT, acting assistant surgeon, granted leave of absence for 7 days from August 10—August 8, 1901.
- E. B. SCOTT, hospital steward, granted leave of absence for 6 days from August 7—August 2, 1901.
- CHARLES SLOUGH, hospital steward, granted leave of absence for 14 days from August 6—August 7, 1901.
- G. A. McGRIS, hospital steward, relieved from duty at New York, N. Y., and directed to proceed to Havana, Cuba, and report to the Chief Quarantine officer for duty—August 5, 1901.
- W. C. PHILLIPS, hospital steward, relieved from duty at Chicago, Illinois, and directed to proceed to the Mullet Key, Florida, quarantine station, and report to the medical officer in command for duty and assignment to quarters—August 8, 1901.

PROMOTION.

Hospital Steward E. P. Olsen promoted and appointed a clerk of Class 2 in the office of the Surgeon General, U. S. Marine Hospital Service, July 16, 1901.

RESIGNATION.

Acting Assistant Surgeon E. A. Smith resigned to take effect from and after July 31, 1901.

Changes in the Medical Corps of the Navy. For week ending August 10, 1901.

SURGEON F. J. B. CORDEIRO, ordered to the Pensacola Navy Yard—August 7.

P. A. SURGEON D. H. MORGAN, detached from the Navy Yard, Pensacola, Fla., and ordered to the Naval Hospital, Norfolk, Va.—August 7.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended August 10, 1901.

SMALLPOX—United States and Insular.

			Cases	Deaths
ALASKA:	Klukswan	July 26, present.		
CALIFORNIA:	San Francisco	July 21-28,	2	
NEW JERSEY:	Newark	July 27-Aug. 3, . . .	1	
NEW YORK:	Buffalo	July 22-29,	1	
	Elmira	July 27-Aug. 3, . . .	1	
	Gowanda	July 28,	1	
	New York	July 27-Aug. 3, . . .	41	11
NORTH DAKOTA:	Bismarck	July 13-29,	1	
	Fargo	July 6-13,	1	
	Fisher	July 6-13,	1	
	Kensal	July 6-13,	1	
	Mayville	July 13-29,	1	
OHIO:	Cincinnati	July 26-Aug. 2, . . .	2	
PENNSYLVANIA:	Philadelphia	July 27-Aug. 3, . . .	1	
TENNESSEE:	Memphis	July 27-Aug. 3, . . .	2	
WASHINGTON:	Tacoma	July 21-28,	1	
PHILIPPINES:	Manila	June 15-22,	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague	July 13-29,	1	
BELGIUM:	Antwerp	July 13-29,	2	
BRAZIL:	Rio de Janeiro	June 30-July 14, . . .	52	
COLOMBIA:	Panama	July 19-26,	6	
FRANCE:	Paris	July 13-29,	5	
GREAT BRITAIN:	Dundee	July 13-29,	5	
	Glasgow	July 13-26,	3	
	Liverpool	July 6-13,	1	
	London	July 6-29,	26	
INDIA:	Bombay	July 2-9,	5	
	Calcutta	June 29-July 6, . . .	8	
	Madras	June 22-July 5, . . .	13	
ITALY:	Messina	July 13-29,	9	
NETHERLANDS:	Rotterdam	July 20-27,	2	
RUSSIA:	Moscow	July 6-13,	3	
	Odessa	July 13-29,	1	
	St. Petersburg	July 6-13,	3	
	Warsaw	July 6-13,	1	
URUGUAY:	Montevideo	June 8-15,	35	1

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	June 30-July 14, . . .	6	
CUBA:	Havana	July 20-27,	3	
MEXICO:	Vera Cruz	July 28 Aug. 3, . . .	1	

CHOLERA.

INDIA:	Bombay	July 2-9,	2	
	Calcutta	June 30-July 6, . . .	17	
	Madras	June 22-July 6, . . .	4	
JAVA:	Batavia	June 22-29,	30	20

PLAGUE—Insular.

PHILIPPINES:	Manila	June 15-22,	9	13
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PLAGUE—Foreign.

INDIA:	Bombay	July 2-9,	68	
	Calcutta	June 30-July 6, . . .	15	
	Karachi	June 30-July 7, . . .	1	

GREAT BRITAIN.

New Hospital in Scotland.—A new hospital for tuberculous patients is about to be built near Aberdeen, Scotland, with money obtained entirely by voluntary contributions.

Against the Plague.—The London County Council has appropriated a sum equivalent to \$250,000 as a precautionary measure against the plague.

The "Baly Gold Medal."—The "Baly Gold Medal" which is presented every alternate year by the Royal College of Physicians of London for special distinction in the science of physiology, has been this year awarded to Dr. F. W. Pavy, Fr. R. C. P., F. R. S., consulting physician to Guy's Hospital.

Death from Cocaine Poisoning.—According to the *Medical Press and Circular*, an inquest was held last week at Cromer on the body of a young married woman who had succumbed to the effects of cocaine injected in view of a dental extraction. The assistant, an unqualified man, made three injections, equivalent to one grain of the alkaloid, and shortly after the teeth had been extracted convulsions set in, and death supervened within an hour without consciousness having been regained. It is remarkable that death

should have resulted from this comparatively small quantity. According to Dr. Murrell recovery has followed the injection of as much as fourteen grains, though anything over half a grain may give rise to very unpleasant symptoms of cardiac oppression. The most unsatisfactory feature of the case is the administration of the drug by an unqualified assistant, who ran some risk of being committed for manslaughter but the jury tempered justice with mercy by describing it as an accidental occurrence.

CONTINENTAL EUROPE.

Koch's Theory is being Investigated by Germany.—It is reported that Professor Koch's experiments with human and bovine tuberculosis were known for some time by the German government, which had appointed, at his request a commission of experts to examine the results, the commission including Professor Virchow and Pollinger. Warning has been given that the difference between human and bovine tuberculosis has not yet been definitely established, and that precautions for preventing the spread of the disease by butter and milk can not yet be abandoned.

New Medical Journals.—A journal exclusively devoted to military medicine and surgery has begun to be published in Paris under the name of *The Caducée*. A new periodical devoted to biochemistry has been founded in Strassburg by Professor F. Hofmeister. It will be known as the *Beiträge zur Chemischen Physiologie u. Pathologie*.

The University of Zurich has just acquired a new addition to its anatomical building. In this addition is a dissecting room with overhead light to accommodate two hundred students, and on the floor below a microscopical room of the same size. There is also an elegant little demonstration room with overhead light, a laboratory for anthropology, and a laboratory for advanced embryological study, together with a suite of rooms for the director. The old part of the building will be rearranged for a large lecture room, a reading and study room for the students, a museum, and the laboratories for the assistants. The courses given in Zurich in macroscopic and microscopic anatomy are amongst the most thorough in Europe.

Dr. Harper, of Madison, Wis., has been visiting the surgical clinics in London, Paris, Lausanne, Berne, Zurich, Heidelberg, Bonn, and Berlin. He seems to think the German (and Swiss) surgeons superior to the English and French, especially in their asepsis.

Professor Uhthoff, of Breslau, was recently elected Privy Medical Counsellor.

Serotherapy in Malignant Tumors.—G. M. Vlaeff, in a paper read before the Progooff's Russian Surgical Society (*Bohitchnaya Gazeta Bolikina*, Vol. XII, No. 21) claimed to have discovered a serum possessing curative properties in cases of malignant growths. In four cases of the latter affection he isolated from the tumor blastomycetes, in pure culture in two. These were passed successively through birds, and a serum was finally obtained from geese, which was employed for therapeutic purposes. In one case of epithelioma of the lip with secondary involvement of the glands, the serum was injected every fifth day, producing a local as well as general reaction. The former was characterized by a clearing up of the ulcer and a diminution of the infiltration of the lip; the latter by a general improvement of the condition of the patient. As soon as the local conditions improved, the patient was operated on, with favorable results. In the second case the patient suffered from an inoperable carcinoma of the breast. Five injections of the serum improved the patient's condition to such an extent that she was successfully operated on. In a third case of carcinoma of the tongue the ulcer cicatrized completely after two months treatment. In a fourth case of carcinoma of the breast of the size of an orange, 13 injections reduced the growth to one-third, while the infiltrated glands became normal. In summing up the results of his experiments, the author claimed that: (1) in incipient stages a complete cure may be accompanied by the serum; (2) if the disease is advanced but there is as yet no metastasis, the injection of the serum will check the progress of the disease by encapsulating the growth and thus prolong the life of the patient; and (3) if the disease is far advanced and metastatic growths developed in other organs, the serum will diminish the pain, produce sleep and improve the nutrition of the patient. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

July 27, 1901.

1. An Address on the Fight Against Tuberculosis in the Light of the Experience that has been Gained in the Successful Combat of Other Infectious Diseases.

PROFESSOR DR. ROBERT KOCH.

2. An Address on the Measures Adopted by Different Nations for the Prevention of Consumption.

PROFESSOR P. BROUARDEL.

3. A Discussion on the Treatment of Consumption by Climate. I. Introductory Address on the Classification of Climates and Comparison of Results. C. THEODORE WILLIAMS. II. Introductory Address Mainly on the Classification of Cases.

I. BURNEY YEO.

1. See Abstract of *Lancet* in Phila. Med. Journal.

2. See Abstract of *Lancet* in Phila. Med. Journal.

3.—Williams classifies the climates that are considered beneficial to consumptives as (1) marine climates, (2) dry warm climates, partly inland and partly marine, and (3) mountain climates. The resorts on the south coasts on the British and the Irish channels are suitable for the majority of the cases of chronic pulmonary tuberculosis, particularly for the strumous forms. The warm climates of Madeira, the Canaries and the West Indies have not, in the experience of the author, proved beneficial in consumption. Sea voyages as taken now-a-days are not very beneficial, because the route through the Suez Canal and the Red Sea exposes the patient to extreme and rapid vicissitudes of temperature. The lack of opportunity for exercise and occupation are other detracting features. Sea voyages, under certain conditions, however, taken in sailing vessels, are beneficial (1) in cases of hemorrhagic phthisis, in which large hemorrhage accompanies small areas of tubercularization; (2) in scrofulous or strumous phthisis, in which the lung disease is accompanied by strumous gland or joint affections; (3) in cases of chronic cavity, in which the tuberculous disease is unilateral and quiescent. In order to ensure the success of a sea voyage the patient must be certain of good and abundant food, of proper cabin ventilation, and the cruise should be principally in temperate climates and not in torrid ones. The dry, warm climates include the desert and the borders of the Mediterranean basin. The desert climate is characterized by dryness, warmth, sunshine, great radiation and, consequently, great contrasts between day and night temperatures and also by the purity and asepticity of the atmosphere. It is a climate in which life in a tent is not only possible but also pleasant. The diminution of cough and expectoration is sometimes very marked and as a rule catarrh disappears. The climates of the Mediterranean basin are, as a rule, cooler, more moist and more stimulating than those of the desert, but they are liable to greater changes of weather if not of temperature. A large proportion of the consumptive patients that are sent to these resorts consult the local medical man but once and then go their own very bad way, committing numerous acts of imprudence, and thus lose all the advantages that they expect to obtain. Consequently, the patient often returns home worse than when he left. These stations are likely to prove beneficial to cases of phthisis in which inflammatory processes have played a large part in predisposing to the disease, to cases of strumous phthisis, of laryngeal phthisis, of unilateral tubercularization and to the large class of patients who, either from the extent of the disease, feebleness of circulation or advancing years, are unable to endure the rarefied atmosphere and cold of high altitudes. Mountain or high altitude climates are characterized by diathermancy (Denison), by which the sun's rays are transmitted through the attenuated air, producing a difference between the sun and the shade temperatures of 1°F. for every rise of 235 feet; by their asepticity; and by their physiological effects on the human body, as demonstrated by the tanning of the skin chiefly by the ultra-violet solar rays, the effect on the circulation and the respiration. The author concludes that high altitudes, on account of the respiration of the rarefied atmosphere, produce hypertrophy of the healthy lung and local pulmonary emphysema around the tuberculous lesions, giving rise, in due time, to thoracic enlargement. It is possible that the arrest of tuberculous disease is at least partly due to the

pressure exercised on the tuberculous masses by the increasing bulk of the surrounding lung tissue, which by emptying the bloodvessels promotes caseation of the tubercle. These changes are accompanied by general improvement in digestion and assimilation, the cessation of all symptoms of disease, the return of the natural functions, gain of weight, of color, of nervous and muscular activity and of respiratory and circulatory power. Arrest of disease takes place in 58% of the tubercularization cases and great improvement in 87%. In cases in which there is excavation, arrest occurs in 21% and great improvement in 61%. The high altitude climate is especially beneficial in hemorrhagic phthisis and in phthisis in which the hereditary predisposition is strongly marked. It is well suited to chronic tuberculosis of the lungs in general, provided the extent of lung involved is not too large or the disease accompanied by much fever. The climate is contraindicated in acute phthisis, in catarrhal phthisis, in laryngeal phthisis, in fibroid phthisis, in phthisis accompanied by great nervous irritability, in patients with double cavities and in all patients whose pulmonary surface has been so much reduced that it does not suffice for complete respiratory purposes. The comparison of the results obtained in the various climates show that high altitudes are easily the best to which to send tuberculous patients. Climate is a most potent weapon in the treatment of pulmonary tuberculosis, as shown by results, and also because it gives invaluable assistance to hygiene and medicine. According to Yeo the objects of treatment by climate in cases of pulmonary tuberculosis are: (1) To arrest catarrhal conditions of the air passages, (2) to improve nervous and circulatory tone, (3) to increase the activity of the digestive functions and thus stimulate nutrition by promoting the desire and increasing the power to take exercise, (4) to raise the moral tone by affording a clear, bright and cheerful environment and (5) to diminish by its asepticity bacterial activity. It must be a question for consideration whether the so-called open-air treatment without regard to suitable climatic conditions will do all this. It should be our object, when practicable, to place the consumptive patient under conditions and in circumstances in which, without risk or injury, he may obtain the most complete and perfect aeration of the lungs possible. It is difficult to establish any precise and rigid classification of the cases best suited to particular places, because in many cases, and especially in the very early cases and in quiescent chronic cases with a limited area of local disease the patients will do well and obtain arrest of the disease in a variety of places with somewhat different climatic conditions. In the opinion of the author the value of the ocean voyage has been greatly overestimated and its serious drawbacks insufficiently realized. Patients seen at the very commencement of the disease and who are otherwise in good health may be permitted a certain amount of choice in the selection of a climate, provided it allows of many hours spent daily in the open air and that they are placed under proper hygienic conditions. Patients who are suffering from a progressive febrile form of tuberculosis should repose in bed or on a couch at home in the best condition possible for the free access of air and sunshine to their apartments. Patients in the advanced stages of the disease are best off at home, if the conditions of home life are favorable, or in warm marine climates with cheerful surroundings if change is advisable. For the catarrhal forms warm, soothing climates, such as Madeira or Teneriffe, are the best. For rheumatic or gouty patients of the fibroid or pleurogenic type, dry, marine climates or the desert climate are most suitable. Scrofulous patients do well in fairly bracing marine climates, if they are free from catarrh; if catarrh is present, mild marine climates should be prescribed. For the majority of the other patients with moderately advanced cases, with the limitations already mentioned, the climate of the high mountains above the cloud belt is the most curative. The author does not believe that hemorrhagic cases should be placed in a group by themselves, because every case complicated by hemorrhage must be considered separately. [J. M. S.]

LANCET.

July 27th, 1901.

1. An Address on the Combating of Tuberculosis in the Light of the Experience that has been Gained in the Successful Combating of other Infectious Diseases

PROFESSOR DR. ROBERT KOCH.

2. An Address on the Prevention of Tuberculosis in the Different Civilized Nationalities.
PROFESSOR P. BROUARDEL.
 3. The Administration of the Manchester Milk Clauses, 1899. JAMES NIVEN.
 4. Sterilization and Pasteurization v. Tubercle-free Herds, etc. E. W. HOPE.
 5. Natural Immunity from Tuberculosis in Natal, South Africa. JAMES F. ALLEN.
 6. The Treatment of Phthisis as a Prevalent Disease in Holland. R. de JOSSELIN de JONG.
 7. On the Relations of Tubercle Bacilli to other Bacteria Resistant to Acids and to Actinomyces.
ALFRED MOELLER.
 8. Examination of Carcasses in Cases of Cattle Tuberculosis. WILLIAM BROWN.
 9. Tuberculin as a Diagnostic Agent. HAROLD SESSIONS.
- 1.—See abstract in *Philadelphia Medical Journal*, August 3, 1901.
 - 2.—Brouardel in an address delivered at the 3d general meeting of the British Congress on Tuberculosis, on July 21, directs our attention to the **prevention of tuberculosis in the different civilized countries**. The mortality from this disease varies in them, and it has been variously estimated as being one-sixth, one-fifth, and sometimes one-fourth of the total mortality. He points out that for many centuries the general opinion has been that the disease was incurable and therefore the struggle against its spread was considered useless. Villemin is to some extent responsible for the changed view in regard to the hopelessness of the prognosis, for this author, in 1865, demonstrated the contagious nature of the disease, but it remained for Koch to discover the exciting agent of this contagion—a factor which has entirely changed. The author reviews the various steps that have been taken to cure, prevent, and exterminate tuberculosis in different civilized countries. The facts which he has mentioned and the conclusions which he has drawn may be summarized in the single statement that tuberculosis should be universally known as a disease which is avoidable and one which can be cured. When these two points become known, anti-tuberculous efforts will multiply so rapidly and become so efficient that it may be reasonable to prophesy that with this united effort the civilized world will finally succeed in exterminating this scourge. [F. J. K.]
 - 3.—Niven delivered an address before the Tuberculosis Congress on the **Administration of the Manchester Milk Clauses**. The almost complete absence of tuberculous lesions in new-born infants compared with children suffering from abdominal and other tuberculous lesions, leads to the probable conclusion that the food of young children is more liable to produce tuberculosis than the food of adults. This conclusion is greatly strengthened by the experimental evidence presented by Cheveau, Joehne, Woodhead and Mertin. This facts lead the Royal Commission to establish laws excluding the sale of milk from cows affected with tuberculosis of the udder, or those exhibiting clinical symptoms of the disease. The authorities were given power to slaughter the diseased animals, subject to compensation under certain named conditions. The Sanitary Committee of Manchester, in September, 1898, adopted milk clauses which gave the authorities unlimited power to inspect cows on all farms supplying the city with milk, and further provided for the exclusion of milk from animals affected with diseased udders of any kind. Other communities soon followed the example set by Manchester. It was clearly recognized by this time that a clause should be inserted which should provide for the slaughter of cows affected with tuberculous udders. The remainder of the article deals chiefly with the laws and the attempts at establishing laws in order to exterminate tuberculosis from dairy cattle. The author suggests the following: (1) That it should be required by law that cows suffering from tuberculous udders should be slaughtered in the presence of a veterinary surgeon; (2) there should be no restrictions upon the inspection of herds supplying a district with milk; and (3) for the failure to notify the authorities of suspicious conditions of the udder, there should be imposed a penalty. [F. J. K.]
 - 4.—Hope discusses sterilization and pasteurization vs. tubercle free herds. He contends that raw milk is more susceptible to contamination and more exposed to contamination than any other food. Milk from a healthy animal, passing directly at the time of its secretion into the glands into the stomach of a young animal, is bacteriolo-

gically clean and pure. Sterilization, a valuable safeguard against tuberculosis, is of far less advantage in preventing contagion than the procuring of milk from herds free from tuberculosis. It should be our aim to see that the source of our milk is pure, free from tuberculosis. He has no hesitancy in declaring that it is possible, through the enactment of laws, to insure a milk supply from cows free from tuberculosis. The remainder of the article is largely devoted to the consideration of the predisposing causes of tuberculosis in cows. [F. J. K.]

5.—Allen delivered a lengthy address before the Tuberculosis Congress on the **natural immunity from tuberculosis in Natal, South Africa**. This author believes that the situation, topography, and climate of Natal are responsible for this natural immunity, which exists not only in the human race of that country but also in the animals. [F. J. K.]

6.—R. de Josselin de Jong communicated an article to the Tuberculosis Congress on the **treatment of phthisis as a prevalent disease in Holland**. During the last few years sanatoria have been established in the Netherlands, and the results of this plan of treatment may, in general terms, be said to compare with those gained at foreign sanatoria. The beneficial effects which consumptives gain by treatment in a sanatorium are: (1) The improvement in the health of the patient; (2) the subject of hygiene is taught at such an institution, and these teachings are spread amongst the poor and less intellectual classes by these patients. This author makes an earnest plea for the maintenance of the remainder of a family, when the patient admitted is the person upon whom the support of his family depends. The influence brought about by such a plan will relieve and cheer the mind of the patient and greatly influence the prognosis. After the patient has received beneficial effects from the sanatoria he should not return to unhealthy surroundings. With the establishment of sanatoria it should be our duty to improve the houses of the working classes, so that when a patient is entirely or partially cured, he will be able to continue with the hygienic rules of life learned at the institution. [F. J. K.]

7.—Moeller discusses the **relations of tubercle bacilli to other bacteria resistant to acids**, before the Tuberculosis Congress. This author calls our attention to the fact that quite recently micro-organisms have been discovered, which, like the tubercle bacillus, are resistant to acids. Koch contends that while the peculiar reaction of the tubercle bacilli is of value the etiological significance of this micro-organism by no means can be determined by its specific color reaction. Klein and Marmorek have demonstrated that young tubercle bacilli do not resist acids and alcohol, a fact which the latter attributes to the tubercle bacilli not yet being covered with a fatty or waxy envelop, while the former believes the resistance of the micro-organism to acids depends upon the formation of chemical substances by the bacilli, which are wanting in the young organisms. Burrel succeeded in removing the power of resisting acids and alcohol by treating the tubercle bacilli with warm xylol. By this method he modified the tinctorial reaction but did not influence the pathogenic properties. The lepra bacillus, smegma bacillus, and the organism of the avian tuberculosis resemble the tubercle bacillus. The lepra bacillus is shorter than the tubercle bacillus but of more uniform length and stains more readily than the latter organism. The smegma bacillus was discovered by Tabel and Alberez in 1885, in normal preputial smegma. The author mentions that the organism of avian tuberculosis differs from the organism of tuberculosis in mammals in the appearance of the cultures and the temperature conditions. Petri and Rabinowitsch succeeded in finding a bacillus (not the tubercle bacillus) in butter which was resistant to acids and alcohol. Moeller succeeded in cultivating a micro-organism similar to the tubercle bacillus and the grass bacillus II. from milk, and as the grass bacillus is so constantly found in cattle-fodder, he believes we are justified in arriving at the conclusion that the milk and butter bacilli are varieties of the grass bacillus. Morphologically and tinctorially the grass bacillus is identical with the tubercle bacillus. Moeller has given the name "timothy bacillus" to that micro-organism which was first found in timothy grass. The cultural characteristics of the timothy bacillus differ from those of the tubercle bacillus. It may be cultivated upon nutritive media at room temperature—colonies appear after 36 hours. The pathological changes produced in guinea pigs by the timothy bacillus are almost identical with those induced by the Petri-Rabinowitsch butter bacillus. By the injections of

cultures of this micro-organism into the veins and arteries of an animal the pathological lesions which develop are difficult to distinguish from true tuberculosis. Reference is also made to the manure bacillus, a variety of grass bacillus, found in the excrementitious matter of cows and other herbivora. Morphologically and tinctorially the grass bacillus and its varieties, milk and butter bacilli, and the manure bacillus are practically identical with tubercle bacilli. The behavior to temperature and the cultural characteristics of the grass bacillus differ from those of the tubercle bacillus. The very slow growth of the tubercle bacillus and the fact that incubation temperature is most favorable for its growth, places it in a unique position when compared with other acid resisting bacteria. Moeller, Frankel Pappenheim, and Rabinowitch have found bacilli in the sputum of individuals which resembled genuine tubercle bacilli in point of morphology and color reaction. The diagnosis of tuberculosis in the absence of physical signs, and in the presence of finding bacilli resistant to acids in the secretions of the respiratory organs, must be confirmed by cultural characteristics, the tubercle bacillus growing slowly and at its peculiar temperature requirements. The author suggests the following simple method. A small amount of the secretion containing the acid resisting bacilli is mixed with nutritive bouillon and incubated at 30 C. If, at the end of 24 hours, there is an increase in the bacilli resistant to acids it may be inferred that these are not tubercle bacilli. The pseudotubercle bacilli, when inoculated into animals, produce a tuberculous-like disease in a limited number of cases under certain conditions. The tubercle bacillus always produces tuberculosis. Macroscopically pseudotuberculosis of animals bears a resemblance to genuine tuberculosis, differing however, in the fact that pseudo-tubercles are of an inflammatory character and show a tendency to the development of abscesses. In the tubercles are seen the caseous substance, giant cells, and epithelioid cells; these are very rarely found in the pseudo-tuberculosis. If tubercle bacilli and butter are injected into the peritoneal cavity of an animal, a peritonitis is induced which is identical with the inflammation, produced by the injection of the pseudo-tubercle bacilli, and differs entirely from typical tuberculosis. The author concludes the article by stating that the etiological significance of the tubercle bacillus is quite distinctive, and that this organism occupies a unique position among bacteria resistant to acids. [F. J. K.]

8.—Brown gives an account of the post-mortem appearances of bovine tuberculosis, in a paper communicated to the British Congress on Tuberculosis. This lecture was illustrated by 106 lantern slides. He gives a detailed account of the tuberculous lesions of the brain, the eye, the pharyngeal glands, the tonsils, the cervical glands, the heart, the larynx, the lungs, the liver, the spleen, the uterus, the bladder, the udder, and of the bones. This author sets forth a view that the tubercle follicle is composed of leukocytes or phagocytes and that these cells resist the invasion of the tubercle bacilli. In bovine tuberculosis the giant cell is present as a constant and conspicuous feature in the early stages of the morbid processes. This author does not agree with those who hold that the giant cell is an enlarged fixed connective tissue cell, but he believes with Metchnikoff, that this cell is formed of numerous leukocytes. The central portion of the giant cell he states is composed of the debris of dead leukocytes which were engaged in the conflict with the tubercle bacilli, and he regards the zone of leukocytes which are found beyond the giant cell area as having a protective function, and the outermost zone of the tubercles as being composed of leukocytes which are engaged in constructing a fibrous wall to prevent a further advance of the enemy. [F. J. K.]

9.—Sessions writes on the value of tuberculin as a diagnostic agent. He discusses the value of this agent from a practical and commercial point of view, rather than from a laboratory standpoint. He is an ardent advocate of its employment and holds that the incorrect and often contradictory results obtained from its use are due to the following conditions: (1) From the use of old and inefficacious tuberculin; (2) harshly and improperly performed tests; (3) from errors made at the postmortem examination; and (4) from the failure of the operator to understand what he sees. The results of this test as it was employed were excellent. Sessions carefully studied the technique and the results in a large number of cases in the Argentine. He urged the Congress in order to prevent misuse of this valuable diagnostic agent to adopt a plan whereby tuberculin could be supplied from a single central authority, and

further, that a statement of the results should be secured from those who use it. The advantages to be gained from such a method are patent. A properly prepared standard tuberculin could be supplied and much needed statistics could soon be compiled. [F. J. K.]

MEDICAL RECORD.

August 10, 1901.

1. The Propagation of Yellow Fever; Observations Based on Recent Researches. WALTER REED.
2. Empyema of the Antrum of Highmore in Young Infants. EMIL MAYER.
3. The Selection and Sterilization of Muriate of Cocaine for Spinal Anesthesia. WM. C. RILEY.
1. A Case of Primary Epithelioma of the Uvula. SEYMOUR OPPENHEIMER.
5. Multilocular Cyst of the Inferior Maxilla; Operation; Recovery. J. A. OTTE.

1.—Walter Reed contributes a paper on the propagation of yellow fever, including observations based on recent researches. He reviews the question of the mosquito theory of yellow fever, giving full credit to Carlos J. Finlay for the discovery. A series of 16 cases are reported, in which the effort was made to establish the disease experimentally. Of these 16 cases, 12 submitted to the bite of the infected mosquito, and of these, 11 developed the disease. In two the results were negative, and in four cases injected with infected blood, three were positive and one negative. Reed studies the results obtained by Carter at Orwood and Taylor, Miss., in 1898, on the interval between the infecting and secondary cases of yellow fever. 93.7 per cent. of Carter's cases correspond with the mosquito interval; that is, the secondary cases occur at just the interval—thirteen to twenty-three days—when we would expect them to develop, provided the mosquito was concerned in the propagation of the disease. In only one of the sixteen first secondary cases was the interval as short as eleven days and fifteen hours. If the commencement of the attack in this case had been recorded correctly it would indicate that the number of days which we have given as about twelve, would have to be shortened somewhat, probably to ten days. Reed adds that of two of the nurses who remained continuously in attendance upon a case of yellow fever at Quemados, Cuba, one contracted the disease on the fourteenth day after the commencement of the primary case. He concludes by stating that he does not believe we can longer ascribe with confidence any part of the spread of yellow fever, nor can the disease properly be classed as a filth disease. [T. L. C.]

2.—Emil Mayer reports a case of empyema of the antrum of Highmore in a young infant. He states that there are but few reported cases of this affection in the literature, and he gives a résumé of these cases. [T. L. C.]

3.—William C. Riley presents a paper on the selection and sterilization of cocaine for spinal anesthesia. Following his method of dry sterilization, a careful selection is made of muriate of cocaine which is broken in a mortar into moderately fine fragments and heated in a dry sterilizer to 110° C. for about 20 minutes and then blotted in a clean, dry bottle with a tightly fitting rubber stopper. This insures a dry salt to begin with, which is quite essential for the after process. Small graduated vials or tubes, carefully cleansed, dried and flamed, are selected, and when cool such an amount of the cocaine is weighed off into each as will make, when the vials are filled to this mark with sterilized water, a two per cent. solution. The mouth of the tube is then closely stoppered with a plug of freshly dry-sterilized absorbent cotton (150° to 160° C. for one hour). It is then placed in a dry sterilizer and the temperature gradually raised from 145° to 150° C., and maintained at that temperature for from ten to sixty minutes. Ten minutes is usually sufficient time to fulfill all requirements, but there might be a possibility of contamination with certain spores which would require a longer period. After cooling, the vials may be taken out and stoppered with sterilized rubber stoppers, or well-fitting corks which have been plunged in a wax resin mixture heated to 170° C., or the end of the tube may be drawn out and sealed. This method, according to the author, gives perfect sterility and absolute efficiency, and presents the further advantage that the product being dry lasts an indefinite time, and that it is a definite quantity.

[T. L. C.]

4. Seymour Oppenheimer reports a case of **primary epithelioma of the uvula** occurring in a man 81 years of age. On account of the age of the patient the glandular involvement which existed and the general impairment of health, operative interference was not considered advisable. [T. L. C.]

5. J. A. Otto reports a case of **multilocular cyst of the inferior maxilla** occurring in a well-nourished lad of 16. After removal of the tumor it was seen through near the symphysis. In the section fifteen large and small bony cysts were seen, the largest the size of a dove's egg. These did not communicate with each other; besides this, on cutting through the bony portions numerous other cysts were found. These cysts contained a glary brownish fluid. In some cases the walls were smooth, and in other cases lined with interlacing trabecula. The patient recovered. [T. L. C.]

MEDICAL NEWS.

August 10, 1901. (Vol. LXXIX, No. 6).

1. The Condition of the Kidneys with Reference to the Employment of Diuretics. ARTHUR R. ELLIOTT.
2. The Therapeutics of Subacute and Chronic Heart Diseases. THOMAS E. SATTERTHWAIT.
3. Gouty Affections of the Kidneys. RICHARD K. MACALESTER.
4. Uremia and Its Differential Diagnosis. S. D. HOPKINS.
5. The Cardio-Vascular Changes of Renal Disease. J. N. HALL.
6. Renal Functions and Life Insurance. CLINTON G. HICKEY.

1.—A. R. Elliott concludes the following: (1) Except in the case of the irritant epithelial diuretics (turpentine, cantharides, etc.) the entire class of diuretics may be said to exert their effect upon the urine by acting directly through the circulation; (2) owing to the necessity for sparing the kidneys all irritation, drugs given for diuretic purposes should act indirectly rather than directly, consequently the secretory diuretics are contraindicated in irritative and inflammatory renal conditions; (3) In functional urinary disorders diuretics are mainly useful to overcome concentration and hyperacidity of the urine. To accomplish this, simple diluents and salines are best adapted; (4) In acute nephritis saline diuretics are permissible throughout the entire course of the disease and exert a beneficial influence by increasing elimination and clearing the tubes of inflammatory debris. Subcutaneous saline infusion constitutes our most powerful eliminant in desperate cases; (5) In chronic nephritis the cardio-vascular diuretics are most useful, owing to the fact that oliguria and dropsy are usually the result of circulatory failure. The dropsy under such circumstances, being of cardiac origin, may be benefited by cardio-vascular stimulants provided the kidneys are not too badly damaged; (6) Dropsy of purely renal origin is not amenable to favorable influence by diuretics; (7) Although the morbid process in the kidneys may furnish us with our primary inspiration to diuretic medication, it is the condition of the heart and circulatory apparatus in most cases that determines the choice of an agent. [T. M. T.]

3.—R. K. Macalester gives the following pathology of the so-called gouty kidney: It is identical in appearance with the small, red, granular kidney of other origin. It is much contracted with a shriveled granular surface, and the capsules thickened and adherent. The decrease of size is chiefly at expense of the cortical portion. Microscopically, there are present the signs of destruction of the renal parenchyma with connective tissue formation, degeneration of the epithelium of the uriniferous tubules and the glomeruli, and endarteritis obliterans of the larger arteries. Deposits of uric acid and urates, appearing as white streaks in the direction of the tubes in the pyramidal portion and the little white points in the cortical, were attributed to the gouty origin of the trouble, but since these same concretions have been demonstrated in the kidneys of very young children, and in other conditions they cannot be considered pathognomic. Besides the small, contracted kidney, large, and mixed granular forms have also occasionally been met with, and described as dependent on gout. [T. M. T.]

4.—S. D. Hopkins mentions a form of uremia in which the symptoms are very slight, "latent uremia," and due to

complete obstructive suppression of urine. The symptoms are little headache, nausea, pupils contracted, tongue dry, temperature subnormal, weakness and drowsiness and toward the end slight twitching of the muscles. The most trustworthy signs are the contracted pupils, subnormal temperature and no loss of consciousness. [T. M. T.]

6.—C. G. Hickey, in his article on Renal Functions and Life Insurance, has ascertained that about one-sixth of the applications for life insurance are refused, all causes being taken into consideration, and that at least one-fourth of these rejections are based upon the presence of albumin in the urine, although not all of these are suffering from irreparable damage of the kidneys. The question of albuminuria still continues, as it has been, a moot one. The number and variety of the pathological relations under which albumin may appear in the urine compel us to regard it as dependent not only upon inflammation, grave congestions and other coarse organic changes, but upon slight variations in the mechanical conditions of the circulation in the kidney. Excluding accidental admixtures of blood or pus from the bladder or urethra, albuminuria is met with in not only acute and chronic Bright's disease, but in diseases of the heart, lungs, and liver, in peritonitis, pregnancy, abdominal tumors, in most febrile and inflammatory diseases. In many cases of poisoning, cancer, tubercle, and syphilis; in lardaceous disease, in anemia, debility, dyspepsia, scurvy, after paroxysmal hemoglobinuria, in gout, in delirium tremens, in various diseases of the brain and spinal cord, in epilepsy, in certain skin diseases, as well as in apparently healthy persons after bathing, exercise, etc. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

August 10, 1901. (Vol. LXXIV, No. 6).

1. Cleft Palate and Its Association with Hare Lip. JOHN H. BRANTH.
2. Acute Lobar Pneumonia: A Pathological and Clinical Study of 120 Consecutive Cases Subjected to Post-mortem Examination. JOHN LINDSAY STEVEN.
3. Suggestions for a Study of Fats in Their Relation to Physiological Chemistry, Therapeutics and Toxicology. JOHN REID.
4. The Home Treatment of Tuberculosis. IRWIN H. HANCE.
5. A New Method of Testing for Lactic Acid. MARK I. KNAPP.

1.—J. H. Branth, in his article on **cleft palate and its association with Hare-Lip**, gives the following varieties of the deformity: (1) The median (intermaxillary). This is so rarely met with that its occurrence has been denied; it comes from failure of the endognathion. Most frequently it involves only the lip, more rarely there is entire absence of the intermaxillary bone and a complete cleft of the palate, hard and soft. This would be a condition of *central cleft*; (2) Ordinary hare-lip (intermaxillary), either unilateral or bilateral, is the usual form. Here there has been a failure of union between the central and outer portion of the upper lip; (3) Facial cleft (intermaxillary). The cleft arises from the upper lip, skirts around the ala of the nose, and reaches to the inner canthus of the eye: It usually involves only the soft parts and not the bone; (4) Buccal cleft (maxillomandibular), or macrostomia. In this deformity there has been a failure of union of the portion of the cheek developed from the maxillary process with that from the mandibular arch (an opening just anterior to the ear); (5) Mandibular cleft, or median fissure of the lower lip, is explained by the failure of the mandibular arch of either side to unite. It is very rare; (6) Cleft palate. The uvula, alone may be involved, or the cleft palate may extend partly or fully through the hard palate. Normally, union takes place from before backward so that incomplete cleft always involves the posterior portion of the palate. Now, when the cleft is complete (often called Wolf's jaw -- *Wolfsraehen*), or, rather, when there is no union of the parts forming the roof and interior wall of the mouth, and the upper lip is also divided, there is a double hare-lip, the intermaxilla being attached to the vomer and carrying the central portion of the lip. Or there may be a single hare-lip, usually on the left side, and then the intermaxillary bone is attached to the right side of the hard palate, projecting more or less in front. Here the vomer is

usually attached to the right side of the hard palate, though it may hang entirely free, and may even extend to the back of the pharynx, dividing that cavity into two.

[T. M. T.]

2. J. L. Steven divides pneumonia into two classifications primary and secondary. By primary pneumonia he means that variety of that disease which begins acutely in the midst of ordinary health and runs the characteristic clinical course. Secondary pneumonia includes those cases in which the pulmonary lesion may be looked upon as the direct result, either of some old standing primary lesion elsewhere, or of septic absorption or insufflation. Macroscopically and microscopically the structural change may be the same in both. He does not believe that it is possible, at present, by the ordinary bacteriological methods to differentiate the two forms. The conditions of the other organs in this disease are the same as are met with in specific fevers. We find cloudy swelling of the liver, kidneys and spleen; especially do we find enlargement of the spleen. The author believes that acute lobar pneumonia is a general disease, and not a local one. His statistics show that 21 died on or before the sixth day; 48 from the seventh to the eleventh day, and that the crisis of the disease occurred on the seventh or eighth day.

[T. M. T.]

3. J. Reid states in his article that iodide of potassium has been used as an eliminator of poisons, and cod-liver oil has been used merely to add fat to an exhausted system. It may well be asked whether the oil is only a fattener, or whether it also serves to eliminate poisonous principles. The use of fat as a vehicle, as a menstruum, in the economy has been neglected, and its elective affinity has been either unknown or ignored. These two functions appear to the author to be highly important to the economy, and to open up a subject well deserving careful study. The use of oleaginous matters in some cases might replace that of iodide of potassium. To sum up: (1) In urinary analysis—oleic acid is useful and speedy in dissolving various principles; (2) in analyzing organs—they may be partly analyzed by acidulating and extracting with supernatant oleic acid, or the fat should be skimmed off and treated with benzene, so as to make complete analysis; (3) fat may be used to eliminate poisons from the body; (4) the elective affinity of drugs may be partly due to their fat affinity; (5) the whole subject of fat in its relation to the economy is worthy of careful study. [T. M. T.]

4.—In the Home Treatment of Tuberculosis, I. H. Hance gives three fundamental needs of patients suffering from the above disease: (1) **Fresh air**; (2) **Good food**; (3) **rest**. Fresh air is required every day and night, the more the better. In winter the room should face south and west, in summer east and south. A fireplace and windows at both sides are advisable. For patients who are bed-ridden, a house with a southern exposure in winter with a piazza where large quantities of sunshine can be obtained and the greatest protection from the prevailing winds. For summer, tent life, night and day, is the ideal one. It is the physician's business to regulate the temperature of the sleeping room, how windows and blinds should be arranged at night, and how long patient should be out of doors, gradually keeping him out longer and longer until he is out the whole day, rain or shine. As to food, if the stomach is delicate, prescribe absolute rest, concentrated liquid food every two hours until 8 P. M., and once during the night, with one evacuation of the bowels daily. Over-feeding is the principle to act upon in all cases, whether feverish or not, whether incipient or advanced, and this is to be kept up until the patient is up to or above his usual weight. It is advised to give three good meals a day with something easily digested between meals and at bedtime. Rest should be absolute in all febrile cases and in all cases at the commencement of treatment for a period of from one to four weeks. Exercise should be controlled in regard to temperature, heart's action, chills, slight suspicions of blood in sputum, loss of or stationary weight and a state of distinct over-fatigue. The author does not think that enough attention is given to the action of the skin. Clothing and bathing are two of the most important aids in producing this action. [T. M. T.]

5.—M. I. Knapp gives a new method of **Testing for Lactic Acid**. For the test a very weak solution of ferric chloride and ether is needed. The strength of the iron solution is 1 to 2,000 freshly prepared. The test is performed as fol-

lows. One cubic centimeter of the filtered gastric juice is put into a cylindrical separatory funnel and to it is added either up to five centimeters. The gastric juice with the ether is then well shaken, by which procedure the gastric juice, if present, is extracted by the ether. This is allowed to remain quiet for a little while to permit of the separation of the two liquids. About two centimeters of the iron solution are put in a test tube of about half an inch in diameter, the iron solution appearing then practically colorless. The test tube is now held inclined and the ether extract is allowed slowly to run from the separatory funnel on the wall of the test tube, which is now turned to a vertical position. At the line of contact of the two liquids appears the canary-yellow ring, which is in very marked contrast with both the subnatant and supernatant fluids. If this canary-yellow ring is not so well distinguished immediately, then the test tube may be looked at again after a few minutes. To see this yellow ring better a white paper is held behind the test tube, our back being turned toward the source of light. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 8, 1901.

1. Scientific Research; the Indispensable Basis of all Medical and Material Progress.

GEORGE BAGOT FERGUSON.

2. A Critical Note Upon Clinical Methods of Measuring Blood Pressure.

WM. H. HOWELL and C. E. BRUSH.

3. The Relations of Bodily Mutilations to Longevity.

JOHN HOMANS.

4. The General Character of the Problems of Public Health Bacteriology. HILBERT W. HILL.

5. Intracranial Pressure After Head Injuries.

WALTER H. CANNON.

2.—There are two instruments that have been devised for the clinical measuring of the blood pressure. The Gartner instrument is by far the simpler, but the Mosso apparatus, if properly used, is more sensitive and exact. Howell and Brush believe that it is desirable, when possible, that the results of one method should be checked by those of the other. Neither instrument can be used successfully for comparative results without careful attention to details.

[J. M. S.]

3.—After a study of the relation of bodily mutilations to longevity, Homans concludes that, as a class, persons who have suffered amputations or other mutilations are not so likely to be long lived as those who are healthy and have not been mutilated. By careful selection, however, many of the mutilated persons might be picked out who would be good subjects for life insurance. [J. M. S.]

4.—Applied bacteriology finds expression at the present time in 4 more or less distinct fields: (1) Industrial bacteriology is concerned particularly with the action of bacteria as they affect certain industries of economic importance. (2) Pathological bacteriology is occupied chiefly with the relations of certain bacteria to the animal body. (3) Water and sewage bacteriology. (4) Board of Health bacteriology. One problem constantly pressing on all health board laboratories is that of sending out early and accurate reports. The promptness of the reports depends largely upon executive arrangements, but their accuracy depends upon complete knowledge and perfect methods. Unfortunately, our knowledge is incomplete and our methods imperfect. We are, therefore, constrained to acquire more information and to improve methods. In diphtheria diagnosis, for example, certain forms of bacilli are found which, while morphologically perfectly familiar, must still be considered as belonging to those forms the true relation of which to the diphtheria bacillus has not yet been determined. It may, at first glance, seem strange that a problem as simple as this one apparently is should be so difficult of solution. But in bacteriology the factors are not yet fully established, and, furthermore, the methods are still imperfect. Therefore it is necessary to impress upon the practitioner that working errors exist and to point out to him the nature of these working sources of fallacy so that he may allow for them and more intelligently interpret the reports that he may receive from the bacteriologist. [J. M. S.]

5. Cannon believes that the problem of the secondary

increase of intracranial pressure after head injuries is essentially the determination of the behavior of brain tissue deprived of its normal nutrition. It has been proved that lack of oxygen causes protoplasm to absorb water. The initial changes in the injured brain are hemorrhage and contusion with thrombi and extravasations. The result of these changes is an impaired blood supply to the injured region and a consequent lack of oxygen. The lack of oxygen causes an increased osmotic pressure within the tissues and a consequent taking up of water from the surrounding plasma. The swelling and edema of the brain after head injuries is not, therefore, due to passive transudation, but is the result of an active process in the tissues themselves, a force many times greater than blood pressure, and amply sufficient to produce all the pressure symptoms and to account for all the signs of intracranial tension which clinical cases of cerebral trauma often manifest. [J. M. S.]

AMERICAN MEDICINE.

August 3, 1901.

1. Cancer of the Uterine Neck, with Comments on the Present-day Teaching. J. M. BALDY.
2. Important Sequels Resulting from Delayed Operation in Appendicitis. A. STEWART LOBINGIER.
3. Two Cases of Vicious Circle After Gastro-enterostomy. THEODORE A. MCGRAW.
4. The Subarachnoid Injection of Cocain for Operations on all Parts of the Body. A. W. MORTON.
5. Twenty Years' Experience as Surgeon to Cambria Iron Company. W. B. LOWMAN.
6. Report of a Case of Hysteroepilepsy, in which the Climax of the Seizure was Expressed by Discharge of Blood Through the Intact External Auditory Canal. K. K. WHEELLOCK.
7. Some New Therapeutic Applications of Euphen. W. E. THOMAS.
8. Scientific Research; the Indispensable Basis of all Medical and Material Progress. GEORGE BAGOT FERGUSON.

1.—See abstract of *Jour. of Amer. Med. Assoc.*, in *Philadelphia Medical Journal*, August 3, 1901.

2.—A. Stewart Lobingier thinks that when a physician or surgeon speaks of having his patients recover without operation from appendicitis he should bear in mind the sequels of such treatment. These sequels are also apt to follow delayed operations. The formation of pus in large quantities is not necessary to septic metastasis. If the infecting bacteria are active, foci of infection may be set up at distant points within 24 or 48 hours. Intestinal obstruction is the frequent result of waiting for an abscess to be "walled off." The author quotes extensively from literature and refers to several of his own cases to show the bad results of delayed operations. [J. H. G.]

3.—T. A. McGraw reports two cases of vicious circle after gastroenterostomy. This complication occurred in these two cases although they were operated upon after the same manner as many others, where no such complication arose. In the first case the condition was discovered postmortem. In the second case it was diagnosed and operated upon. At the time of the second operation it was found that the afferent portion of the ileum which had been placed upon the left side of the body was now on the right side, in fact, the loop which had been made at the time of the operation was reversed. In order to accomplish this change the stomach had been partly twisted on its axis. The efferent limb of the ileum was found contracted and empty, while the afferent portion and duodenum were enormously distended. The afferent and efferent limbs of the jejunum were anastomosed by means of a Murphy button. The patient made a satisfactory recovery. (To be continued). [J. H. G.]

4.—A. W. Morton, in speaking of the subarachnoid injection of cocain for the purpose of producing analgesia says that in this method "we have a safe and reliable analgesia * * * for the performance of any surgical operation on any portion of the body, regardless of age, sex, or disease, and one which has no contra-indications." The author has followed this method 314 times. In only one instance has he seen alarming symptoms from its use. The ages of the patients varied from 8 to 86 years, and

many of them suffered from well advanced organic disease. The author has been unable to discover any remote complications from the use of the drug in this way. A number of the operations reported by the author were done on parts above the diaphragm. [J. H. G.]

August 10, 1901.

1. Expectant Treatment. (Continued). A. JACOBI.
2. Fusel-Oil Poisoning, with Special Reference to the Copper-Reducing Substances Eliminated in the Urine. THOMAS H. FUTCHER.
3. Acute Dilation of the Stomach. JULIUS FRIEDENWALD.
4. Two Cases of Vicious Circle, after Gastro-enterostomy. (Concluded). THEODORE A. MCGRAW.
5. Some Surgical Lessons from the Campaign in South Africa. SIR WILLIAM THOMSON.
6. The Value of Research in Medicine and Therapeutics. E. T. WILSON.
7. Friends in Council. JAMES F. GOODHART.
8. Puerperal Fever; Uterine Cancer; the Falling Birth-rate. JOHN W. BYERS.
9. Tropical Medicine. RONALD ROSS.
10. Asylum Administration and Nursing. J. B. SPENCE.
11. The Work of the Navy, Army and Ambulance Section. W. G. DON.

1.—Will be abstracted when concluded.

2.—Thomas B. Fletcher reports two cases of fusel oil poisoning with special reference to the copper reducing substances eliminated in the urine. His conclusions are drawn from the study of these two cases in addition to the study of the effects of the administration of fusel oil to dogs. He states that fusel oil when administered to animals, causes the elimination in the urine of combined glycuronic acid which reduces alkaline, copper and bismuth solutions and acts as a levorotation to polarized rays. When taken by men it acts as a profound intoxicant, causing unconsciousness of several hours' duration. In one of the cases it was followed by symptoms of hemiplegia. In certain cases it has been found to be a profound blood destroyer and causes methemoglobinuria. In both cases reported it caused transitory nephritis. Glycosuria was also produced in both cases, lasting two or three days. In addition to these facts, it was found that the evidence was fairly conclusive that glycuronic acid was present in addition to glucose. [T. L. C.]

3.—Julius Friedenwald discusses dilation of the stomach. He reports a number of cases from the literature together with two cases of acute dilation which were under his own care. As to the etiology of the condition, he believes that acute dilation may take its origin in a certain class of cases from some error in diet, or sudden overloading of the stomach; in another class of cases from a sudden paralysis of the muscles of the stomach, due to a poisoning of the nerve centers. There are certain symptoms characteristic of this trouble. These are the sudden and rapid distention of the stomach, the pain in the absence of peristaltic movements, the absence of vomiting and diarrhea, followed by intense and constant vomiting of very large quantities of greenish fluid and marked by exhaustion of the patient. The author points out the possibility of the occurrence of acute dilation in all cases of acute dyspepsia, indicating the necessity of emptying the stomach quickly. [T. L. C.]

4.—Continued from August 3, 1901). After discussing these two cases McGraw concludes his article with the following:

First.—The "vicious circle" may occur whenever the duodenum becomes permanently distended, even though the efferent limb of the jejunum offers an open passage to the ingesta. In all operations of this kind, therefore, an enteroenterostomy should be added to the gastroenterostomy in order that the duodenum may discharge its contents into the efferent portion of the jejunum.

Second.—It may also occur from obstruction due to spurs, twists, bends or other entanglements of the intestines. As such accidents may arise from a too short afferent limb of the jejunum, the anastomosis should always be made at such a distance from the duodenum as would make trouble from this cause impossible. The practice of turning the bowel around in order to make its peristaltic movements correspond with those of the stomach has no practical advantage whatever in cases of py-

loric stenosis; but, on the contrary, complicates the operation and tends to form a trap in which the intestine may become entangled. It may besides drag the wall of the stomach into a fold which may obstruct the opening into the bowel. This method of joining the viscera should be discarded.

Third.—As the orifices of communication may, if made too small, contract and become obliterated, the opening should be made at least 5 cm. in length. The effects of any resulting spur-formation will be obviated by the enteroenterostomy.

Fourth.—The safest and best method of operating is that by the elastic ligature. [J. H. G.]

5.—Address in Surgery at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901, and published synchronously by courtesy of the *British Medical Journal*.

6.—Introductory remarks delivered at the opening of the Section of Medicine, at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901, and published synchronously by courtesy of the Editor of the *British Medical Journal*.

7.—Address in Medicine, at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901, published synchronously by courtesy of the Editor of the *British Medical Journal*.

8.—An address delivered at the opening of the Section of Obstetric Medicine and Gynecology, at the annual meeting of the British Medical Association in Cheltenham, July-August, 1901, and published synchronously by courtesy of the Editor of the *British Medical Journal*.

9.—An address delivered at the opening of the Section of Tropical Diseases at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901, and published synchronously by courtesy of the Editor of the *British Medical Journal*.

10.—Introductory remarks delivered at the opening of the Section of Psychologic Medicine at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901, and published synchronously by courtesy of the Editor of the *British Medical Journal*.

11.—Introductory remarks delivered at the opening of the Section of Navy, Army and ambulance at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

August 16, 1901.

1. Results of Ovarian Surgery, with Further Report upon Intra-implantation of Ovarian Tissue. A. PALMER DUDLEY.
2. Elimination of Peritoneal Infection and Prevention of Surgical Peritonitis. JOHN G. CLARK.
3. Primary Carcinoma of the Nasopharynx. A Table of Cases. CHEVALIER JACKSON.
4. Case of Nasal Sarcoma, with Remarks. DUNBAR ROY.
5. Report of a Case of Epithelioma "Involving Tonsil, Faucial Pillar, Tongue and Buccal Surface," with Treatment and Apparent Cure. S. A. OREN.
6. The British Congress on Tuberculosis.
(See Abstract of *Lancet* in the *Philadelphia Medical Journal* of Aug. 13).

1.—Dudley, in speaking of **Conservative Surgery of the Uterine Appendages**, remarks that it is a well established fact that the ovaries in women can be treated surgically in an aseptic manner and that after such treatment they recover their lost functions and continue to do their full duty in the human economy for many years. Early in 1887 he began what was then experimental work in surgery on the ovaries. He has now operated upon 190 cases up to date without a single failure. Included in this number are cases in which the ovary has been completely buried in plastic exudate, in which the tube involved in the same has been completely occluded in its outer half; where the uterus has been displaced and firmly bound in such displacement; in fact, where every organ and function in the genital system of these women have been pathologic. He does not do such plastic work on the ovaries on a patient who is nearing the menopause, but only upon the young or those hopeful of bearing children. Social position influences him materially. The hard-working woman is not a fit subject for such work as a woman so situated in life as to be able to conserve her strength and, if necessary, to

take a prolonged rest. The history of hereditary taint from syphilis, tuberculosis or other diseases liable to influence the result would deter him from such work. The diseased condition of the genital organs also influences the conservative surgeon. For instance, uterine gonorrheal infection still active, syphilitic infection, still active, either secondary or tertiary, fibroid conditions that would require such extensive myomectomy that the ultimate result would be a deformed uterus, and probably occluded tubes, resulting in peritoneal complications would all contraindicate conservative surgery. In certain cases he prefers the intrauterine implantation of the ovary instead of the transplantation to the tube or abdominal wall. By this method the proper nerve supply to the ovary is not cut off, and should the ovarian tissue subsequently give trouble it is within the cavity of the uterus where it can be quickly reached with a sharp curette and removed without danger to the patient. [W. A. N. D.]

2.—Clark has made a study of **peritoneal infection and surgical peritonitis** and has arrived at the following conclusions: The peritoneum has an enormous absorbing function, being capable of taking up from 3% to 8% of the entire body-weight in an hour. Minute solid particles are carried in an incredibly short time from the peritoneal cavity through the diaphragm into the mediastinal vessels and glands, and thence into the blood-circulation by which they are quickly distributed to the abdominal organs and to the bone-marrow. The granular bodies are at first largely transported as free bodies, swept along by the lymph-current, but later the leukocytes act as the carriers. There is, normally, a force in the peritoneal cavity which carries fluids and foreign particles toward the diaphragm regardless of posture, although gravity may greatly favor or retard the current. After the introduction of micro-organisms into the peritoneal cavity there is great decrease in their number within the first hour, both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is, therefore, no possibility of limiting free infectious matter to any part of the peritoneal cavity by mechanical means. Vigorous streptococci which remain behind develop within 6 hours a repellent or destructive quality for leukocytes, and the lethal combat is inaugurated and well under way before drainage, as ordinarily employed, can possibly exercise any beneficial action. In many cases, therefore, in which surgical drainage is employed the patient recovers in spite of and not because of it. In many cases drainage, as ordinarily employed, is superfluous or even dangerous, and the rational method is to remove all possible debris and infectious matter by thorough irrigation and then leave one liter of salt-solution in the abdominal cavity. In order to promote and hasten natural drainage, supplement this by enema of a liter of salt-solution, given while the patient is well under anesthesia and in the Trendelenburg position. [W. A. N. D.]

3.—Chevalier Jackson speaks of the rarity of primary carcinoma of the nasal fossae and the even more rare occurrence of primary carcinoma of the nasopharynx. The author has made a careful search of the literature of the subject but has been able to collect only 14 cases of primary malignant disease of the naso-pharynx. Schmidt, out of 32,997 nose and throat patients, met with but one case, although laryngeal carcinoma was seen in 75 instances. A table of the 14 primary cases is presented and discussed. In discussing the question it is said that sex plays little part as a causative factor. It is thought that irritation can play little part in producing the disease since it is found so much more frequently in the larynx than in the naso-pharynx, and yet the latter locality is much more exposed to irritation. In the majority of cases where the location was reported the growth sprung from the vault. The disease was most frequent between the years of 40 and 60. In one-half of the cases where heredity was mentioned there was found to be an hereditary predisposition in one-half of the cases. The symptoms of the disease are pain, fetor, hemorrhage, bloody discharge, and glandular involvement, each of which the author discusses in detail. [J. H. G.]

4.—Dunbar Roy discusses the question of **nasal sarcoma** and reports a case. He thinks the disease more frequent than is generally supposed. The round-cell and alveolar forms are the most common. Some authors maintain that the disease very rarely originates in the nasal passages but that it extends here from one of the continuous passages. The most frequent seat in the nasal cavity is on and around

the turbinates. The average age at which the disease occurs is about 10 years. The prognosis of sarcoma in this region does not seem to be so bad as in other parts of the body. The author's patient was a young woman of 28 years of age who had undergone frequent operations for supposed polyp. When seen by the author her case was beyond operative interference. Coley's toxins were used for two weeks with decided reactions but no change in the growth. Dowbarn's operation of ligating both external carotids was done and produced some temporary decrease in the growth. It is thought that this case illustrates the transformation of a benign into a malignant growth. At the time of the removal of the polyp in this case there was an excessive amount of bleeding and Roy thinks wherever this occurs it should create suspicion as to the nature of the growth. [J. H. G.]

5.—S. A. Oren reports an interesting case of supposed epithelioma involving the tonsil, the faucial pillar, the tongue and buccal surface. The growth occurred in a man 73 years of age. The patient was examined by a number of surgeons and was thought to present all the clinical evidences of malignant disease and a portion of the growth examined microscopically was reported to be a squamous epithelioma. The condition was considered inoperable. The patient was placed upon the iodides and local treatment applied three times a day. Hypodermatic injections of alcohol were employed for the purpose of limiting the extent of the growth. Under this combined local and constitutional treatment the patient made a satisfactory recovery, and a year after the discontinuance of the treatment showed no return of the growth. In spite of the recovery Oren is inclined to consider this a case of epithelioma. [J. H. G.]

VRATCH.

May 5, 1901. (Vol. XXII, No. 18).

1. On Special Medical Meetings. D. N. SCHBANKOFF.
2. Genu Recurvatum. A. A. VOROBIEFF.
3. On the Influence of Common Salt on the Results of the Determination of the Organic Substances in Water by Kubel's Method. N. Ia. SCHMIDT.
4. Chaffkin's Lymph and Other Substances Elaborated by the Human Organism, Producing Immunity Against the Plague. A. F. VIGOURA.
5. A New Appliance of Engineer Iagn for Obtaining an Uninterrupted Current of Boiled and Cooled Water. S. Ia. LUBIMOFF.

2.—Will be abstracted when concluded.

3.—Schmidt found that the presence of sodium chloride in water introduces a considerable error in the determination of the organic matter by the permanganate or Kubel's method. 100 mgrms. of sodium chloride consume on an average 0.357 mgrms. of potassium permanganate or 0.098 mgrms. of oxygen. He therefore recommends Schulze's method, by which the error is practically avoided. [A. R.]

4.—Vigoura concludes his exhaustive paper with the following deductions made from a large number of experiments on monkeys and clinical observations: A. The defects of Chaffkin's lymph. (1) It confers immunity in the majority but not in all cases of preventive inoculation. No one immunized is assured against infection with and death from the plague. (2) The immunity produced by Chaffkin's lymph depends largely on personal equation of the immunized, and it is therefore impossible to determine the duration and the degree of immunity in each case. (3) The immunizing value of Chaffkin's lymph cannot be determined by the weighing method. (4) Being a fluid with an organic sediment, the lymph is liable to deterioration, although in India it has been kept for 4 months without losing in strength. (5) There is not a sufficient number of observations to enable us to determine the reaction in those cases which succumbed to the plague after the immunization and yet the necessary amount of the lymph is determined by the reaction. B. The virtues of Chaffkin's lymph. (1) It diminished the mortality from plague 10-15 times. (2) It is possible to diminish and possibly prevent an epidemic by timely and systematic use of the lymph. (3) The lymph has been tried in India on man on a large scale. It has for itself statistics and experience. Any new substance which may take the place of the lymph, owing to greater efficiency, will have to go through the same crucial tests by which the value of Chaffkin's lymph has been established. (4) With all the modifications of the tech-

nique, the method of preparation of the lymph has been rendered extremely simple, easily acquired without any considerable skill or expenditure, thus making it possible to manufacture the lymph at the very spot of the epidemic, even if the latter is removed from the centres of civilization and well equipped laboratories. Owing to the slight expense connected with it, municipalities can well undertake its manufacture. A. The defects of other substances causing immunity, produced by the organism itself. (1) These substances have no statistical data in their favor. (2) The manufacture of these substances is more difficult than is the case with Chaffkin's lymph. B. The virtues of these substances. (1) The substances of Lustig and Galleotti give promising results in laboratory experiments. (2) The determination of the active units is quite possible by weighing, especially the substance of Lustig and Galleotti. [A. R.]

5.—Lubimoff describes a new apparatus devised by Iagn for the purpose of boiling and cooling water at the same time. The apparatus consists of two cylinders with an inner cone in one of them. The inner cone receives the boiled water which is cooled by water circulating between the cone and the outer cylinder. The cylinder in which the water is boiled is provided with a bell with a valve on the upper ends of the shafts. When the water reaches 100 degrees C. the bell raises and shuts off the supply of the unboiled water. Thus the inflow of the unboiled and the outflow of boiled water takes place automatically. [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

May 2, 1901.

1. The Serum Diagnosis of Tuberculosis. E. ROMBERG.
2. Concerning the Bacilli Described by Danysz, Which are Pathogenic for Rats. J. KISTER and P. KOETTGEN.
3. A Cured Case of Otogenous Meningitis. BERTELSMANN.

4. The Objects of Functional Diagnosis with Remarks Concerning the Blood as an Organ and the Regulatory Function of the Kidneys. O. ROSENBACH.
5. The Changes Taking Place in Malaria During Staining With Methylene Blue. A. IVANOFF.

1.—To be concluded.

2.—The bacilli in question are chiefly of interest in their relation to plague bacilli since the latter kill rats in large numbers and the same is said to be true of the bacilli of Danysz. Kister and Kottgen found these bacilli extremely pathogenic to rats, the pathogenicity first increasing as they were passed through animals and then, after further inoculations, decreasing. The changes caused by them in the various organs resembled those produced by plague bacilli, but there is in the authors' belief no serious danger of confusing the two organisms if the morphological and cultural peculiarities be observed. The plague bacilli are long, motionless and usually show polar staining. Those of Danysz are short, narrow, show no polar staining and have movement. In cultures with glucose Danysz's bacilli produce gas within 24 hours, the plague bacilli do not. [D. L. E.]

3.—The patient, a man of 22, had had a running ear for some time and at the time of examination had signs of beginning meningitis, or of abscess between the dura and the skull. The mastoid cells, upon operation, were found filled with pus and were cleaned out. An opening was then made posterior to the meatus and an abscess lying between the dura and bone was drained. A lumbar puncture made at the same time, showed cloudy fluid containing numerous leukocytes and from this it was decided that the man had meningitis also, but the dura was not opened as the result of the puncture was not reported until later. The man recovered completely except for a facial paralysis. [D. L. E.]

4.—Rosenbach makes some sensible remarks concerning the recent tendency to think too much of the importance of laboratory diagnosis and the diagnosis of definite organic lesions, and insists that we should devote far more attention than we do to the diagnosis of functional changes. He insists, without offering any special proof therefore, that the excretion of albumin without signs of a definite acute or chronic disease of the kidneys is not an evidence of disease but is the result of physiological action of the kidneys intended to compensate for some metabolic disturbance. He also demands that we shall look upon the blood as an organ as well as a medium of transport, not solely as the latter. [D. L. E.]

5.—The most striking characteristic of the malaria parasites under the influence of staining with methylene blue is that this stain acts chiefly on the protoplasm, in contrast with quinine which acts chiefly on the chromatin. The two are in contrast also in the form of parasites chiefly affected. Methylene blue acts chiefly on the half moon form, next on the full grown and sporulating forms and not at all on the young parasites. The direct contrary is true of quinine. With methylene blue the full-grown forms show less amoeboid movement, the protoplasm collects in balls, the chromatin stains deeply but is very granular. There is a marked achromatic zone about the chromatin. These changes appear only when the drug has been given two or three days. [D. L. E.]

CENTRALBLATT FUER CHIRURGIE.

June 1, 1901. (28 Jahrgang, No. 22).

1. Ether Narcosis. ERNST BECKER.
2. The Origin of Congenital High Position of the Scapula. W. KAUSCH.

1.—Becker has for two years added *oleum pini pumilionis* to ether just before administering the anesthetic. 20 drops to 200 g. of ether to prevent the secretion of mucus. This gives but a slight piney odor to the ether, making it less objectionable to the patient. Becker has used this mixture in about 500 cases, with uniform success. Even when bronchitis, phthisis, empyema, or senile emphysema existed, these conditions have not grown worse. In one case, a goiter in a woman of 58, mucus collected in the bronchi, lasting a few days. Since the oil of turpentine cannot do harm, its effect is even better than atropin, which is so often given before operation to prevent the accumulation of mucus. [M. O.]

2.—Kausch, who has seen five cases of congenital high position of the scapula in the past year, discovered a defect in the lower part of the trapezius muscle in three of the cases. He believes that this absence of the lower fibers of the trapezius is the cause of some cases of congenital high position of the scapula. [M. O.]

June 22, 1901. (28 Jahrgang, No. 25).

1. Immediate Cystorrhaphy After Suprapubic Cystotomy. BALACESCU.

1.—Balacescu describes the technique of Jonnesco's cystorrhaphy by imbrication, for hemorrhage cystitis. From 3 to 6 days before operation, salol or urotropin is given internally and irrigation with a solution of mercuric iodine of potassium or argentic nitrate is used. The incision is made above the pubis, and the peritoneum denuded. The bladder is then opened. Cystorrhaphy follows, with freshening of the edges, and sutures, first in the mucosa, then the muscles, and finally over the muscles. A catheter may be left in place for a week. If the patient cannot urinate voluntarily. Twelve cases treated thus are reported, 11 of which recovered rapidly. One healed very slowly. From the results he believes this to be the best operation for stone in the bladder. By this method one or two weeks in bed, not six or seven weeks, will be sufficient. [M. O.]

June 15, 1901. (28 Jahrgang, No. 24).

1. An Improved Method of Bandaging in Fractures of the Lower Extremity. HUSCHENBETT.

2. "Tulle" in the Transplantation of Skin. F. KUHN.

1.—The apparatus applied in fracture of the lower extremity generally immobilizes the knee-joint. Huschenbett's method of applying plaster of Paris bandages leaves the knee freely movable, so that walking is possible. The bandages in fractures of the hip are put on under an anesthetic. Pads are placed under the knee and under the heel. Iron bars, bent to fit the leg, attached under the heel, and movable at the knee, are kept in place by more layers of the plaster bandage. The hinges at the knee are left uncovered, though the patella is partly covered to hold the dressing in place. Walking is thus possible two days after the fracture occurs. His results have been excellent, neither dislocation nor shortening developing. A photograph is shown, of a man aged 70, thus treated for fracture of the left leg, who also had dislocated his humerus, fractured the neck of the humerus and the internal condyle of the right arm. He was walking about, a week after the accidents occurred. [M. O.]

2.—To keep the fragments in place, in transplantation

by the Thiersch method. Kuhn uses ordinary "tulle" which has been made impermeable to liquids by impregnation with a celluloid solution. This can be left in place until healing occurs. Additions can always be made and a new piece of "tulle" applied over the others. Kuhn considers the results achieved by this method far superior to those obtained with taffeta, silk, stannol, protective, etc. [M. O.]

CENTRALBLATT FUER INNERE MEDIZIN.

May 18, 1901.

- A Contribution to the Question of Antidoting Poisons (natural Immunity). MARIO CARRARA.

In the same journal (1900, No. 13) Czychlarz and Donath reported some experiments which had convinced them that strychnine combined with (or is antidoted by) certain of the tissues or body fluids. Mehtzer and Langmann (*Centralbl.*, 1900, No. 37) contended that the results were really due to slow absorption of the strychnine as a result of partially tying off the circulation in the limb into which the strychnine was injected, and were not due to an antidotal action of the tissues. Carrara claims that Czychlarz and Donath were right and that the doses given were too large to allow of a belief that the results were due to mere slow absorption. He contributes a series of experiments which he has undertaken by the same method and which showed that constricting the infected limb for several hours after giving the strychnine, allowed of the use of a dose several times the size of that which is fatal under ordinary circumstances without producing any notable symptoms. The protective influence of the procedure was much more marked in animals that had considerable natural resistance to the effects of strychnine than in those naturally very susceptible. The result was not due to slow absorption and gradual excretion, for Carrara removed both kidneys, thus doing away with the chief means of excretion of the strychnine, and saw no notable symptoms of strychnine poisoning in these animals after the procedure of Czychlarz and Donath when the same dose produced fatal poisoning under normal circumstances. Carrara also brought strychnine solutions in contact with freshly removed muscle, and then injected the enucleated muscle into animals of the same and of other species but could not see that the muscle had any antidoting effect. (Czychlarz and Donath have, however, in a second publication (*Prag. Zeitsch. f. Heilkunde*, 1901, Heft 2; *Abth. f. innere Med.*) reported that many other organs do seem to antidote strychnine when they are macerated with the drug, and that this action seems to depend upon the richness of the organ in cells, a statement which agrees well with modern theories of immunity.) [D. L. E.]

May 25, 1901.

- Carbohydrate Metabolism in Old Age. Also Some Investigations Concerning Phlaridin-diabetes.

LUDWIG v. ALDOR.

The investigations reported consisted in giving a series of 30 persons between 64 and 92 years of age doses of glucose ranging from 130 to 150 gms. on an empty stomach and observing whether alimentary glycosuria was produced thereby. The subjects were, so far as could be determined merely senile and had no known organic disease, were not alcoholics and had no other recognized predisposition to alimentary glycosuria. The results may justly be considered somewhat questionable as the amounts of glucose used were such as often cause some glycosuria in normal persons when taken on an empty stomach. 24 of the 30 persons chosen for investigation showed some glycosuria. It was notable that while glycosuria usually occurs within about an hour after giving glucose in these cases, it occurred within an hour in only two instances. In 17 it occurred only after two hours, in others only after four or five hours. Aldor suspected that the kidneys might be at fault, though the patients showed no definite sign of this, and used the phlaridin test of the renal excreting function, giving in each case a dose of 5 mg. of phlaridin subcutaneously. Those who had shown no alimentary glycosuria reacted normally to the phlaridin test. Of the others, 11 showed irregular results from the phlaridin. Aldor decides therefore, that alimentary glycosuria is very common in the aged but that it appears late after giving glucose, the latter fact being due to imperfect renal excretion. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

June 11, 1901. (No. 24.)

1. Neutral Red Staining of the Nucleated Red Blood Cells. BETTMANN.
2. Gelatine as a Hemostatic. H. GEBELE.
3. The Pathological Condition of Drunkenness. K. HEILBRONNER.
4. The So-Called Pseudo-Myxoma of the Peritoneum. E. FRAENKEL.
5. The Treatment of Chronic Otitis Media with Hot Air. HECHT.
6. A New Pessary: The Wedge-Shaped Pessary for the Treatment of Hemorrhoids. W. SCHEFFER.

1.—Bettmann describes the following technique for the study of nucleated red blood cells. Thin sections of pith are allowed to absorb each a drop of blood, and then a small quantity of a solution of neutral red is added. The sections are placed upon a covered glass and treated in all respects as hanging drop preparations. The majority of his studies have been upon the blood of young mice, which contains great numbers of the corpuscles. When the nuclei of the red blood cells are stained, they stand out very prominently from the other structures. It is impossible therefore to confuse them with anything else. Later the lymphocytes become stained, but this does not give rise to any confusion. It is interesting to note that the nuclei are frequently placed eccentrically, and in the course of observation approach nearer and nearer the edge of the cell until sometimes they seem to project beyond it. Later they lose the stain and disappear, although the addition of more of the neutral red solution again stains them intensely. [J. S.]

2.—Gebele reports 3 interesting cases. The first, a man of 22, a hemophile, after the extraction of a molar tooth, had prolonged, uncontrollable hemorrhage. Accordingly, on the 4th day 100 ccm. of a 2% solution of gelatine were injected into the left thigh. The hemorrhage was almost entirely controlled, but as there was still a slight bloody tinge in the water used for washing, an additional injection was made on the following day. Subsequently a large abscess was opened in the submaxillary region without hemorrhage, and the patient recovered completely. The second case, a man of 28, also a hemophile, had a severe hemorrhage from the nose. Nothing seemed to check this, and on the 8th day 100 ccm. of a 2% solution were injected. The hemorrhage ceased, but the patient developed pneumonia and died 4 days later. The 3d case, a man of 48 had severe epistaxis that could not be controlled, and on the 3d day a gelatine injection was given. The hemorrhage ceased but 2 days later the injection was repeated. The patient was discharged cured. A series of experiments were made on rabbits to determine what effect injections of gelatine would have upon the amount of blood discharged from an open vessel. It was shown that in a given period of time the reduction varied from 50% to nearly 100%. This was not due merely to the anemia produced by the hemorrhage, because in control experiments the difference was practically nothing. There seems to be no doubt, therefore, that gelatine controls hemorrhage, and increases the tendency to coagulation. As, however, this testimony is only manifest after the total quantity of blood has been reduced to 1.5 of 1.4, there is no reason to suppose that gelatine injections can ever have any prophylactic action. The results of the injection are slight albuminuria; slight elevation of temperature; considerable discomfort at the point of injection, and sometimes general restlessness. In one case of hematuria evidently of renal origin, in which gelatine was given, the results were unfavorable. [J. S.]

3.—Heilbronner discusses the various conditions that may be produced by indulgence in alcohol in subjects who manifest an abnormal or morbid susceptibility to its action. He would restrict this pathological form of drunkenness to those transitory states whose symptoms exceed those of ordinary intoxication. Among these he calls attention to a state of anxiety usually characterized by a feeling of precordial discomfort, and sometimes causing the patient to commit suicide or murder. Sometimes the patients pass into a state of excessive happiness which is not the euphoria of the slightly intoxicated. In other cases there may be confusion, insanity, loss of ability to recognize position, and optic or auditory hallucinations, but movement is rarely seriously involved. Conditions are sometimes seen that resemble the convulsions of gen-

eral paresis. The attack usually occurs suddenly; sometimes after a period of sleep; sometimes it commences with a convulsion. In rare cases this stimulates general epilepsy. The duration is usually very short, sometimes only a few minutes, rarely more than a few hours. In general it terminates with a profound sleep. However in the early stages the patients are sometimes readily awakened, and the attack will then occur. Often these cases are very resistant to hyoscine. The attacks, however, may be repeated very frequently, sometimes after indulgence in very small quantities of alcohol. At other times the same patients may indulge to great excess without producing the morbid condition. The patients usually suffer from total amnesia afterward. A second group are also hallucinations, but the symptoms are very much less pronounced, and memory is not impaired. The amount of alcohol necessary to produce these attacks is sometimes very small. He reports the case of a man who, after moderate indulgence, suddenly had a convulsion and then wounded one of his companions with a knife. He retained no recollection of this condition. In another instance a student suddenly had a convulsion and then struggled violently with his companions. By the time he was brought to the hospital he had returned to his normal condition and was totally unaware of what had occurred. The paper is still unfinished. [J. S.]

4.—Fraenkel calls attention to the condition described by various authors under the name of *pseudo-myxoma peritonii*. He reports the case of a woman of 51 who, for several years had noticed enlargement of the abdomen. Three laparotomies were performed, at the first of which a tumor proceeding from the right ovary was discovered, containing an enormous amount of colloid material, a curious condition of the peritoneum was also discovered, that resembled cystic formation. A considerable quantity of yellow gelatinous fluid was removed, and the colloid cysts were found increased in number. The patient finally died, and the autopsy revealed essentially the same conditions. Microscopically the tumors resembled a cyst adenoma containing a considerable quantity of pseudo mucin. It seems likely that some of the cysts found in the peritoneum should be regarded as metastatic although in many of them the epithelial lines had disappeared as the result of some pathological condition. He reports a second case in which a somewhat similar condition was found in a man of 79, the primary situation of the tumor having been the vermiform appendix, which had undergone rupture. [J. S.]

5.—Hecht, having had a number of unfortunate experiences in his attempt to employ hot air in the middle ear, as the result of the heating of the specula that he employed, finally had constructed a fine metal tube, by means of which he was enabled to inject the hot air directly in the tympanic cavity without touching the external canal. The air is heated electrically, and the desired temperature obtained by the rheostat. The patient himself controls the air pump, and therefore can stop it as soon as the pain is unbearable. It is probable that the chief action is a thorough drying of the mucous membranes. The water produces emaciation and thus furnishes culture media for bacteria; at the same time the active hyperemia that is produced must not be overlooked. [J. S.]

6.—Scheffer has constructed a peculiar form of pessary, the essential features of which consist of a staff in the form of a double cone, which is introduced into the rectum, and a small ring which presses upon the hemorrhoids just outside. The advantage is that the sphincter has a tendency constantly to draw the instrument inward. In prolapse the hemorrhoids are replaced, and the instrument then introduced. If the external portion is hollow and connected with 2 tubes a current of warm or cold water may be applied. [J. S.]

JOURNAL DE CHIRURGIE.

April-May, 1901. (Première Année, No. 4.)

1. Cirsoïd Aneurysm of the Scalp. BROCA.
 2. Late Accidents in Cocainization of the Spinal Cord. DANDOIS.
 3. Two Cases of Hemorrhagic Papillomatous Ovarian Cyst. KEIFFER.
 4. Plastic Operations Upon the Mouth. J. LORTHOIR.
- 1.—Broca reports a cirsoïd aneurysm of the scalp in a girl 8 years and a half. Four years ago she fell, striking the right parietal bone upon the curb. Following this the

aneurysm appeared, but has not enlarged since. There was marked dilatation of the arteries and veins of the scalp, with pulsation and a noticeable thrill. These were not noted by the child at all. In spite of the probable hemorrhage, the best treatment of these arterio-venous aneurysms of the scalp is excision of the aneurysm entire. After ligation of all the vessels which branched from the aneurysm, Broca removed it, with very little hemorrhage. A week later the dressing was removed, and the child was well. The aneurysm consisted of four arteries which communicated with a large Y-shaped vein. Broca prefers treating angioma of the scalp in the same way. [M. O.]

2.—Dandolis reports an external urethrotomy performed with cocaineization of the spinal cord. This method of anesthesia was chosen on account of the poor condition of the patient. The results were excellent until the ninth day after operation, when paraplegia appeared. Then came cerebral symptoms, without fever, which persisted for a month. In three weeks more, he had wholly recovered. [M. O.]

3.—Kelfer reports two cases of hemorrhagic cysts of the ovary. One was removed by operation from a woman of 34. Its size was that of a child's head, with interstitial hemorrhages in its walls, its inner surface covered with papillae. The second tumor, which was even larger, was removed from a woman aged 54. In neither case were there any bad symptoms after operation, and both are perfectly well now. [M. O.]

4.—Before describing the operation, Lorthioir briefly reviews the embryology and history of the theories to explain the persistence of the branchial clefts. He divides these fissures into the simple fissure, the common hare-lip, unilateral, bilateral, or median; the complex fissures, with bony cleft beside hare-lip, unilateral, bilateral, or abnormal; and the palatine fissure, simple or complex cleft palate, anterior or posterior. Simple hare-lip, with or without cleft palate, is the most common. Then follow in detail descriptions of the various methods of operation, with the technique, for all forms of hare-lip. All these operations should be performed before the child reaches the age of two years. Lorthioir's results have been best from 8 to 10 years. Uranoplasty, straphylorrhaphy, and the instruments needed for the operations are also fully described. [M. O.]

JOURNAL DES PRATICIENS.

June 1, 1901. (15me. Année, No. 22).

Etherization. ALCEE DURRIEUX.

After a detailed account of the discoveries of both ether and chloroform, Durrieux states the indications and contraindications to the use of ether. The distance between the anesthetic and the mortal dose is much greater with ether than with chloroform. This fact makes ether much less dangerous than chloroform, especially when an unskilled physician is the anesthetizer. For short operations ether is excellent; in long operations, chloroform may be used after beginning with ether. Ether cannot well be used for face operations. Durrieux then describes the numerous inhalers invented. Ether should always be administered slowly, drop by drop, never in large doses. After 10 minutes the effect is seen. Ether should be added at regular intervals, 5 to 10 drops every 3 or 5 minutes. Ether increases all secretions. Then follows the treatment of the various accidents which may occur during etherization.

[M. O.]

REVUE DE MEDECINE.

May, 1901. (21me. Année, No. 51).

1. A Clinical Study of Some Infectious Diseases. II. ROGER.
2. A Comparison Between the Liver of Man and That of Pigs. CHARLES SABOURIN.
3. An Epidemic of Herpes Zoster. CHARLES DOPTEI.
4. Intermittent Nervous Troubles of Malarial Origin. BUSQUET.
5. Malarial Polyneuritis. E. BOINET.
6. Polymyositis. R. LEPINE.

1.—Will be abstracted when concluded.

2.—Sabourin has made extensive preparations of the livers of men and of pigs, which he examined in detail

histologically. He has illustrated his article with many drawings to show the conditions found. After a full description of the liver of man and of pigs, he states that the perfectly regular arrangement of the liver lobules seen in man is occasionally found in pigs. Often, however, a distinct fibrous capsule, of glissonian tissue, surrounds the separate lobules of the pig's liver. In man the capsule of Glisson forms only the outside layer of the liver covering; in the pig, the glissonian tissue often accompanies the afferent perlobular capillaries. Roger concludes that this prolongation of the fibrous tissue of the capsule of Glisson from the periphery along the afferent perlobular system, with some irregularity in the arrangement of the lobules constitute the main difference between the liver of the pig and that of man. [M. O.]

3.—Dopter reports an epidemic of herpes zoster affecting three soldiers sleeping in one room. None of the others, however, contracted it. In all three cases, sore throat, vomiting, and headache appeared first; then fever, the distinctive eruption, and pain. The lymph-glands enlarged later. After discussing the literature, Dopter states that, according to Professor Brissaud's theory, the epidemic character of herpes zoster is the expression of the elective, natural, or acquired affinity between a virus and a certain metamere of the central nervous axis, the nutrition of which has been disturbed, seen in several people, infected simultaneously or successively. Then the infection, which the eruption follows, would be epidemic. [M. O.]

4.—Busquet reports a case of malaria in a man 28, who had been a soldier in Madagascar and Algiers for three years. He had already had malaria, four separate attacks of which are described by Busquet. During these attacks paralysis of the vesical and anal sphincters occurred. There was no suspicion of hysteria, syphilis, or any infectious disease. There was at times some loss of power in the extremities, which improved upon quinine. The symptoms are believed to have been due to the presence of the malarial parasite in the capillaries of the brain and spinal cord. [M. O.]

5.—Bouinet reports a case of malarial polyneuritis in a man of 40. Both legs and arms were affected, knee jerks were absent, and sensibility diminished. There was lessened reaction of both faradic and galvanic currents. The slow appearance of the disease, its slow course, and the absence of uniformity between reflexes and gait, with the amelioration of the motor disturbance, made the diagnosis. Muscular atrophy remains marked upon the left side. There were no vasomotor symptoms. Electricity, baths, arsenic and iron constituted the treatment successfully carried out. [M. O.]

6.—Lepine reports a rare case of polymyositis which occurred in a man of 59. He presents diffuse pains localized in the muscles with edema. The spleen is enlarged. This has been called dermatomyositis or hemorrhagic polymyositis. Lepine prefers the term angiomyositis for this variety of acute polymyositis, without suppuration. [M. O.]

Chlorosis.—Professor Hayem recently (*L'Indépendance Médicale*, 1901, No. 17) discussed the subject of chlorosis. He presented a young girl of 17, saleswoman in a large department store, whose father had been tuberculous. Menstruation appeared at 13, and had been regular, but scanty in quantity. Her skin is pale, of a greenish hue, a sign of chronic anemia. She complains of palpitation, which disappears when she lies down. Over the heart a faint systolic murmur is heard, loudest at the pulmonary area. A loud venous hum is audible over the jugular veins, louder upon the left side, though usually found louder on the right. She has no headache nor edema. A few signs of rickets remain, and the groove made by her corset is plainly seen. It is in such cases that neurasthenia develops about the age of 20. Her stomach is somewhat dilated, and nephroptosis has occurred on the left side, though commonly found on the right. There are certain signs of dyspepsia, and acids are preferred. Respiration at the right apex seems slightly prolonged. Otherwise the lungs are normal. The more pronounced the symptoms of chlorosis, the less will be the danger of tuberculosis. When tuberculosis and chlorosis co-exist, they appear and develop side by side. In this case Hayem advised washing out the stomach, strict diet, and tonic constitutional treatment. [M. O.]

British Congress On Tuberculosis

FOR THE PREVENTION OF TUBERCULOSIS.

(Continued from Page 226.)

ABSTRACT OF PAPERS.

The Fight Against Tuberculosis in the Light of the Experience Gained in Successful Combat of Other Infectious Diseases. ROBERT KOCH. See Philadelphia Medical Journal, Aug. 3, 1901, pp. 1771.

The Nature and Diagnosis of Predisposition in Tuberculosis: Therapeutic Considerations. By Mons. Albert Robin, Paris. The prophylaxis of tuberculosis does not consist solely in the measures taken, either publicly or in private, against the infective agent. A study of the respiratory exchanges enables one to recognise predisposed subjects beforehand, and consequently to submit them to a hygienic and therapeutic regimen capable of modifying the functional and nutritive fault, which is the necessary antecedent condition for the development of the bacillus.

The respiratory exchanges are increased in 92% of the subjects of confirmed tuberculosis, and in 63% of those with a tuberculous heredity. Alcoholism and the different forms of overwork increase the respiratory exchanges, and are capable of creating a soil for tuberculosis in the same way as heredity.

An examination of the respiratory exchanges, therefore, enables one to make a diagnosis of tubercle in doubtful cases.

The action of different drugs and methods of treatment on the respiratory exchanges enables one to select those which are capable of modifying the soil and opens up a new mode of prophylaxis as well as of treatment in tuberculosis.

The Hereditary Arthritic Forms of Tuberculosis. By Dr. G. E. Papillon, Paris. Bearing in mind the "law of pre-tubercular hereditary reaction," which he enunciated and proved at the Thirteenth International Congress (Paris, August, 1900), the author applies that law to arthritic heredity. The existence of an arthritic diathesis, though to some extent disputed to-day, is shown by the heredity marks it produces, which are bequeathed to the descendants by the victims of any forms of that diathesis: diabetes, gout, rheumatism, asthma, etc. And if, in those descendants, any individual seems, during a part of his life, to have escaped this inheritance, the hereditary tendency will appear under the influence of any slow and hidden infection, as, for instance, the pre-tubercular infection.

In heredo-arthritic people, the pre-tubercular stage may be indicated by any arthritic manifestations, such as fits of asthma, attacks of subacute rheumatism, late appearance of what the French call "stigmata de l'arthritisme." These are not manifestations of localized tubercles, as in the case of the "tuberculous rheumatism" described ten years ago by Poncet, but only effects of the bacillary toxins.

These fits of asthma, rheumatic attacks, arthritic deviations, etc., are the symptoms of the disordered function: either of the contractility of the bronchial muscles, or of the secretion of the articular synovia, or of the nutrition of the extremities of the bone, cartilages and periarticular muscles; disorders all belonging to the great class of "sympathetic reactions to the tuberculous intoxication," which was the subject of a paper read by Dr. Papillon to the Congress of Naples (April, 1900).

The author proves that the toxins introduced into the organism by a tuberculous centre may produce the "stigmata de l'arthritisme" in predisposed individuals, as in others (otherwise predisposed by a different heredity) they may create Papillon's "Pre-tuberculous neurasthenia," or pre-tuberculous anemia, etc.

Discussion on Higher Standard of Lighting and Cleanliness.

STATE SECTION.

On the Need of a Standard of Efficient Ventilation. By Dr. Arthur Ransome, F. R. S. Consumption is a "filth disease," and flourishes in atmospheres polluted with organic matter, especially of respiratory origin.

The influence of this pollution is manifold, and is due

(1) to the presence of the bacillus of tubercle; (2) to the retention of its virulence by this organism in such atmospheres; (3) to the presence of other pathogenic organisms; (4) to its influence on the physical condition of the persons breathing such air.

Our first duty, in the prevention of consumption, must be to get rid of this "air-sewage," which causes more mortality than water-sewage. This work can only be accomplished by copious "ventilation."

The standard of ventilation hitherto fixed for dwelling rooms is 3,000 cubic feet per head per hour, in order to reduce the amount of respiratory CO₂ to two parts per 10,000.

A better method of judging the efficiency of ventilation is to take the amount of CO₂ in the air as the standard. Although it is the organic matter accompanying the CO₂ which does the harm, and although, in still air, these two ingredients are not always in proportion, owing to the non-diffusibility of the organic material, as a test of ventilation, which sweeps away both, it is a good more readily applied standard than the mere velocity of the entering, or outgoing, currents of air.

In the year 1897 a Home Office Committee, of which I was one, proposed that the CO₂ present in humidified weaving sheds should be made the standard of ventilation; and this measure was embodied in the Cotton Cloth Factories Act of 1898, with the result that a great improvement has taken place in the conditions of labor in these places. A table showing the results was exhibited.

Evidence was also given showing that the health of the operatives in these weaving sheds had greatly improved, and that, in consequence, the sickness rate had diminished.

The Act of 1898 only applied to a few thousands of male and female operatives, leaving several millions of others, who now perform their labor under the old conditions of insufficient air supply.

The paper urges that the same standard should be applied to all "work places," and anticipates that the health of the people who work in them would benefit to at least the same extent, and that the prevalence of consumption amongst them would be greatly reduced thereby.

A plea is also put in for some regulation of the ventilation of other places of public assembly, such as theatres, concert-rooms, churches, chapels, etc.

The question of cost is discussed, and it is shown that this objection need not be prohibitive.

SECTION II.

The Use of Drugs in Pulmonary Tuberculosis. By W. R. Huggard, M. A., M. D., F. R. C. P., Davis Platz. While there is no specific for pulmonary tuberculosis, various drugs influence the course of the disease favorably, always provided that they are well tolerated by the patient, and that they do not interfere with appetite or digestion.

Drugs are of less importance than fresh air, good food, and rest or exercise according to the patient's needs.

The most important point in treatment is to keep the digestion right, and to improve the nutrition. Pyrexia, while generally yielding to absolute rest in the open air, may sometimes with advantage be treated by drugs.

A tendency to hemoptysis, or to recurrent pulmonary inflammation, contraindicates the use of creosote and its derivatives, while it renders advisable the administration of the balsams, the terebinthines, and sometimes minute doses of morphine. The tendency to recurrent febrile attacks, whether from inflammation or from absorption of toxins, is diminished by arsenic, quinine, salicin and its derivatives, and strychnine.

The use of various drugs in controlling needless cough, and in augmenting, diminishing, and modifying secretion, is briefly stated, especially the value of formaldehyde vapor.

Lastly, the importance of treating syphilis as a complication is touched on, with remarks on intramuscular mercurial injections and the inhalation of iodide of ethyl.

Discussion on Internal Control.

STATE SECTION.

Notes on Tuberculosis in the Dominion of Canada. By F. Montzambert, M. D. (Edin.), F. R. C. S. E., D. C. L., Ottawa, Can. Tuberculosis in the Dominion of Canada, as elsewhere, has heretofore levied a heavy tax upon the well-being and the lives of the people. Some 8,000 deaths per annum in Canada are attributed to this disease. Some of these are, of course, amongst native-born Canadians;

others are amongst those who have brought the seeds of the disease with them from other countries.

Here, as elsewhere, the knowledge of the true nature of the disease and the methods of its spread has advanced *pari passu* with the advances of medical science. With this extension of knowledge in the medical profession have come also wiser counsels to patients and their friends, and to the public. This was, until recently only, the action of boards of health, of medical societies, of individuals, and of comparatively small local associations. This year, however, His Excellency Lord Minto, the Governor-General of Canada, has organized and set in motion a national movement for the prevention and cure of this disease. He has caused to be formed the Canadian Association for the Prevention of Tuberculosis. Of this association His Excellency is the Honorary President. Amongst its Vice-Presidents and in its Council are leading and representative men from each and every province and territory from the Atlantic to the Pacific, from the Yukon on the one side to Cape Breton on the other. The first meetings were held in Ottawa in February last, and the work of this general national movement was begun—the work of endeavoring to rouse to a sense of their danger the mass of the people, whilst at the same time a knowledge of the possibility of prevention and cure is brought home to their minds. And they are thus both encouraged and urged to take the practical measures necessary to attain the great object in view—the limitation, if not, indeed, the extinction, of this preventable disease.

This action of His Excellency has been received with grateful appreciation and hearty co-operation by all. Active steps have been, and are being taken to make the association a great educational and practical success, and high hopes are cherished of the results to be attained.

In the Dominion of Canada much of the jurisdiction in, and administration of, matters of public health falls to the different provinces and municipalities. Already some of these are moving in this matter of the prevention and cure of tuberculosis. During last year the Province of Nova Scotia passed an Act through its Legislature to empower the Province to erect, furnish and equip a sanatorium for the care and treatment of persons suffering from tubercular disease of the lungs in its earlier stage. And the Province of Ontario, in an Act respecting municipal sanatoria for consumptives, empowers, subject to the provisions of the Act, any municipality or any two or more municipalities to establish a sanatorium for the treatment of consumptives.

Of private institutions for this purpose perhaps the two largest and best known are that at Ste. Agathe des Monts, in the Laurentian range of mountains some sixty miles from Montreal, and that at Gravenhurst in the Algoma district of Ontario, within easy reach from Toronto.

If there be anything in climatic influences in the prevention and cure of tuberculosis, Canada offers a wide field for choice. She stretches from ocean to ocean, and her vast inland tablelands and mountain ranges offer all the elements of dryness, altitude, and clearness of atmosphere, with absence of strong penetrating winds, that may be desired. And this with a variety of grandeur of scenery and full opportunities for out-of-door sports, hunting, fishing, etc., for those who seek them; and for all, the pleasant summer weather and the dry and invigorating cold in winter render life and rest out of doors a possibility and a benefit at all seasons of the year by night as well as by day.

With such conditions as these available we may fairly hope that when the people can be educated up to the realization of the truth as to the communicability of tuberculosis, and the means of controlling its diffusion and spread, a marked diminution, both in frequency and in its mortality, may speedily be attained.

The Value of Tuberculin in Diagnosis and Treatment. By Prof. McCall Anderson. The subject is dealt with under three heads.

I.—*Is it safe to use it?*—The answer being in the affirmative, if it is employed in suitable cases, if the dose is not too large or too rapidly increased, and if the intervals between successive injections are not too short.

II.—*What is its value in diagnosis?*—It is enormous, and it is a curious anomaly that, while it is recognized as a very certain test for tuberculosis in cows, it is rarely used by medical men in the case of human beings.

III.—*What is its therapeutic value?*—In the early stages

of phthisis it is calculated to yield good results, but in more advanced cases, when a large extent of lung substance has become implicated, it must be used with caution, if at all. But in external tuberculosis it is almost invariably beneficial, and in many cases removes the existing manifestations. It is true that relapses are very apt to occur, if it is not borne in mind that there are two factors concerned in the production of tuberculosis; (a) the tubercle bacillus, and (b) the soil suitable for its growth and development; so that in addition to attacking the former with tuberculin, we must endeavor to counteract the latter with the aid of pure air, generous diet, and other recognized anti-strumous measures.

The Morphological and Physical Variations of the Bacillus Tuberculosis and its Relations: (a) to other Acid-fast Bacilli, (b) to the Ray Fungus and other Streptothricaceae. By William Bulloch, London.

I. So far as is known, the Bacillus Tuberculosis discovered by Koch is the only immediate cause of all forms of human tuberculosis.

II. In the majority of cases the micro-organism is met with in the form of slender rods, which frequently show clear spaces in their interior.

III. Under certain conditions at present imperfectly understood, the micro-organism may show filaments, true dichotomous branching and club formation, and, in the tissues, especially in experimental tuberculosis, it may assume a radiate arrangement—characters which from a taxonomic point of view bring it into close relation with a large group of micro-organisms variously designated Streptothricaceae, Oospora, Nocardiaceae, and more recently Actinomycetes (Lachner-Sandoval).

IV. According to all experience, the tubercle bacillus is an aerobic facultative parasite which grows extremely slowly outside the body, and for its growth requires a relatively high temperature, the minimal and maximal limits of which are 29°C. and 42°C. This fact is against the supposition that the tubercle bacillus multiplies extra corporally, at least in temperate climates.

V. In general, cultures are difficult to obtain, and are best prepared by growing the organism upon relatively complicated media, such as blood serum. The addition of glycerine to all media undoubtedly favors the development and luxuriance of the cultures. In the presence of this substance, however, good growths can be obtained in vegetable media, such as potato (Pawlowsky, Lubinsky, and others). It is also possible to obtain growths on media which contain no proteid material, the carbon and nitrogen demands of the organism being fulfilled respectively by ammonia salts and glycerine. Hitherto in such simple media it has not been possible to replace the glycerine by other allied compounds (Proskauer and Fleck).

VI. With ordinary hydro-alcoholic solutions of basic anilin colors, the tubercle bacillus is stained with extreme difficulty and imperfectly. If certain substances (anilin, para-toluidin, meta-toluidin, benzaldehyde, carbolic acid—in practice the latter is chiefly used) are added to the basic dyes, the penetrating power of the latter for the tubercle bacillus is increased in high degree, and on subsequent treatment with mineral acids (33% nitric acid, 25% sulphuric acid) the color remains in the bacilli, so that they stand out prominently from other objects in whose association they may be. This "fastness" towards acids (Säurefestigkeit), discovered by Ehrlich, has had a great influence on the development of the study of tuberculosis, and at the present day the microscopic diagnosis is made with this method alone.

VII. The acid-fastness is, however, not specific to the tubercle bacillus, but is also possessed by a considerable number of other bacilli, some of which are pathogenic for man (Bacillus Leprieux), some for animals. In recent times the number of these have been considerably increased, and although they have been found as saprophytes, and capable of living at relatively low temperatures, they may produce tubercle-like diseases in animals.

VIII. The microscopic diagnosis alone is not sufficient to differentiate the true tubercle parasite from other "acid-fast" organisms. There is every reason to believe that the bacillus of human and bovine tuberculosis, are identical. The bacillus of avian tuberculosis presents points of difference, but these are not differences of species. There exists a group of acid-fast, tubercle-like bacilli wide-

ly distributed in Nature. The identity or nonidentity of these with Koch's bacillus is not proven.

IX. In any case, a microscopic diagnosis of Koch's bacillus, especially in objects which are from their nature and source liable to contamination with other acid-fast bacilli, is not decisive by itself.

X. Even the application of alcohol subsequent to acid is not capable of differentiating the tubercle bacillus from others like it. Some tubercle-like bacilli may be as *saurefast* and *alcoholfast* as Koch's bacillus.

XI. Contrary to former beliefs, the acid-fastness is not due to the presence of *fat* in the bacillus, as, after complete removal of this substance the bacilli are still acid- and alcohol fast. The acid-fastness is due to a body of the nature of a wax (Aronson) which can be extracted by acid-alcohol-ether, boiling chloroform, boiling benzene. This wax in itself is powerfully acid-fast, but is unstainable by fat stains. (Sudan III, and Ponceau R.)

XII. Besides wax and fat, which are present in relatively large amounts, the tubercle bacillus is composed of proteids (important among which is a variety of nucleic acid, described as tuberculinic acid—Ruppel) and salts (with phosphates predominating). After the removal of all proteids, wax and fat, a substance remains which contains a considerable quantity of nitrogen and from its reactions is probably chitin or some allied body.

XIII. No certain facts are known of the possession or non-possession by the tubercle bacillus or other acid-fast bacilli of true endospores. Although the tubercle bacillus is more resistant to injury than non-sporing microbes, it is much less resistant than true endospores.

A Study of Heredity in its Relation to Immunity and Selective Activity in Tuberculosis. By Dr. Herbert Maxon King, New York. In a paper, of which the foregoing is the title, the author has embodied the results of carefully recorded observations in two hundred and forty-two cases of tuberculosis occurring in his own practice, where opportunity for close personal study into the immediate family histories and such other features of the several cases as would throw light upon the present inquiry were exceptional. He has endeavored to prove, in so far as was possible by the limited number of cases under observation, that a history of tuberculosis in the parents instead of predisposing an individual to the disease, confers to a certain extent an immunity to it—an immunity which of course is but relative and not sufficiently protective, yet such as to deserve a more thorough and unprejudiced attention than has thus far been accorded the subject. After briefly summarizing in the usual way the family histories of his series of cases, the author devotes the chief space of his paper to an analysis of the progress of the disease in one hundred and three fatal cases out of the total two hundred and forty-two. Of these fatal cases he finds that seventy-six occurred among individuals of non-tubercular parentage. The average duration of the disease in these cases, from its earliest evidence to death, was 2.93 years. The other twenty-seven fatal cases occurred among individuals of tubercular parentage. The average duration of disease in these cases was 4.01 years; more than a year longer than in the former class, and this, it is to be observed, among a class which for obvious reasons may be fairly presumed to have contracted the infection at a time considerably more remote from the date of death than would be the case among those of non-tubercular parentage.

He cites the instances of tuberculous outbreaks among negroes and Indians of the Far West of non-tubercular heredity, in which resistance to the disease is lowest, and where a rapidly fatal termination is the almost unexceptional rule; and this is in a climate to which are sent the more immune whites suffering from this disease, as a therapeutic measure.

The conclusions arrived at, by the author's observations, are:—

First, the percentage of consumptives having a tubercular parentage, is actually smaller than that having a non-tubercular parentage, and much smaller than would be more than accounted for by the additional danger of infection to which the former class is subjected; and

Second, tuberculosis in the parents render to no inconsiderable extent an immunity to the disease in the offspring, as is shown by increased resistance to the progress of the disease and increased tendency to recover among this class.

The Open-Air Treatment in Institutions and in Nursing Homes. By E. Syme Thompson, M. D., F. R. C. S. Dr. Syme Thompson in this communication, compares the value of "Nursing Homes," where a few cases can be admitted with the "Sanatorium" treatment. He points out the often insurmountable difficulty of carrying out the open-air treatment in the homes of the patients, giving reasons for this want of success. He shows that balconies and shelters are superior to rooms, even when the windows are actually removed, and the percentage of carbon dioxide is the same as in the open air. The therapeutic value of *wind* is considered in some detail.

The paper contains suggestions and details of treatment as regulated: 1st, by incessant observations of temperature (charts, by which the rectal and mouth temperatures are compared, demonstrate the insufficiency of mouth temperatures as guides for treatment); 2nd, by watchful consideration of the respiratory movements; 2nd, by discriminating attendance to the digestive system.

Whilst affection of the larynx is a late manifestation of tubercular disease, pharyngeal affection is an early, often the earliest symptom. Indeed, in many cases tubercle appears thus to gain access to the system, and it is in cases of tubercular pharyngitis, prior to the development of lung disease, that careful local and constitutional treatment in a Nursing Home often proves of the greatest value.

Whilst foreign health resorts retain their value in many cases, English resorts, and especially those at the seaside, are of equal value in some, and of even greater value in other conditions.

The Paper concludes with a condensed record of a series of cases from which the deduction is reached. In rapid cases (galloping consumption) Nursing Home treatment is the best that can be found. In many slight cases the evil is arrested in these Homes more successfully than in other ways, and in advanced cases of long standing lasting benefit is often thus secured.

The Role of the Nasal Fossae in the Prophylaxis and Treatment of Pulmonary Tuberculosis. By Dr. Maurice Mignon, Nice. When we consider the question of the prophylaxis of tuberculosis, we must recognize the fact that contagion takes place chiefly through the air. Air is the vehicle by which the microbes invade the organism far more frequently than foods, which can be sterilized by cooking. When the air is still infective, in spite of the use of spittoons, in spite of the practice of disinfection, in spite of every precaution intended to prevent the spread of the disease, the nasal fossae are still capable of arresting the danger that threatens us. The microbes that enter with the air are, in a large measure, arrested by the cilia of the nasal vestibule and by the very extensive and very irregular surface of the mucous membrane. One may thus recognize the bactericidal function of the nasal mucus, although it has been questioned by some authors. Clinical experience teaches, indeed, that the nasal fossae are much more resistant to tuberculosis than the rest of the respiratory tract, and even than the bucco-pharyngeal cavity. Insufficient nasal permeability (nasal obstruction from malformations or septal ridges, from hypertrophic or congestive rhinitis, from cysts, vegetations, adenoids, etc.), should therefore be reckoned among the dangers of tuberculous infection.

From the point of view of treatment the state of the nasal fossae is of equal importance. As the nose allows more air to enter than the mouth, nasal insufficiency results in deficient oxidation of the blood, and everyone knows how necessary oxygen is to the tuberculous. Entering by the mouth the air brings with it harmful microbes, which, accompanied by dust, favor the malady. Moreover, this air, insufficient and injurious, is unmodified, either in temperature or in pressure; it provokes bucco-pharyngeal, laryngeal and tracheo-bronchial inflammations which impede the action of treatment.

It is therefore absolutely necessary that we should be satisfied that patients presenting themselves for examination (especially those disposed to tuberculosis, and those who are themselves tuberculous) are not suffering from any cause of nasal insufficiency. If any defect is present it should be remedied, and we should enjoin the patients to breathe solely by the nose as soon as they are able, for in this habit often plays a part. Instruction on the latter point should be included in the general advice which one makes a point of disseminating amongst all classes of the population.

Original Articles.

SLOW PULSE WITH SPECIAL REFERENCE TO
STOKES—ADAMS DISEASE.*

D. ROBERT T. EDES, M. D.,

a Boston

Since our late associate, D. W. Prentiss was so kind as to call my attention to his patient with an extremely slow pulse, whom he showed to this society in 1899 and in whose case I had the opportunity to make a post-mortem examination, I have added somewhat to my own experience and have also looked over a not inconsiderable amount of literature which has accumulated upon the subject since that time.

CASE I. Mrs. Rosetta M., aet. 50. Housewife; born in New Hampshire, of N. E. parentage. Her father died of pulmonary hemorrhage; her mother from a fall during pregnancy. She has been an invalid since the birth of a child 25 years ago. She has had one miscarriage and frequent headaches. One year ago these were intense. In the Worcester City Hospital, a short time last year, short of breath, emotional, fainted several times. In January fell on the street. Two years ago had sciatica, lately treated by Dr. Samuel Breck for uterine trouble. Fainted one day while at work and has fallen in the house several times since then. Entered the Boston City Hospital, June 3, 1897. While in bed has sinking spells, feels as if she were falling. Appetite fair. Bowels constipated. Temperature 101; pulse 56; respiration 22. Patient said that her nervous condition was due largely to shock and grief at death of her daughter's child of scarlet fever. She was pale, anemic, and nervous, the pupils equal, reacting to light and accommodation. The tongue moist with a white coat. The pulse regular, 40, of poor strength and volume. The heart's area not enlarged, action irregular, sounds very weak. At times between pulsations are heard sometimes one, sometimes two or three slight sounds as of incomplete beats. Pulse synchronous with heart. At times a soft systolic murmur replacing first sound at apex, slight roughening of first sound at aortic area. Lungs and abdomen negative. Knee jerks normal; no ankle clonus; hyperesthesia of extremities.

June 4: Felt faint during the afternoon, dull and heavy headache, pain about the heart and throbbing of head. Several slight sinking spells during early part of the night. About 1 A. M., screamed and apparently lost consciousness. Night nurse could not feel pulse. House Officer called and gave subcut. of ether, patient roused, confused, but recognized house officer. Pulse very weak and slow. Quiet the rest of the night. Next day felt weak and very dull. In regard to attack of night before said that she was not unconscious, but felt powerless, screamed because she felt herself sinking. Felt as if oppressed by great weight. Dark blurring of eyes, was conscious of the night nurse's presence and heard them discussing as to whether she was dead. Recognized House Officer when he came. On this day the pulse went down to twenty.

June 11: Patient says that she can feel pulsations of her heart in her left hand and arm when grasping anything with this hand. Pulse and heart sounds synchronous, no evidence of organic disease. Patient feels very weak.

19. Patient up dressed and out on the piazza. Pulse still weak and slower than apex beat.

22, 1897: Urine 500 c.c.; acid 1012; urea 1.39 o/o; Ind. -n. Alb. sl. poss. trace. Sugar -o.

Sediment: Occasional abnormal blood globule; squamous epithelium; occasional small hyaline and finely granular cast; few blood and fat globules; few renal cells. J. H. Ogden.

21. Pulse 35 to 48. Has had slight chill; attack of vertigo every few days. Pulse at such times scarcely perceptible, does not lose consciousness when in attacks. Never any convulsions.

29. Had four spells yesterday, given brandy and nitro-glycerine, attacks of semi-unconsciousness preceded by headache, blurring of vision, feelings as if sinking down into hole. She is somewhat paler than usual at such times

and her eyes are closed. After attack feels weak; head aches badly and she is much exhausted, pupils dilated and pulse slow (18-20) but improves with stimulation. She bathes her clothes daily and spends an hour on the piazza. Attacks generally come on in P. M. Premonitory symptoms warn her to go to bed.

July 11: Head heavy. Tenderness in left side of head.

July 12: Condition much improved; pulse still slow. Di. more relieved. Diagnosis: Hysteria, myocarditis.

The chart kept during this time gives the temperature on the day of entrance at 101 and for three days after as normal. After this it was not taken. The pulse after two observations at twenty rose somewhat and ranged even about twenty-five to forty-eight, being for a considerable part of the time between 35 and 45. The respirations were from 20 to 25.

Admitted to the Adams Nervine Asylum on July 11. Her application paper gave nothing additional except the statement of Dr. Breck, that she had lately had a thorough pelvic examination under ether without anything definite being found.

Height, 5-1; weight, 146. Early history unimportant, except headaches. About seven weeks ago headaches were worse and she had pain in the left groin. Seven weeks ago fell several times during the day with short spells of unconsciousness; the next day twice. When she entered she had not lost much flesh, her manner was calm, but she was sleeping badly, usually from 1 to 5 or 6 hours, seldom the latter. Her dreams were not especially bad and she had no morbid fears or hallucinations; her appetite was deficient and she was constipated. She was pale, with a somewhat puffy complexion. She was frequently having the sinking spells. There was no enlarged cardiac dulness. Sounds nearly normal, the first sound rather long, occasionally with something like reduplication or interruption, occasionally very slight beat just after second. Says she feels her heart beat in her head and limb. Counted the head beats herself while I held the radial pulse. They were synchronous. Her hand goes to sleep. When she has the sinking spells, the whole arm is involved. There is a burning sensation over the heart and there is dyspnea when she lies upon her left side. The sphygmographic tracings have a long, flat top and gradual decline without diastolic. She continued in about the same condition for several weeks with the pulse very slow, much of the time being 25 or 26, and at the paroxysms becoming imperceptible. The blood was never counted, but color index was not below that of the average female. There was no abnormality in the white corpuscles. The urine when measured, was below the normal in quantity, contained no albumin and only the normal amount of indoxyl.

The eyegrounds normal. There is a beating in the back of the head nearly all the time. The feeling coming from the back to top of head coincides with the spells. When seen in or soon after the attacks her pulse would be imperceptible or very slow, she said that in some of them she became unconscious, but this apparently did not last long. There were sometimes several days when there would be none. Her sleep improved somewhat as regards the average number of hours per night. The record of medication consists chiefly in cardiac stimulants with no hypnotics.

September 10: Patient has had several slight spells of faintness occurring during the day time; has been in bed ever since entrance, but has bed rest, wants to get up; has complained of rheumatic pains in muscles of both legs; pulse 32 to 36.

September 18: On the 11th and 12th, attacks (patient said afterwards that she was not conscious during these attacks) during which pulse scarcely felt at the wrist; duration 15 to 30 minutes. On the 16th, about 9 o'clock, had fainting spell, aroused dazed and confused. Again, about 1 A. M., called nurse and said that she felt she was going to have another attack and while nurse was at the telephone, patient screamed loudly several times, awakening and frightening all the patients. Nurse found her with eyes staring, pupils dilated, tossing herself about the bed and tearing her hair. No dyspnea, face very pale. Nurse tried to keep her quiet by holding her, assisted by night watchman, who had been attracted by the cries. Assistant called, but found patient quiet, in apparent unconscious state. Ammonia to nostrils and subcut. ether given. Pulse 16 to 18, could scarcely be counted on account of weakness. Later on nurse applied faradic battery;

*Read before the Association of American Physicians, Washington, May 1.

The interne of the service informed me that he could hear none recently.

CASE IV.—In September, 1899, I saw with Dr. Edson, of Roxbury, a bank cashier, æt. about 60. For years he had worked very hard, with very little vacation. Last winter he was restless and twitching and he could not walk up hill as well as he used to. For years he had had occasional blind headaches. Last May he lost consciousness and fell. In July he had another severe attack but after that none for a considerable time until he got hot and tired in the cars. Since then several severe ones and a great many less so. In the severe ones he loses consciousness and twitches in face and legs. In the slighter ones there is no twitching and no complete loss of consciousness. In the severe ones his color becomes white and then red, or red and then white, his wife stating the latter and others the former. During my visit he said that he had several slight ones but I could observe nothing except that after some of them there seemed a little longer interval in the heart's beats and then two or three closer together. The pulse at the wrist was 29 to 31, mostly regular, of good force and tension. The arteries appeared smooth and elastic at the wrist and the temple. The heart's impulse was not exaggerated nor the dullness increased. There was a strong double beat (the normal sounds) synchronous with the radial pulse. Between them one faint beat which sometimes seemed to be more developed, so that the pulse was apparently quicker, but this was not frequent enough to greatly increase the number of beats per minute. There was a systolic murmur, loudest at the base. This examination was made without a stethoscope.

Through the courtesy of the patient and of Dr. Edson I had the opportunity of examining him again last February, that is about a year and a half after the first examination. Dr. Edson informed me in his note that "for a year his pulse has kept at 28 and is full and perfectly regular with none of the faltering it showed when you saw him. His lapses of consciousness grew less frequent until May last, since which date he has had none." I found that he had not only had no losses of consciousness, but not even any faintness or dyspnea unless on going up-stairs too fast. He walks out and even cuts a little wood. He is somewhat deaf, varying at times, but always the most on the right side, where there is a slight trace of facial paralysis. I examined his heart with the phonendoscope, but through his clothing, and thought that I could at times make out a lesser beat after the principal one.

A pulse considerably below the average is much more likely to call the attention of the physician and the patient than one above it, as being much less common and less easily accounted for by any of the usual conditions which raise it, exercise, nervous excitement and especially fever. The fact that so many cases of it have been reported shows, indeed, that it strikes the practitioner as an unusual circumstance. The statement of Gossett Brown (*Brit. Med. J.*, 1879, Dec. 27), however, who says that in many thousands of cases in both hospital and private practice he had seen two cases of slow pulse is an extreme one. He evidently refers to the remarkably or phenomenally slow pulse, of which both of his cases are instances.

Riegel (*Ztschr. f. Klin. Med.*, 1890, p. 221), taking 60 as the figure of the normal pulse, finds among 4,484 men and 3,083 women, with a total of 7,567; 710, 334, and 1041 cases of slow pulse respectively; but of all these, however, he says, that but 47 were connected with diseases of the organs of circulation.

What is to be regarded as a slow pulse? An average of a large number of promiscuous counts would have little value, and the variations in age, sex, position and so on have been sufficiently often stated. A very interesting statement was made by Gros (*Union Med.*, Paris, 1870, p. 658) in regard to the Bretons whom he had the opportunity to ob-

serve in the military hospitals during the Franco-Prussian war. They had habitually their pulses considerably below the average of the rest of France. I have seen a similar statement as to the Central African negroes, but I do not know on what original authority.

Riegel quotes Kaiser as saying that whole families show slow pulse. Russell (*Med. T. and G. J.*, 1877, p. 229) reports the case mentioned to him by Crompton, of a man whose pulse has been notably slow for years, but who has long been an enthusiastic salmon fisherman and sportsman. His son has also a very slow pulse.

For the sake of round numbers we may call 60 the lower limit of the usual normal range which would probably be a little below the correct figure for the greater number of large, strong and healthy males. The upper limit, which would apply more closely to smaller, more excitable, and active persons and to females, might be put in the neighborhood of eighty.

It is usual to report cases of a pulse considerably below this as being found in perfectly healthy persons. There are a few in which it is impossible to dispute this diagnosis, but there are others more numerous, in which careful inquiry or the course of time shows the condition of alleged health to be subject to serious exceptions. In fact, such cases are treated of by Huchard as a separate class of Stokes-Adams disease.

It is customary here to speak of Napoleon I., who is said to have had a pulse of forty and to have been uncomfortable when it rose to sixty. Various authors state different figures, but for the sake of emphasis I mention the lowest. According to Ogle (*Lancet*, Jan. 26, 1897*), who made careful inquiries, there is no record of this pulse, but it is a tradition resting upon the verbal statements of Corvisart.

Dr. O'Meara, Napoleon's physician at St. Helena, records, however, that his circulation was very feeble, rarely exceeding 58 or 60 in a minute and most frequently was 54. The strange thing is to find this spoken of as a normal condition in face of that other tradition resting on the same basis but scouted by many Frenchmen, of epilepsy, and of the facts recorded by many historical writers* of those strange attacks of depression and apathy lasting for some hours, which assailed him on more than one critical occasion. Is it not quite as reasonable, as Ogle suggests, to unite the two symptoms into the well-known group of the permanent slow pulse with syncopal or epileptiform seizures?

Cases of physiological slow pulse are not common. Some which are so designated would be more correctly described as cases which up to the time of report had not shown any other obvious symptoms.

Mr. Mayo (*Land. Med. Gaz.*, Vol. XXII., N. S., p. 232) describes several which are certainly open to but little criticism even if classed as physiological, but which are prudently called by him "compatible either with ordinary length of days, or, at all events, with the continuance of life for an indefinite period."

The first was that of a man, aged 35, rather deli-

*It is more than 15 years since Dr. Ogle's early communications on this subject.

*Dorsey Gardner. *Quatre Bras, Ligny and Waterloo*, 2nd Ed., p. 31-36.

cate, whose pulse for many years was about forty, regular, full and strong. The action of the heart was healthy. He was in perfect health and supposed himself to be as capable of bodily exertion as other persons of the same slight frame as himself.

The next was a clergyman who died at 32 of obstruction of the bowels. He was exceedingly active in mind and body. Hills did not embarrass his breathing in the slightest degree. He frequently, however, like most other excitable persons, had fits of languor and depression. His pulse was regular at 30. When the body was examined, commencing ossification of the aortic valves was found.

In his third case there seemed to have been no connection between the slow pulse and some not very severe ailments. The patient occasionally rode eight miles to market.

Vigouroux (*Gaz. des Hop.*, 1876, p. 788) stated that he had known for five years a laborer whose pulse and heart always beat at the rate of twenty. During this time he never attended him but once, and then for "embarras gastrique." On the day of writing he had seen him in hot weather driving a cart with six oxen, "an exercise which demands a certain amount of health and energy."

There are a very few cases in which an acquired slow pulse seems to have become distinctly physiologic. This is difficult to understand unless we admit that the healthy heart is capable of doing an amount of work greatly in excess of what it is ordinarily called upon to do; that is, that the margin is a very wide one and that the physiologic estimates of the amount of blood pumped by the heart are maximums which very much more than cover the ordinary and necessary work. There is perhaps in such cases some adjustment of the capacity and elasticity of arteries, making in effect a larger reservoir, so that an extremely slow pulse may give a stream sufficiently steady for practical purposes. The case of Dr. Archibald Hewan is an interesting one. His pulse, from overstudy and from gout and rheumatism, gradually fell from 72 to 38, where it remained, but he never had a fainting fit. He was able to climb a mountain some thousands of feet high, his pulse at the top being 40.

Before discussing the mechanism and causes of slow pulse, it is well to mention briefly the principal clinical conditions under which it has been met with. Besides the somewhat doubtful physiological class, we find it in convalescence from many acute diseases, and in the course of some acute diseases, especially acute rheumatism.

Atkinson (*Tr. Assoc. Am. Phys.*, 1891) concludes: "It is evident that bradycardia occurring in acute rheumatism cannot in all cases be considered with the phenomena of convalescence from acute febrile disease as some are disposed to do."

Schuster (*Deutsch. Med. Woch.*, 1896, p. 484) reports the following: A child of 4 went through with articular rheumatism with no indication of heart trouble, but after the acute symptoms had passed and the pulse was of normal frequency, a strong systolic murmur was heard at the apex. When this also was in way of improvement a series of attacks were developed, coming on in the evening after the child had been asleep, in which the pulse, which had been small and arrhythmic, grad-

ually decreased in frequency together with the temperature and the respiration, which also took on the Cheyne-Stokes type. The next morning the child would wake up feeling pretty well. This lasted three weeks, when improvement began and continued until an attack of herpes zoster, when there was a new series. Later still, after renewed improvement, there was a third series less severe and coming in the morning. In a later attack of measles there was no heart disturbance.

The slow pulse of the puerperal condition is probably of the same character. In none of these conditions is it usually extreme nor long continued. In convalescence it usually occurs with a slight fall of temperature below the normal and is simply a part of the general reaction from the fever. Examinations of considerable numbers of puerperal cases seem to show that while the slow pulse under these circumstances has no unfavorable significance it cannot be called exactly physiological, inasmuch as it is not invariable, nor in the majority of cases well marked. Heil (*Arch. f. Gynecol.*, 1898, p. 265); Labousquière (*Ann. de Gynecol. et d'obstetrique*); Grüneisen (*Thesis. Halle, A. S.*, 1898); Varnier (*Ann. de Gynecol. et d'obstet.*, 1899, p. 30).

A large number of poisons, both vegetable and autogenetic, have a marked influence upon the rhythm of the heart. Among these are, of course, digitalis and its congeners, which slow the beats through their excitant action upon the vagus and vasomotor centres, the solanaceous alkaloids which act in the opposite direction by an opposing mechanism, and a considerable number which seem to have a general depressing effect upon the whole cardiac motor mechanism, such as aconite, saponine, muscarine, colchicum, and others. The position of tobacco is interesting and peculiar. It seems sometimes to be the cause of temporary slow pulse, although this is likely to be changed to a very rapid one by a slight exertion, but it has nothing to do with the etiology of the permanent slow pulse. Several of the most typical cases (I and IV and many others) have had nothing to do with tobacco, and in others it has not been used to excess. My friend, Dr. Starbird, the surgeon of the Soldiers' Home at Chelsea, where the principal employment of several hundred inmates is the consumption of tobacco, has for some years been looking in vain for a case of permanent slow pulse to show me.

Peaslee (*N. Y. Med. J.*, vol. 23) speaks of two cases of slow pulse, both attended with occipital pain, which recovered at once on discontinuing the weed. He recalls the fact that when examining recruits during the war he found many young men with slow pulse, who turned out to be cigarmakers. He mentions also, which is interesting as showing the power of psychic action on the rate of the pulse, and also as speaking well for the courage and patriotism of the expectant soldiers, that the pulse invariably rose when they were informed that they were accepted.

Tanquerel des Planches (*Lead Diseases*) states that in 1,217 cases of lead colic observed by him, 678 had a pulse of from thirty to sixty.

Whether the pulse follows the temperature, as it does to some extent *below* the normal, although much more decidedly upward, on account of a di-

rect act on or because some special toxin is formed in febrile conditions is not easy to say: there are reasons for supposing the former.

The relation of temperature to the rapidity of rhythmic action is interestingly shown by the chirping of the tree cricket, which, as was first pointed out by Professor Dolbear (see *American Naturalist*, 1897, p. 970, and 1899, p. 935), follows very closely the temperature of the atmosphere at the rate of four chirps per minute to the degree Fahrenheit.

In some physiological experiments where the heart is cut off as completely as possible from all other influences, one may find a relation between pulse and temperature almost as close as this, but only in a few instances the beat of the human heart does follow the thermometer so closely and accurately (*Journal Boston Soc. Med. Sci.*, Nov. 21, 1899, p. 39). The analogy, however, between the slow and disconsolate chirp of the cricket when "the melancholy days have come," and the reluctant pulse of bradycardia is a striking one, even if not scientifically valuable.

The following case is of more interest as showing some intimate relation or close neighborhood between the pulse regulating and heat regulating centers, a dependence of pulse on temperature:

Nieden (*Tr. Clin. Soc., London*, Vol. VI, p. 75) records the case of a man who fell downstairs in such a way as to strike against a wall at the bottom with his outstretched arms, dislocating, as it was afterwards found, the first dorsal vertebra without fracture, but compression of the cord. There was a complete paralysis of the lower extremities, the chest, and the greater part of the trunk. There was then progressive lowering of the temperature and pulse, consciousness remaining perfect to the time when the pulse was thirty and the temperature 81°. Death took place on the 11th day with a temperature of 80.6°. The most remarkable circumstance about this case in addition to its furnishing the lowest recorded temperature is that there should have been any fall of temperature at all, for although a fall of pulse is usual or at least very common in fractures of the cervical portion of the spine with injury to the cord (see Table 11), the rule is exactly the opposite as regards temperature, which rises often to excess.

Williams and Arnold found in young men, after long and severe exercise (*Marathon Runners*, *Tr. Am. Climatolog. Assoc.*, 1899), that there was a fall of temperature and of tension as shown by the sphygmograph, but a very rapid pulse.

Handfield Jones (*Lancet*, Dec. 30, 1876) gave belladonna to a case with low pulse and temperature without effect upon the pulse but raising the temperature some degrees.

In many cases of bradycardia the temperature is a degree or two below the normal, and this condition is not infrequently accompanied by a subjective sensation of cold.

The combination of a subnormal temperature and a pulse which, if not pathologically slow, is close to the lower limit or normal, seems to be met with in persons who are not absolutely sick, but who are not strong, get easily tired and do not recover rapidly from acute illness.

The pathologically slow pulse seems not infre-

quently to arise from extreme muscular exertion or strain, and even in some cases emotional depression. This effect may be a temporary one or more frequently passing off after a few days, although some cases of the permanent form trace their origin to conditions of this kind.

Observations of very slow pulse have always excited the attention of physicians and the number of recorded cases is very considerable. Taking out the well defined classes which have been spoken of, the remainder still comprises the most interesting and important. I have made a collection of all that I could find presenting a certain train of symptoms and tabulated them on that clinical basis before attempting to attach to them definite pathological conditions. Those in which post mortem examinations were made are in the first two tables. The first and most important group of recorded cases are those of the so-called Stokes-Adams disease or permanent slow pulse with acute exacerbations, attended by vertiginous, syncopal, epileptiform or apoplectiform attacks.

If the names of discoverers or of those who have been the first to describe special diseases are to be attached to them they certainly should be so to what they have described and not to a theoretical pathological condition. Adams and Stokes both described cases exhibiting the group of symptoms which I have taken as a basis for the first table. There are modifications which are undoubtedly closely allied which throw much light on the typical form, in which certain of the phenomena have not reached the same completeness as the others, and again it is not only possible but almost certain that this larger symptomatic group must be broken up on the basis of pathology into smaller ones, but notwithstanding these reservations, it must be admitted that the symptom-complex is a well characterized and distinctly limited one.

In these cases, on the occasion, perhaps, of a sudden attack, an early one of those which later characterize the disease, or perhaps by accident, a pulse is found which is very much below the average in frequency. On recovery it rises in frequency more or less, but still remaining below the average. The figures vary a great deal. In the table first, the larger numbers apply chiefly to the usual condition, that is, between the exacerbations or fits; and the very small ones to severe attacks. The habitual pulse varies considerably from day to day and has been given in detail in some of the reports which I did not think it worth while to reproduce, as the very slow pulse is subject to some of the same influences which change the rate of the normal one. The range of frequency may be seen in the tables. It has been noted, however, in some cases, that posture does not alter the rate so much as in health. Fever, however, increases the rate as in normal conditions. In the case of Mrs. P., reported by me, the pulse is, for the sake of brevity, given in the chart only during several periods of a few days each. In the first, it may be seen that a decided drop in the pulse coincided with a moderate fall of temperature. Whether this was the initial fall I have been unable to ascertain. During the paroxysms the heart may come to an absolute standstill, lasting for as much as a minute, and it

may be as low as four per minute for several successive minutes; six per minute has been counted for an hour (*Kinkead, Dublin J. Med. Sci.*, 1898, p. 4).

The failure of the heart has been observed to precede the nervous symptoms, so that the physician with his finger upon the pulse has been able to predict the onset. An aura of various kinds has been observed in many cases.

Rhythm. Many writers have cautioned against the error of mistaking a slow pulse for a slow beat of the heart and object on this ground to the use of the word bradycardia to describe an infrequent radial pulse. One author goes so far as to make this error cover most of the cases of the class we are considering. While it is, of course, true that such a mistake may be made, I have not found in reading over a good many cases that it often has been; many authors stating that the heart beats were or were not synchronous with the radial pulse and others showing by implication that they were aware of the possibility of error and avoided it. Besides this it seems from what follows, that the error, if it be one, does not materially affect the pathology:

There are certain transition stages between the ordinary rapidity of the pulse and the phenomenally slow ones which are very interesting. It is well in noticing the various changes in rhythm to take as a starting point the slow pulse in which no sign of interpolated beat can be in any way detected, either at the wrist or at the heart. Such a pulse is usually of fair strength, so as to be very distinctly felt and heard. The slowness, or to be strictly accurate, the infrequency, consists not in a general prolongation or proportional drawing out of all the elements of the cardiac cycle, but of a systole as sharp and decisive as the normal and a great prolongation of the diastole. That there is *no* prolongation of the systole it would be hard to say, but it is very evident from sphygmograms that it is not prolonged in proportion to the diastole. A physiological writer, to whom I regret that I cannot now give a more exact reference, has stated that the systole varies in proportion of the square root of the diastole, and most of the sphygmograms look as if they conformed quite nearly to such a ratio. Garrod, however (*Proc. Roy. Soc.*, 1870, p. 351, and 1875, p. 142), says "the length of the interval between commencement of the primary and diastolic rises is constant for any given pulse rate, and varies as the cube root of the pulse rate. Thurston (*Jour. Anat. and Physiol.*, 1876, Vol. X, p. 497) confirms this.

For the proofs of this general statement without mathematical accuracy, I may adduce the observations of many auscultators and many sphygmograms. Those taken in Prentiss' cases and published in the fourth volume of our reports are very characteristic. I have taken others of a similar form in several cases, and they are to be found in the literature nearly all bearing the same marks of an energetic upstroke, (systole) often a plateau, although this is certainly much more marked in some than in others, and a quite rapid decline, without a trace of diastolic, until the level is reached just before the next pulse. When the pulse is very slow (see *Tr. Assoc. Am. Phys.*, 1889, p. 122) the pressure may have reached almost to its minimum

some time before the next stroke. In the middle pulse of the second sphygmogram on that page the descent during the last one-third of the diastole or rest is extremely small.

There are sphygmograms which represent a much more gradual rise in the obliquity of the upstroke, but there is a possibility of instrumental error.

A unique observation is that of Auché and Martin (*Gaz. Hebd.*, 1878, p. 87), who examined by means of the radioscope a man subject to attacks of vertigo, who had habitually a pulse of about 40. They say "the cardiac contraction is brisk and does not last longer than ordinarily. Dilation is rapid, but when it is accomplished the heart rests. During the whole of the long pause ("grand silence") it is impossible to determine the least contraction or auricles or ventricles. There is no abortive systole."

On some sphygmograms interpolated beats may be distinctly marked which from their character and position seem to correspond to ventricular contractions. In a paper by Dr. Putnam (*N. Y. Med. J.*, Sept., 1874), not upon this subject but upon the *pulsus bigeminus* and *trigeminus*, sphygmograms are given where three successive beats grow less and less, so that if such a pulse had been counted only by the strongest pulsations it would have been at the radial only one-third of its true number at the heart.

The occurrence of abortive beats has been long recognized in connection with diseases of the heart other than that we are considering, especially in mitral stenosis, where it is not difficult to account for on mechanical principles. The dropping out of beats appears to be one method of formation of the slow pulse from the normal, the intermediate stages having been observed, as if the heart declined to continue a useless labor; but it is not certain that it is the only one. If such intermediate stages have existed in all cases they have certainly not been observed. Baumgarten (*Tr. Assoc. Am. Phys.*, 1888, p. 236) mentions the case of a young man dying of diphtheritic paralysis of the heart, where the development of a slow pulse of 25 from a frequent and irregular one, was traced as occurring in this way. He goes on to remark that "the very rare pulse of atheroma of the coronary arteries—never quite regular—is undoubtedly of this character." I should doubt if it were always developed in this way, although from the rarity of cases in which the development has been watched from the beginning and also from the possibilities of coronary disease existing beyond the limits usually examined it would be impossible to disprove it from recorded cases. An interesting converse may be found in the action of digitalis. Under the influence of this drug stimulating the vagus, the heart's beats become gradually slower and the tension rises. When overdoses are given and poisoning takes place lesser beats are interpolated and finally a rapid pulse is established.

It does not appear that in the slow pulse at any period of its development, nor in the recovery from this condition, which has been sometimes sudden and sometimes gradual, the interpolated ventricular beats are an essential feature, although they may occur at any stage.

Another set of intermediate pulsations observed

at the heart, and sometimes in the jugulars, but not at the radials, seems to be quite clearly shown to depend upon contractions of the auricles which go no further, and are not, as in the normal condition, followed by contraction of the ventricles. Pouzin (*Thèse de Paris*, 1878) refers the sound to the closure of the aurico-ventricular valves, which are heard separately instead of being merged in the other missing elements of the first sound. They thus mark the time at which a systole should occur but does not. Bristowe (*Lancet*, March, 1885) observed a motion imparted to the stethoscope placed near the base of the heart which was wholly unattended by cardiac sound or pulsation in the arteries.

The tracing of cardiac, radial, carotid and jugular pulsations taken by Vaquez and Bureau (*Mém. Soc. de Biol.*, 1893, p. 170), in a case of slow pulse with cardiac sounds not corresponding to anything at the wrist but attended with jugular pulse, and those of Chauveau (*Rev. de Méd.*, 1885, and *Lyon Médicale*, 1883) seem to put the occasional existence of such purely auricular pulsations beyond a doubt. Stokes describes as a new symptom occurring in one of his cases the pulsation of the jugulars, the number of which was difficult to be established, but was more than double the number of manifest ventricular contractions.

Whether the change from the usual to the slow pulse takes place by the dropping of beats, first a partial failure of the ventricular, then the total, and at last of the auricular, is not certain. Comparatively few cases have been observed in their formative stage, but in some it has appeared that this succession has been observed. In others, however, there is no reason to suppose that a simple elongation of the interval should not have occurred just as happens when a very frequent febrile pulse drops down to normal.

In many cases the first observations made, some of them at an early stage, make no mention of intermediate weak beats.

The nervous symptoms of the paroxysms vary a good deal in form and severity. They do not always preserve the same type even throughout the same case, varying from simple vertigo to complete loss of consciousness with convulsions. In a few cases they have been described as epileptic instead of epileptiform, and in others, notably the original one of Adams, as "apoplecticiform," with the remark that they are not followed by paralysis. Different forms do not seem to be attached to any special train of cardiac symptoms or cardiac conditions, nor can the prognosis be very accurately based upon them, as there have been instances of permanent slow pulse where the only representatives of the paroxysms, although genuine, have been so slight as to attract little attention and yet the patient has died suddenly in another.

Dyspnea accompanies many attacks, but is not so invariable a symptom as we should expect when the cardiac function is so extremely depressed. The respiration, except, of course, in the cases where convulsions take place, is more likely to be quickened than slowed to correspond with the heart.

The paleness of the face which ushers in the attack has been mentioned in many histories.

The usual explanation of the nervous phenomena

that they depend upon an anemia of the brain more or less complete and varying somewhat in its local distribution, would account satisfactorily for the differing forms. The dyspnea, however, is very likely to be of the same kind and origin which is found in the more common kinds of cardiac disease, and it is possible that on this account the number of cases included in the first table of the most typical form of Stokes-Adams disease ought to be somewhat diminished; but the line would be a difficult one to draw with absolute precision.

The number of cases which I have included in the first table on the basis of the symptoms and in which an autopsy has been made is thirty-four.

Naturally the records vary widely in completeness and possibly also in trustworthiness, but in very few of them has there been any satisfactory examination of what we cannot help regarding as a very important, if not essential point, that is the nervous supply of the heart, especially the sympathetic cords and the intrinsic ganglia of the heart.

To any one who has sought for the ganglia among the cardiac plexuses and in the heart itself it is not necessary to suggest a reason why they have not been more frequently examined with modern histological methods. Whether the fate of Dr. Robert Lee, who got into much trouble with the Royal Society for his too abundant discoveries of ganglionic nerves, has had any discouraging effect on would-be investigators, may well be doubted. In our more liberal times anatomical rather than ethical obstacles have probably been more effectual in keeping these structures out of the routine of the ordinary post mortem, and as typical cases are among the rarities of clinical observation the chances of the right case falling into the hands of the zealous histologist are small. These structures are far from easy to find except by the tedious process of imbedding and cutting of serial sections from the regions where they are likely to be found and many sections may be examined without finding any.

They are situated in the septum of the auricles in the triangular space bounded on each side by the diverging walls of muscle, and above by the pericardium, immediately beneath which latter they lie, being specially grouped above the foramen ovale, and more posteriorly where the septum comes down to the sulcus between the auricles and ventricles. They are said to extend beyond these regions, especially along the sulcus, and probably do so in a scattered way, but practically these are the best regions to search. They are not to be found at all below the transverse sulcus in man, but are described by some authors* as occurring over the upper third or two-thirds of the ventricle in some animals. For examination in the fresh condition they may be found by dissecting out from the appropriate localities pieces of nerve and tearing them apart with needles. This is not a very certain method, as many pieces may be examined without success, but occasionally one may get in this way a very satisfactory specimen. I have once in a very emaciated heart found just beneath the pericardium lying over the top of the auricle a couple of small ganglia the size of very small pinheads.

*Katz in Beck (*Chl. Med. Wiss.*, 1897.)

The structure of these ganglia is that of sympathetic ganglia in general, consisting of from one (on section) cell to forty of fifty or more with fibres of both kinds, white and grey. The cells are enclosed each in its capsule, consisting of many small nucleated cells. The nerve cells have a very finely granular or rather semiopaque parenchyma less pigmented than that of many sympathetic ganglia, and a large nucleus. The ganglia resist with considerable tenacity the process of dilaceration. These ganglia have been investigated by a considerable number of histologists in various diseases, but among them there have been few if any of the kind we are considering. They are as follows:

Romberg and His, *Prager Med. Woch.*, 1890, p. 331. Embryological. Cardiac ganglia are offshoots from the sympathetic and remain connected with it; hence are only sensitive.

Dogiel (*Arch. Mikr. Anat. XI and XX*) Anatomical.

Schwarz (*Berl. Klin. Woch.*, 1898) showed specimens of ganglia. They are few in the mammalian heart, situated superficially in and above the auriculo-ventricular sulcus. They lie mostly in the neighborhood of the mitral valve. They should not be confounded with the "Mast-cells," which are found all over the surface of the ventricles and which have given rise to some of the mistakes. Lübmoff (*Virch. Arch.*, 61, p. 145). Histology; many drawings. Pathological changes consist in thickening and degeneration of the cell capsules. Thickening, amyloid degeneration, and metastases (micrococci) in the vessels; and degenerative changes in the nerve cells. The latter in adults always contain pigment.

Ivanowsky, *Rudnoff's Journal* (Russian)—abstract by Putjatin (v. i.). Observations on spotted typhus. Changes chiefly parenchymatous, but capsular endothelium often swollen. He explains by these changes the heart paralysis which caused death in the early periods of typhus.

Putjatin (*Virch. Arch.*, 74, p. 461) examined ganglia in three groups of cases. In the first two groups there were serious organic changes in the heart. In the third the changes were dependent on constitutional disturbances. Fibrous intergrowth in ganglia. Degenerative changes in protoplasm.

Uskow (*Virch. Arch.*, 91, p. 453). Changes in the heart ganglia connected with hypertrophy of muscle. Chiefly in the medullated fibres, which lose their myelin sheaths and show the process of proliferation of the nuclei. The visible changes in cells are limited to proliferation of the nuclei capsules. In certain acute diseases occur the changes pass on to parenchymatous inflammation. In two children with diphtheria he found no changes.

(To be Continued.)

Spontaneous Expulsion of Large Biliary Calculi.—Troisier reports two such cases in the *Bulletins et Memoires de la Société Medicale des Hôpitaux de Paris*, (May 30, 1901, No. 18). In the first patient, a woman of 60, who had never had hepatic colic or jaundice, the symptoms of acute intestinal obstruction appeared, and lasted about twelve hours, when a gallstone, weighing 7 gm., was passed with a normal movement of the bowels. There have been no symptoms in the three years which have gone by since. In the second case, a calculus which weighed 8.5 gm. was passed without any symptoms before or since. [M. O.]

PROGRESSIVE HARDNESS OF HEARING AND ITS ARREST BY SURGICAL REMOVAL OF THE INCUS.

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Progressive hardness of hearing and its accompanying symptoms, tinnitus aurium and vertigo, are due to disease in the middle ear. This aural malady has generally been supposed to be due to a chronic catarrhal inflammation in the mucous membrane of the middle ear, and has been sometimes denominated "dry catarrh of the middle ear." There is, of course, such a disease as catarrhal deafness that gets better or well after the catarrhal symptoms are relieved. In many cases of hardness of hearing, however, even with catarrhal symptoms in the ear, nose and nasopharynx, after the latter are relieved, the ear symptoms remain unchanged or grow worse. Such is the condition characterizing progressive hardness of hearing, or so-called chronic catarrh of the middle ear. The catarrhal symptoms in such cases are not to be regarded as primary and causative, but as secondary and resultant, or accessory and complicating. The catarrhal symptoms may be said to be superposed upon the affected tissues of the middle ear, the pathogenesis of the latter disease not being positively demonstrable. Progressive hardness of hearing must be regarded as an "affection of the nerves supplying the middle ear and correlated structures." (Weber-Liel, Berlin, 1873.) The majority of the symptoms indicate that neuroses of the trigeminus play the greatest part in the causation of this form of ear disease, though disturbances in the sympathetic innervation have much to answer for in the development of progressive deafness. Many of the phenomena of this disease indicate furthermore that complex disturbances in the correlated areas of the vagus, glossopharyngeus, facial, auricularis magnus and spinal accessory nerves also have much to do in the development of the aural malady under consideration. Hence many aural neuroses, i. e., neuroses in the tract of the middle ear nerves, occur not as such, alone, but must be regarded as standing in the closest relation to simultaneous and similar ones in the structures of the nasopharynx, fauces, larynx, and the opposite fellow ear. In the latter instance is seen an example of cross influence of one ear upon the other.

Subjective Symptoms.—From such nervous lesions are developed a large series of the most dangerously insidious and progressive forms of deafness, tinnitus aurium and ear vertigo or so-called Ménière's symptoms. Hardness of hearing and deafness are the prominent and earliest subjective symptoms in this disease, tinnitus aurium being the next, and aural vertigo the last symptom in the distressing list.

Objective Symptoms.—Among objective symptoms, the most prominent are the changes in the position and appearance of the membrana tympani and ossicles of hearing. The drumhead becomes opaque, lusterless and retracted from contraction of the tensor tympani muscle. The malleus handle

instead of being nearly vertical in position is drawn backward and upward and appears foreshortened. In this process of retraction the membrana tympani is brought nearer the inner wall of the drum cavity, and in many instances the promontory of the cochlea, and the incus-stapes joint become visible through the membrana. These are the most important of the physical symptoms of progressive hardness of hearing, and in them can be seen the mechanism of progressive deafness.

The Ossicles.—The immediate result of retraction of the membrane and malleus is retraction of the incus and stapes, with impaction of the latter bonelet in the oval window. Impaction of the stapes is all the more readily produced if the stapedius muscle is weakened by a lesion of the facial nerve from which the muscle obtains innervation. In a normal ear impaction of the stapes in the oval window and consequent compression of the labyrinth fluid in the vestibule receives compensation by an outward movement of the membrane of the round window. But in progressive hardness of hearing, changes occur in the membrane of the round window which render it stiff and unyielding to intra-labyrinth pressure, and its compensatory bulging outward toward the tympanic cavity is hindered or destroyed. Hence impaction of the stapes in progressive deafness is followed by disastrous pressure on the terminals of the auditory nerve in all parts of the labyrinth, resulting in deafness, tinnitus, and at last, in some instances, ear vertigo.

This form of hardness of hearing generally begins in one ear, in which it progresses slowly for a year or more, the opposite ear remaining normal. Suddenly the patient is surprised that the good ear is failing in hearing, and progressing more rapidly towards deafness than the ear first attacked. It is not unusual to discover that when the patient presents himself for treatment it is because, the ear so long the better one, has become the worse, and that the ear first attacked, though hard of hearing, is at last the better one. This unfortunate result is doubtless due to the synergetic, or "cross" influence of one ear upon the other. Cross influence of one organ or limb on one side of the body upon its fellow on the opposite side is not yet fully explained, but its existence is doubted by few. The ears are to be considered correlated areas quite as much as the ear and the nearer half of the soft palate from which the tensor tympani muscle originates. Nearly always in a case of progressive hardness of hearing a partial paresis occurs in the half of the velum nearer the more affected ear, in consequence of which the opposite half of the velum draws the uvula towards the better ear. The preponderance in traction on the part of the stronger side of the velum induces muscular imbalance in the muscular structures of both middle ears. It is thus shown that the two ears must be regarded as very closely correlated areas, and that very readily a cross influence, or a synergy either for good or bad, passes from one to the other. The fact that first one ear and then the other, in the course of a year or two, is affected by progressive deafness, seems to indicate that the implication of the second ear is dependent upon the cross influence of the ear first diseased. This view is strengthened by the deterrent

and prophylactic effect of the surgical treatment, as will be shown later. Every aurist knows that the chief causative factor in the phenomena of this disease is the undue contraction of the tensor tympani as evidenced by the great retraction of the membrana tympani and the chain of ossicles. Sooner or later this disordered state of the tensor tympani muscle, and the chain of conducting bonelets is imitated by the opposite ear. Many years ago (1888) I demonstrated that by the liberation of the impacted stapes, through removal of the incus, and consequent interruption of the retractive power of the tensor tympani, tinnitus aurium and ear vertigo are relieved. This operation, however improved the hearing, either not at all or only a very little, but I observed that it did not diminish the hearing in the ear operated upon, and that the progress of the deafness was arrested in it. As I have been able to observe closely and protractedly during the past 13 years some of the cases first operated upon, I have noted that in the opposite ear if already affected, the progressive hardness of hearing has been in some instances arrested and the hearing improved. The only explanation of this result I can offer is that the contraction of the tensor tympani, spasmodic in character, being overcome by the removal of the incus in one ear, the synergetic contraction of the tensor in the opposite ear, induced by cross influence of the more diseased organ, was also overcome by a beneficial cross influence emanating from the operation in the diseased ear. This improved condition of one ear resulting from improvement in the condition of the opposite one, is quite as comprehensible as the improved muscular condition of the left arm observed to follow the development of the right. (Scripture.) It was also observed that if the fellow ear was entirely unaffected by symptoms of progressive deafness at the time of the operation, it showed no tendency to become thus diseased, demonstrating a prophylactic effect of the operation in the affected ear, upon the unaffected one.

Cases. The first case to be observed in this way was that of a woman, 31 years old at the time of the operation in May, 1888, 13 years ago. The tinnitus and vertigo were promptly relieved by the operation upon the left ear. The hearing 6 in. for the tuning fork was unaffected by the operation. The right ear has remained a good ear to the present time, notwithstanding chronic rhinitis and some general ill health on the part of the patient.

A second case, which I have been able to watch for 10 years, since March 5th, 1891, is that of a woman 20 years old at the time of the operation. In this instance the hearing was greatly improved by the operation from 6 inches to four feet, and the opposite ear has never shown any symptoms of progressive deafness, though the patient has some chronic hypertrophic nasal catarrh, and has passed through one pregnancy since the operation.

A third case kept under observation, is that of a woman of 30 at the time of the operation, November 21st, 1892. There was a slight improvement in hearing brought about in the left ear by the removal of the incus. Though her general health has not been good, the ear not operated upon has shown no symptoms of progressive deafness.

A fourth case kept under observation is that of a young man 22 years old at the time of the removal of the incus, December 12th, 1892. In this instance the incus was removed from the left ear, resulting in improvement in hearing, from 12 inches to four feet for isolated words. The right ear also showed signs of progressive deafness, the hearing in it being from 2 to 3 feet for isolated words. The hearing in the left ear was maintained at four feet, and the progress of the deafness in the opposite ear was ar-

rested by the operation. This fortunate condition of hearing continued until the untimely death of the patient in 1899.

This case I have reported, American Otological Society, July 19, 1898, as an example of the deterrent effect of incudectomy upon progressive deafness, not only in the ear operated upon, but upon the opposite ear. In the other cases reported in this article the prophylactic action on the unaffected ear is also demonstrated.

The sooner the operation is performed in the affected ear, or in the more affected ear, if both ears are implicated when first seen by the aurist, the better the results. Every aurist knows that the tendency in progressive deafness is towards a fall in the hearing to a very low point; first in one ear and then in the other. Let perfect hearing be represented by 100. If a patient presents himself with a hearing distance of 100 in one ear, and 75 in the other, it is advisable to operate at once on the defective ear even if the hearing in it fall say to 60, because the effect of the operation on the good ear will be to maintain it at 100, so that the equation of hearing in the two ears will become 100, but be maintained at that point by the deterrent effect of the operation on the diseased ear. If this operation is not performed the hearing will sink in both ears to a low degree. In other words it is better to sacrifice some hearing in the affected ear, but preserve a good total of hearing in both ears, than allow both to sink to low points, as is the tendency in progressive deafness. In any instance of progressive deafness, especially if the hearing be defective in both ears, and tinnitus aurium be present in the more defective ear, incudectomy is indicated in the latter, as offering the only means of relief of deafness and tinnitus, and prophylaxis of ear vertigo in the ear operated upon. It will also arrest the progress of the disease in the better though defective ear, and ward off tinnitus and other conditions in it conducive to ear vertigo.

Operation.—The patient should be etherized (local anesthesia by cocaine being both inefficient and toxic according to my experience) and the external auditory canal and the membrana sterilized by a solution of mercuric bichlorid (1 to 5000) or one of formalin (1 to 1000), or with alcohol. Then the auditory canal and membrana tympani should be illuminated by means of an electric light held on the forehead and run by a small portable storage battery, made for the purpose of clinical illumination.

When the membrana is intact, as it is in a case of chronic progressive deafness, the initial incision is made with a delicate knife, beginning close behind the short process of the malleus and following closely the periphery backwards and downwards until reaching a point below the line drawn horizontally through the umbo of the membrana. This cut is followed by little or no bleeding as a rule. The flap thus made should be pushed inward towards the promontory by means of a probe armed with a small dossil of sterilized cotton. If there be no bleeding the incus-stapes joint is seen as soon as the flap of the membrana is pushed aside. If there be bleeding it must be mopped away with sterilized mops on a cotton holder.

The incus being now in plain sight, it should be gently disarticulated from the stapes by drawing the former outwards and downwards by means of an incus-hook knife passed behind its long limb. When this is done the long limb of the incus should be grasped by special forceps and drawn very cautiously downward and outward into the auditory canal and then removed entirely from the ear. When this is accomplished the operation is finished. The slight bleeding that sometimes occurs in these cases requires no attention. The rest of the conductors of sound are left intact. The meatus should be stopped

with sterilized cotton and the ear let alone for 24 or even 48 hours, unless the cotton in the meatus gets moist with blood or serum. If this occur the cotton should be removed and dry cotton inserted. There is to be no after-treatment in such cases, as all is accomplished when the incus is removed. As a rule there is no reaction in these cases, and the wound in the membrana heals by first intention. Sometimes a slight reaction has occurred, shown by a little pain and some mucopurulent discharge. But this is healed in a few days by simply mopping the ear with sterilized cotton and a solution of formalin (1 to 1000) and such reaction has never had any bad effect upon the result of the removal of the incus in checking the progress of the deafness. A serious reaction I have never encountered after any of my operations for incudectomy, and the patient is never obliged to remain in his room for more than twenty-four hours.

It must be borne in mind that between 1888 and 1892 I had operated upon only 25 cases of progressive hardness of hearing, and that of these, few could be kept under my continuous observation. I soon discovered, and have long taught, that incudectomy was an efficient mode of breaking the retractive force of the tensor tympani muscle, liberating the stapes impacted in the oval window, and thus relieving tinnitus aurium and ear vertigo. After patiently watching some of the cases operated upon from ten to thirteen years ago, I now feel justified in my conclusions that the operation of incudectomy also arrests progressive deafness, not only in the ear operated upon, but in the opposite ear if it has appeared there, or acts as a prophylactic in the better ear if it be not yet affected. Since 1892 I have operated upon 53 cases of progressive hardness of hearing in order to break the retractive force of the tensor tympani upon the chain of auditory ossicles; four times by resection of the long limb of the incus, eight times by tenotomy of the tensor tympani, and 41 times by incudectomy, the last named method being the preferable one. The results of the operations in these 53 more recent cases it is purposed to present in future communications.

THE DIFFICULTIES ATTENDANT UPON THE PROPER TREATMENT OF DISEASES OF THE EAR IN DISPENSARY PRACTICE.*

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of Philadelphia.

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I have been led to make the following brief presentation of facts because I believe it to be the duty of those who have charge of the otological departments of our hospitals to do all in their power to render their dispensary services of the greatest possible utility to the patients, the hospital and to their own scientific interests. I hope to arouse interest and discussion of the matter on the part of hospital boards of management as well as of physicians with a view to the betterment of the conditions I mention, and I think the same statements apply largely

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to other dispensaries as well as those for the treatment of diseases of the ear. All of us are familiar with the fact that the cases of aural diseases which we treat in our offices respond much more readily to treatment and are cured or relieved in much larger proportion than are those seen in dispensary practice. I have thought carefully over the reasons for this and have discussed them with a number of others who are engaged in hospital work, and I now present some of the conclusions at which I have arrived.

First, as regards the social condition of our hospital clientele. Of course, this varies greatly in different hospitals; in one consisting of respectable, hard-working people; in another made up largely of foreigners; and in yet another of the colored race. In most large city hospitals it consists of a mingling of various races and all sorts and conditions of men.

In the Pennsylvania Hospital, the patients in the ear dispensary consist largely of Russian Jews, Italians, and Slavs. These people as a rule do not understand English, are filthy in their habits, living in the most squalid conditions. It is impossible to even make them understand directions, much less to make them carry such orders out, as regards return visits and home treatment. Very few of the foreign patients possess enough sense to bring an interpreter with them, and if you do procure some one who can talk to them he usually understands very little more of your instructions than the patients themselves. The class of patients who suffer most from this condition are the children with suppurative ears. The parents cannot be depended upon to properly cleanse the ear of the ever accumulating discharge, or to bring the child back to the hospital on the days designated for its treatment. Such neglect results in filthy, eczematous conditions in the external ear, in mastoid involvement, or in brain abscess. Frequently I have sent children into the hospital, where a few days proper treatment has terminated in recovery what would otherwise in all probability have resulted in a very chronic, possibly fatal, condition, whom I had reason to suppose would be thus neglected by their parents. Many times these people through ignorance will not consent to leave their children in the hospital even when they are very sick. Consent to operations, even as minor as the removal of polypi, or the evacuation of an abscess over the mastoid, is frequently refused and the condition of the ear thereby greatly aggravated.

Secondly, the difficulty of properly examining and treating the patients, because of the overcrowding of most dispensaries, is to my mind a very real evil. What aurist would venture in his private practice to treat patients, taking them just as they come, new and old cases, serious and trivial, at the rate at which dispensary patients are generally rushed through? Many of the cases present features of much interest over which one desires, and ought to linger, but there is always the ever pressing throng clamorous for their turns. The examination with the speculum is usually all that can be satisfactorily made, the functional examination requiring time and quiet, which are but too seldom procurable, and yet, as Dr. Randall (*Journ.*

American Med. Ass'n, March 23, 1901) has recently emphasized, how essential such examinations are. I cannot but think that one reason why such functional examination is often neglected is because we have become habituated to its neglect in our dispensary work. If useful with our private patients it is surely just as valuable with those we see in dispensaries.

After examination comes treatment, and here the time limit again operates to the disfavor of our patients. A case of impacted cerumen may require ten or fifteen minutes; the proper cleansing of a suppurating ear, to be done with thoroughness and with comfort to the patient, may require fifteen or twenty minutes. A few cases of this kind will consume time to such an extent that the rest of the patients must be hurried through at breakneck speed.

Thirdly, how difficult and almost impossible it is to keep records of dispensary cases. The first visit is always, at our dispensary, made a matter of careful record, but after that, unless one of us is particularly interested in following up some particular case, I am afraid the record is usually left blank. How utterly worthless dispensary records are! Partly on account of failure to note progress, partly because practically no ultimate results can be noted, the patients disappearing from observation as soon as they are cured, or if not cured, because they are discouraged, and, treatment costing them nothing, they want to make a change.

How shall we overcome these difficulties? The question of hospital management so that there shall be the greatest amount of good accomplished with the least waste of money so charitably given for the relief of the sick poor, is a very deep one and may be considered as beyond the province of the present paper, but it seems to the writer that no province of hospital work has been more neglected as regards its business management, and stands in more urgent need of reform than the dispensary service, and to this lack of attention is to be attributed its comparative failure. The managers and superintendents of hospitals, as a rule, pay close attention to the condition of the buildings, to the average cost of maintenance of patients, the expenses of the drug department, and to the proper performance of their duties by the physicians and surgeons in the wards. Great attention is paid to the admittance only of proper cases to the wards. Efforts are made to have a sufficient surgical armamentarium in the operating rooms.

Now let us turn to the condition of affairs in the average dispensary.

We have heard lately a great deal of talk about dispensary abuse by patients who are able and should be made to pay for the services of a physician. This talk is largely based on the injury supposed to be inflicted upon the doctor. The truth is that, as a rule, the doctor suffers less than anyone from this really grave abuse. The charitable people who have given their money to relieve the sick poor may here behold their funds misappropriated. By adding to the number of patients to be treated these "beats" take up time which should be given to the suitable objects of charity; by adding to the expense of the dispensary they lessen its power to en-

large its means of doing good. It is this detestable class of patients who always insolently expect more trouble to be taken with them and more time given to them than can be given to the truly poor. To a great extent this evil could be remedied if in every hospital a dispensary clerk was maintained, whose duty it should be to issue cards to suitable persons for dispensary treatment. If the person applying for treatment appeared as though he ought to be able to pay, a minute inquiry should be made into his circumstances, and if not an object of charity he should be refused treatment. The Eye, Ear, Nose and Throat Hospital of New Orleans has a registration clerk, and from its last report I quote the following paragraph:

"Forty-two persons acknowledged their ability to pay, and were denied admission by the clerk at the registration desk. Besides these, there were 57 cards withdrawn by the examining surgeons; 37 in the eye department and 20 in the ear, nose and throat department, making a total of 99 applicants who were discovered in the act of imposing, intentionally or not, on a charity founded for the poor only." Probably many more patients who could pay were deterred from applying by the mere knowledge that their circumstances would be inquired into.

A man of discretion in such a position would possibly save his salary to the hospital in the course of a year, and his labors would be of the most direct benefit to both patients and doctors.

Almost all dispensaries are cramped for room and consequently seriously hampered in their efficiency. Every otological dispensary should consist of at least three rooms, a waiting-room, a quiet room in which new patients could be studied and in which functional examinations could be properly made, and a room for the treatment of routine cases. No otological dispensary should ever be run unless equipped with sets of tuning-forks and other instruments necessary for the most accurate diagnosis. Many otological dispensaries possess but one tuning-fork, and that tuning-fork is rarely used because of lack of time, and the noises which usually accompany the work in a busy dispensary. How rarely are the Galton whistle or the acoumeter to be found among a dispensary's equipment!

It is but right that we whose daily work lies in dispensaries and who must be struck with the miserable waste of money and effort which is daily taking place in them, should be the first to point to the existence of such evils in the dispensary system. How else can we hope to impress superintendents, who, in their efforts to fulfil the wishes of the managers, must devote their time and labor to the hospital in distinction to its dispensaries, or managers, who, perhaps, never visit the dispensaries during the hours when work is being carried on in them, and who often really know but little of what goes on in the hospital, save what can be seen from the books of the superintendent, and by their walks of inspection through the buildings and wards. The managers are apt to base their ideas of the work of the dispensaries on the statistics of patients. If these show, as they usually do, a steady increase in number, the managers point with pride to the increased usefulness of the dispensaries, little think-

ing that this increase has in reality greatly diminished the ability of the dispensary to do good.

Finally, it seems to me incumbent on all physicians who work in the special dispensaries, whether for the ear, nose and throat, or eye, in which these abuses are most apparent, to lose no opportunity to insist that the dispensary work be as carefully provided for as the work done in the wards, that the number of cases handled be restricted to those which can be properly studied and treated, and that every dispensary contain an up-to-date complete armamentarium. Only by so doing can we bring the dispensaries up to a level upon which they will perform scientific work, and at the same time benefit those worthy of charity. A hospital which wishes its work to result in the greatest amount of benefit to those worthy of its charity should see that the agents selected to carry out its work are given every facility to properly perform their duties, and then should see that those duties are properly performed. At the present time I am convinced that in most dispensaries there is a large absolute waste of clinical material for scientific study. Medicine and surgery have in recent years made such enormous advances largely because the cases in the wards of hospitals have been so thoroughly utilized for purposes of study. In the modern dispensary, however, entirely too much attention is paid to securing an enormous attendance of patients and then rushing through their routine treatment, without stopping to study individual cases, not only at their first, but at their subsequent visits.

MENIERE'S DISEASE.*

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In accepting an invitation to contribute a brief paper on this subject, the writer does so without the expectation of adding anything new to our knowledge of the subject, but with the hope that the discussion which follows may throw some light upon an affliction the exact nature of which is so little known. Since Paul Ménière read his notable paper before the Academy of Medicine at Paris in 1801, the disease which still bears his name has been the subject of much contention. Although Ménière, in his famous case, showed conclusively by post-mortem demonstration that the semicircular canals were filled with clotted blood which encroached to some extent upon the cavity of the vestibule, there has always been a tendency, apparent even at this late day, to make use of, or apply the term Ménière's Disease to almost all severe aural disturbances characterized by vertigo, deafness, etc. This misunderstanding or misapplication of the disease outlined by Ménière has led to much confusion as to the actual pathology of the lesion. Manifestly, if the term Ménière's disease means anything, it must be restricted to that complexity of symptoms at present recognized as the outcome of what is termed apoplexy of the labyrinth. Furthermore, this laby-

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rinthine hemorrhage should be primary in its inception, and occur suddenly in a subject free from previous ear trouble, and enjoying excellent general health at the time of the attack. If then, gentlemen, such restrictions are to be placed upon this pathologic entity, how very uncommon must be a true case of Ménière's disease.

Personally, the writer has long since felt that the so-called Ménière's disease is of most exceptional rarity; furthermore, if we exclude previous systemic illness as a causative factor, this disease must, with few exceptions, be regarded, from an etiologic standpoint, as the result of traumatism; and who to-day would venture a definite diagnosis in most lesions involving the base of the skull?

Since the publication of Flourens' experiments on the semicircular canals of pigeons, it has generally been accepted that in the semicircular canals we have the peripheral organs for the maintenance of equilibrium. On the other hand, "Steiner has found that, when the membranous canals of sharks have been excised, and the animals then returned to the water, there is no disturbance of locomotion. If, however, the auditory nerve be stretched, or the ossicles pulled upon, locomotion is interfered with. Similar experiments were confirmed in lizards and frogs, which would tend to show that the canals are not necessarily associated with equilibrium, and that the disturbance of locomotion has probably a central cause in the medulla." Furthermore, Magendie and Cuvier have shown that the same results may be induced by division of the transverse fibres of the pons varolii, or of the fibres running from the cerebellum to the corpora quadrigemina, or of those passing from the cerebellum to the spinal cord.

Baginsky asserts that the semicircular canals have no part in the maintenance of equilibrium; as the entire labyrinth of a dog may be destroyed without the appearance of any disturbance of this nature. Gellé speaks of Ménière's symptoms as occurring, or likely to occur, in diseases of the middle ear, in hemorrhage into the labyrinth, in hyperemia of the labyrinth, in anemia of the labyrinth, in labyrinthitis, in hyperesthesia of the labyrinth, in reflex labyrinthine vertigo and toxemias.

The lamented Gruber, to whom the writer is indebted for many of his references, affirms that "it is now certain that an exaggerated intralabyrinthine pressure first of all takes effect upon the perilymph, and is then transmitted through the aqueductus cochleae to the subarachnoid space, thereby inducing the results under discussion, if this action takes place with sufficient rapidity. The pressure may always be moderated to a certain degree, since the direction in which the aqueductus cochleae opens into the subarachnoid space is not the most effective one. It is, however, quite otherwise with the aqueductus vestibuli; for if the pressure on the sacculus becomes excessive, the endolymph can give way directly through this channel towards the cranial cavity, and if the recessus Cotugnii be largely developed, it will become distended to a corresponding extent, and thus exercise a more considerable pressure upon the centre of statical equilibrium, the cerebellum, evoking symptoms of vertigo, etc. If, on the other hand, the recessus Cotugnii be but slightly developed the phenomena in question may then be quite absent. It should likewise not be

forgotten that the pressure brought to bear by the perilymph through the aqueductus cochleae upon the extended area of the subarachnoid space is proportionately greatly lessened in its effect, a condition which does not exist in respect of the closed recessus Cotugnii."

Since, then, it seems to be definitely shown that Ménière's symptoms do not arise exclusively from a single disease of the labyrinth, but are more or less prominent in traumatisms and various other pathological changes involving the ear and adjacent structures, would not the cause of otology be best served, and much confusion averted, by adopting a nomenclature defining as far as possible the location and nature of the various affections of the internal ear without consideration of Ménière's disease. It is desirable, of course, that *Ménière's symptoms* should have proper recognition, but the term *Ménière's disease* cannot be used as at present understood without perpetuating, and probably multiplying, the confusion already extant.

In many instances an injury to the brain substance proper, rather than to the semicircular canals, is unquestionably the cause of an inability to move in a forward direction. In common with the writer, many of those present have doubtless witnessed the ability of rabbits to run at a rapid pace in a small circle after receiving a gun-shot wound of the head. Dalby's experience in this direction has shown conclusively that the wound did not in any way injure the ear, a subsequent examination disclosing the shot located in the *cerebellum*. Dalby has suggested the term auditory vertigo, to distinguish between vertigo due to lesions of the ear and that arising from other causes. This, however, seems objectionable, as the term is too general in meaning, not defining any particular disease, nor the exact portion of the ear involved.

"Tympanic vertigo," as suggested by C. H. Burnett, is an efficient and expressive term to distinguish between vertigo due to middle ear disease or disturbance of intratympanic pressure, and that involving other parts of the ear or neighboring structures. The writer is firmly of the opinion that too little importance has been given to the diseases involving organs more or less remote from the ear, which, however, play an important part in the secondary development of many pathological changes in the organ of hearing. Just as an intractable cough at times develops during the course of certain diseases of the kidneys, so also has the writer observed aural manifestations in cases suffering from nephritis, which he hopes in the near future to make the subject of a separate paper. To carry this thought a step further; is it not reasonable to presume that the benefit we sometimes secure by the use of quinine for the relief of tinnitus, is due to the fact that the tinnitus was the result of malaria and consequent anemia of the labyrinth; the quinine not only exerting its specific action on the general disease, but also relieving the labyrinthine ischemia, a condition from which most patients so afflicted probably do suffer.

The element of time and rest which is usually self-enforced, are the two most prominent factors in the treatment of a real case of Ménière's disease; and yet, counter-irritation, together with the

use of the iodides, bromides, etc., probably have some virtue, and should therefore be employed.

The writer believes that most diseases of the internal ear are secondary either to some tympanic or to some systemic trouble (excluding traumatism), which must necessarily be carefully sought after and so far as possible corrected, while the local manifestations are being dealt with as the symptoms demand.

It is not the purpose of this paper to enter into a discussion of the treatment of the various diseases involving the internal ear. However, we wish to commend the employment of the subcutaneous injection of pilocarpin, as suggested by Politzer, in syphilitic affections complicating the ear. Furthermore, we desire to call particular attention to the virtues of Zittmann's decoction in cases where the use of mercury is indicated, in lesions of the ear, nose or throat. The writer also desires to endorse the removal of the incus, in selected cases for the relief of tinnitus and vertigo, as suggested by Burnett.

A NOSOLOGICAL STUDY, FROM A CLINICAL STAND- POINT, OF CERTAIN MANIFESTATIONS AC- COMPANYING AND FOLLOWING MALARIA.

By G. W. PENN, M. D.,
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With the history of this important subject in its ordinary forms, the profession is familiar since the work of Laveran, in 1880, and since confirmed by Marchiafava, Celli and others. The discovery of the hematozoon of malaria has, of course, done much toward bringing order out of the chaos of Southern fevers. Vidal's blood test and Ehrlich's diazo-reaction have still further straightened the tangled nosological skein over which so many brilliant men, both from a laboratory and a clinical standpoint, have spent so much time. And yet the fevers of tropic and temperate climates are still unclassified! Ever since Woodward's attempted explanation of the febrile phenomena he found south, as a hybrid fever, under the name typho-malarial, there have been numerous theories offered only to be exploded in the light of further research.

I wish to offer a suggestion that I believe will make clear many things in the history of this fever hitherto unexplained on any other hypothesis. If the idea I am about to present has ever been advanced, I am unaware of it, and while there may be little in it, I desire an expression from men better able to study the matter from every standpoint, than myself.

The teachings that practically all cases of continued fever not yielding at once to quinine are typhoid, and that there is a third fever (aside from thermic fever) entirely independent of malarial origin, are equally fallacious. I believe the effort to fathom the problem along the lines of the above theories has caused us to overlook the simple truth, viz.: that the fever that is not typhoid, and that does not yield to quinine, is a *post malarial fever*, if I may suggest a name, due to lesions of the mucous membranes or the nervous system, produced by the malarial plasmodium, or, more likely, to an irritant effect of plasmodial toxins on the central nervous system, or yet, possibly to both in varying degrees

in different cases, corresponding to the characteristic regular irregularity of the disease in question. This idea seems to me to more fully meet and explain the clinical manifestations of this class of cases than any yet advanced, and I believe it will satisfy the minds of many physicians with long experience in malarial localities. Furthermore, I believe it will be borne out by the microscopic and chemical tests of malaria and typhoid fever, in at least a negative sense; for after the immense amount of laboratory work done on the subject, it would be indeed strange if a new fever would have eluded discovery; and the confusion caused by those who believe that in all cases not yielding to quinine, and in which the blood does not contain Laveran's plasmodium are typhoid fever on the one hand, and those who believe that the same cases belong to a new genus, is dissipated when we remember that had it been typhoid the clinical picture would more nearly conform to the classic type, and be confirmed by Vidal's test or the discovery of Eberth's bacillus, and that were it a new fever, the classic remittent picture of malaria would not exist in the early stages, confirmed by the presence of the hematozoon. That we must look for an entirely new fever, altogether independent of either of the others, seems to be the idea of those rejecting the typhoid, and equally so with those who do not accord with the strictly malarial nature of the case.

That every case not promptly yielding to quinine is typhoid fever will necessitate a complete unlearning of the classical clinical picture of that disease and a relearning of a new, and while having no sympathy with those who minimize the laboratory diagnosis of disease, I believe its bedside study to be at least corroborative of the truer findings of the skilled bacteriologist and chemist. On the other hand, I cannot agree with Osler and others, who believe that quinine will cure in from ten days to two weeks all southern fevers not coming under the head of typhoid or thermic fever; or not to misrepresent their views, that all cases of malarial remittent fever so-called, or rather cases known in the beginning of attack as estivo-autumnal fever, are amenable to quinine. The evidence to the contrary is overwhelming; it is the almost universal experience of practitioners in malarial districts to constantly meet these long fevers, that have no resemblance to typhoid fever in either the clinical aspect or mortality rate; neither can they be traced from case to case, nor from house to house, through the milk or water supply, as is so strikingly true of typhoid fever. And it is not the neglected cases alone I refer to, but a type frequently seen, unavoidable in many cases, a natural sequence, though not an active or real form of malaria.

I say, and I challenge proof to the contrary, that no man, however conversant with the subject, seeing a case of continued malarial fever so-called, during the late summer and fall months, can tell within a range of from one to seven weeks its duration. Given a case of malarial infection in which a post malarial toxemia (I do not refer to malarial cachexia) does not develop, we can promise a speedy cure on the simple administration of the specific.

To summarize, I believe that the so-called unknown or X fever of the south is simply a sequence

of estivo-autumnal fever, which occurs in some susceptible individuals, or in those whose systemic condition is just such as will permit the toxic effects of the malarial germ to continue the fever, *after the germs themselves have left the body*, so that it is not after the first week, or at most two weeks, strictly speaking, a malarial fever at all; neither is it a new fever, entirely independent of malaria, but a post malarial fever, much as many cases of methemoglobinuria or post paludal conditions.

This view readily accounts for the great irregularity and mild type of these cases, varying, of course, with the degree of resistance of each individual, and the amount of original toxic material absorbed; for the absence of malarial hematozoa in the blood late in the cases—and hence with the failure of quinin to cure. It also accords with the fact that these cases come in at the height of the malarial season, after the system has been for some time under malarial influences.

Furthermore, as intimated above, not only the blood test, but the remittent character of the cases in the beginning, mark them surely paludal; but when we would expect our patients' convalescence, we are confronted with a continuing fever, with no hitherto well-defined cause, lasting as long as two or three weeks, and in many cases much longer, and which is readily understood when the toxic nature of the cases is remembered, behaving much as any septic fever does. I treated a lady during the summer and fall of 1897, whose temperature reached 104 F. each day for four weeks, and 102 and 103 for four more weeks; not only did quinine fail to have the slightest effect on the fever, but nothing else seemed to influence its course. There was not at any time delirium, headache, epistaxis, rose spots, regular temperature curve, nor any of the usual typhoid fever symptoms. And yet at the beginning of this case I felt that I was dealing with a remittent malarial fever pure and simple. The patient ate a little most of the time after the first week. While this was a case of unusual severity, it is a common type met with throughout the Southern States.

I desire to call the attention of laboratory men to this line of thought, and also to suggest that if investigation should confirm it, the possible good effect of a serum treatment, or antitoxin, made from the blood of animals immunized to malaria by inoculation, should any such be found susceptible to its virus. In this case the routine treatment would be quinine in the beginning, or until the malarial bodies disappeared from the blood, to be followed by the antitoxin during the remainder of the attack.

Hoping to be to some extent instrumental in clearing up the question of this vexing fever, I appeal to the experience of every man in malarial localities, and to the negative results of quinine treatment and laboratory research, to substantiate this theory.

BOLNITCHNAIA GAZETA BOTKINA.

May 23, 1901. (Vol. XII, No. 21).

1. A Case of Ossification Following Inflammation of the Pleura. A. B. ARAPOFF.
2. Aspirin in Acute Articular Rheumatism.
N. A. VOROBIEFF.
3. Ruptures and Traumatisms of the Thoracic Duct.
B. K. FINKELSTEIN.

4. A Contribution to the Study of the Toxic Manifestations of the Plague in Man. A. F. VIGOURA.

1.—Arapoff reports the case of a peasant, 33 years old, who has had three attacks of pleuritis at intervals of several years. The last attack resulted in a pyothorax for which the patient was operated. On opening the chest cavity, a considerable amount of thick, green, odorless pus was evacuated. On the walls of the pleura the examining finger encountered bony formations in the shape of small plates firmly adherent to the pleura. When removed and examined, these showed the consistency and color of bone, possessing a smooth outer surface, while that next to the pleura was rough. Microscopically, however, no resemblance between these and true bone could be discovered. Cellular elements were absent, except a barely perceptible network of fibres of connective tissue infiltrated with lime salts. From the pus a pure culture of *micrococcus cercus albus* was isolated, which, according to the author's view, was responsible for the deposit of lime salts into the chronic exudate. The patient's recovery was slow and frequently interrupted by elevation of temperature which seemed to have coincided with the discharge of the calcareous bodies. The author believes that the case would be more properly designated as one of pleuritis petrificans. [A. R.]

2.—Vorobieff treated 30 cases of typical acute articular rheumatism exclusively with aspirin in doses of 0.5 to 1 gram three times daily. Within 15 to 30 minutes after the ingestion of the drug the patients developed a profuse perspiration, necessitating frequent changes of the linen. At the same time the pain subsided and the general condition of the patient improved markedly. The temperature also fell to the extent of 1 degree, rising in 4 to 5 hours. In favorable cases recovery took place in 3 to 4 days after instituting the treatment which was usually commenced on the third day of the disease. On the heart no injurious effects were noticed; the frequency of the pulse as well as the blood pressure remained unchanged. Only in one case was the pulse reduced to 50 beats a minute. The digestive disturbances usually accompanying the onset of the disease subsided with the general improvement. With regards to cardiac complications it was observed that aspirin does not prevent them. Of 15 cases in which the attack was primary 5 developed valvular lesions; of the other 15 which have had previous attacks, 7 already suffered from cardiac lesions, while in 2 the latter developed during the last attack. The action of aspirin is quite transitory, and it should be given without any considerable interruption for as long as 2 weeks after the patient has apparently recovered, otherwise a relapse is imminent. The author concludes by stating that while aspirin possesses certain advantages over salicylate of soda by being more rapid in its action, tasteless and harmless, it is nevertheless inferior to the latter as a radical cure. [A. R.]

3.—Will be abstracted when concluded.

4.—Vigoura describes some of his experiments on monkeys performed in 1898 which prove that the skin manifestations of the plague are due to the toxins. By injecting large doses of Lustig's and Galtcott's nucleo-proteid obtained from cultures of the plague bacillus, the author produced gangrenes of the skin at the point of inoculation. This was accompanied by a marked elevation of temperature and other grave symptoms which threatened the life of the animals. The fact that fatal cases of the plague have been known to be free from fever is explained by the author by the observation that when large doses of the toxins of the plague bacillus are injected intravenously or intraperitoneally the temperature is lowered. [A. R.]

The Consideration of Ancestry in the Diagnosis of Hysterical Coxalgia.—M. Lerouge (*Journal des Sciences Médicales de Lille*, May, 25, 1901) reports the case of a boy of 13, who complained for some weeks of pain in the right hip, following a knock. These pains had become violent at night. Examination showed all the signs of coxalgia, except atrophy. But the pain was intense and seemed deep in the tissues. The child was also in excellent physical condition. The father was rheumatic; the mother hysterical and neuralgic. A sister is also hysterical, and the boy has already had convulsions and chorea. Under chloroform all signs of coxalgia disappeared. Three applications of the thermocautery to the painful spot cured the patient, with no recurrence since. [M. O.]

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The Alcohol Question Again.—Much of the voluminous literature on this subject is either primarily polemical, or influenced by such strong prejudice, that is it not adapted to calm review. A recent contribution of a scientific character is a paper by Dr. G. Sims Woodhead, of Cambridge, England, introductory to a discussion before the Edinburgh Medico-Chirurgical Society. Unfortunately, the remainder of the discussion is available only as a very brief abstract, so that it is not possible to examine the statements of the paper in the light of the extended opinions of any of the experienced clinicians who heard it. Dr. Woodhead, being a pathologist, considers the topic largely from that point of view and gives but little information drawn from actual clinical observation. We find much allusion to animal experimentation. It seems to us that while such experimentation has its fields of great usefulness, this is a line in which it can be of but little value and may even mislead. After all, the great prompting motive for inquiries on this topic is the hope of determining positively the value of fermented beverages when used in moderation by persons of adult life and fair health. No one has ever doubted the danger of the excessive use of such beverages, nor is there much difference of opinion among informed persons as to the importance of restricting the use in childhood. It seems to us, therefore, that to give large doses of alcohol to small animals, especially to introduce it hypodermically into the peritoneal cavity, cannot afford either physiological or pathological results that bear strongly on the great problem.

Dr. Woodhead sums up his paper as follows: Alcohol is a narcotic poison, and a drug which may be valuable but is more dangerous than any other drug in the pharmacopeia. Its food value is always low and temporary and is usually zero.

Among other interesting statements made in the paper is that the use of alcohol tends to reduce the vital resistance to infection, but this view, based by Dr. Woodhead largely on the results of experiments reported by others, was challenged by Dr. T. R. Fraser, who alluded to the relative mortality of Hindoos (total abstainers) and Europeans from plague. Dr. Clouston said that the frequency of

alcoholism among the insane may be a consequence as much as a cause of the neuropathic condition.

Almost all the observations on the physiological effects of alcohol overlook the fact that, in the first place, commercial alcohol varies in purity and that the adventitious substances, though usually small in proportion, are often highly toxic. In very few of the reports of experiments is it stated that the character and amount of these impurities were ascertained; indeed, the determination of some of these substances is very difficult. In the second place, commercial alcohol or even pure alcohol does not represent, in any degree of solution, exactly the standard fermented beverages, so far as their dietetic relations are concerned. A pure alcohol, doubtless, furnishes the fundamental stimulating action for which liquors are used in therapeutics, but the effects of long continued use of liquors will include the effects of the by-products of fermentation and distillation.

Dr. Woodhead, as will be seen by the summary given above, agreed with those who do not accept Atwater's experiments as demonstrating the food value of alcohol. He quotes Madden's argument, that alcohol differs greatly from the carbohydrates and fats, in that it is a powerful protoplasmic poison, while the true foods exert no such effect. Dr. Woodhead also notes a chemical theory of Ehrlich's bearing on the same point.

No substantial agreement can be reached among the disputants on this phase of the question until they decide on some definite meaning of the term food. If this be taken to cover anything that can be changed in the body so as to yield some form of energy, then the list will be enlarged so as to take in not only alcohol but many of the best known poisons.

It is in the discussion of this question that Dr. Woodhead makes one of the peculiar slips in chemistry that are so painfully frequent in the writings of almost all grades of medical men. Speaking of the ready oxidability of alcohol, and comparing it with phosphorus, he suggests a common chemical reason for the similarity of the degenerations (fatty) produced by these agents. Both, he says, use the oxy-

gen of the blood. Let us see where this analogy will lead us. A grain of phosphorus may be regarded as a fatal dose. Presumably trustworthy reports give instances of death from much smaller amounts; in one case the death of a child from one-fiftieth of a grain. Now one grain of phosphorus requires to bring it to its highest known stage of oxidation a trifle over one and one-third grains of oxygen. Can we assume for a moment that this slight absorption of oxygen could upset the functions of the system as we see occur in phosphorous poisoning? Besides if we know anything about the pathological chemistry of phosphorus poisoning it is that it does not result from the formation of the highest oxide, for that body is not actively poisonous.

Koch's Address on Malaria.—We are indebted to Professor Koch for an address on malaria, which was delivered while he was in England last month. Professor Koch's experience with the many phases of malaria has led him to suggest a method for exterminating this widespread and ancient disease. Briefly summarized, this plan, which he proclaims as "my method," consists of:

(1) Making a microscopical examination of the blood of every individual suffering from malaria and in every suspected case, so as to establish the diagnosis.

(2) Training non-medical men to examine the blood in order to facilitate the work of the physician in malarious districts.

(3) Prompt administration of quinine, and its long-continued use—for a period of weeks or months—in every case of malaria.

(4) The establishment of quinine dispensaries to supply this drug to individuals at the lowest price and in an unadulterated condition.

(5) Exterminating the parasite in the blood of children, in which especially it propagates itself.

In making these suggestions Koch presupposes that quinine can destroy malarial parasites or render them harmless, and he holds the now accepted view that the infection is only transmitted by mosquitoes.

We concur with most of the views set forth by Koch, which, however, are by no means original with him, but which correspond in a general way to the opinions which have been advanced by most competent writers and investigators. They are a part of the common stock of knowledge. The influence which Professor Koch will wield with the public in regard to the prevention of malaria will possibly be felt, for few evidently are more ambitious to impress the public than himself. Few scientists however, will admit that the German investigator has sufficient grounds for proclaiming this method

as a measure first conceived and proposed by himself. This assumption, in fact, is the only original and remarkable thing in the address. Have not all physicians recognized the therapeutic value of cinchona almost since its introduction into Europe in 1640? Have not clinicians recognized the specific merits of quinine in malaria, and that it is the most useful drug known to combat the infectious principle of this disease? Is not this ancient history now? And finally, have not all competent observers and teachers repeatedly emphasized the fact that the most approved and practical method and the only positive means for the verification of the diagnosis of malaria, is the microscopical test? Many distinguished workers in this field, however (and Celli may be mentioned amongst these), inform us that quinine will not always destroy or render the malarial parasite harmless, and therefore prevent the spread of the disease. This applies to many of the cases of estivo-autumnal fever. Celli, in referring to the effect of quinine on the estivo-autumnal parasite, states that, "upon these forms of parasites, which are the most dangerous from the epidemic point of view, quinine has no influence." During the period of incubation, when perhaps only prodromal symptoms manifest themselves (and the disease is not often suspected at this time) there are to be found circulating in the blood, although in fewer numbers than when the disease is fully developed, malarial parasites which are capable of being a source of further infection. Relapses occur at times, even after the most careful and prolonged administration of quinine during the initial attack.

In our efforts to exterminate the malarial parasite, we should use every practical means at our command. The attack on this disease should be made from all sides. We should insist upon the early establishment of a diagnosis by means of the microscope. (See *Philadelphia Medical Journal*, March 30, 1901). The various prophylactic measures which are to be found so carefully outlined in all modern text-books, are of the greatest importance in checking the spread of this disease. We believe that individuals should be shielded from the bites of the mosquitoes, and efforts should be made to exterminate these insects. But all this is certainly not due to Koch or his "method."

Modern Gunshot Wounds.—In his address before the British Medical Association on "Some Surgical Lessons from the Campaign in South Africa," Sir William Thomson discourses in an interesting manner on the subject of gunshot injuries.

Speaking of the general effect of modern small-bore fire he shows that as a result of the recent changes in the calibre and consistence of bullets

modern warfare is much more humane than was that of a generation ago. One interesting fact to which attention is called is that the modern bullet striking the soft parts sideways, after a ricochet, often will produce such extensive laceration of the tissues, particularly at the wound of exit, that the surgeon may be inclined to believe the wound to be the result of an explosive bullet. The author's experience regarding injuries of the soft parts by the modern bullet coincides exactly with that of our own surgeons in the late war in Cuba and the Philippines. The rapidity of repair, even in long flesh wounds of the extremities, was most remarkable.

Sir William does not put much credence in the theory that the bullet is aseptic by the heat generated in its flight. The factors tending to the primary healing of these wounds he thinks are: The early application of the first dressing, the immobilization of the part by bandages, and the small track left by the bullet, which, by promptly collapsing, excludes the air. The dry climate of South Africa is also thought to have contributed largely to the quick healing of the wounds. The modern bullet was found to produce extensive bone injury when it entered the latter at short range. These bullets seldom lodged in the bone as was the case with the older form of bullet.

Attention is called to the wonderful improvement made in the treatment of gunshot wounds of the thigh, amputation now being the exception, whereas formerly it was the rule. The author protests against the examination of gunshot wounds in the field hospitals excepting under unusual circumstances. His attitude toward the treatment of gunshot wounds of the abdomen is very interesting, and to surgeons in civil life somewhat surprising. The war in South Africa has shown, as did our own war in Cuba and the Philippines, that the conservative treatment of these cases results in more recoveries than does the immediate opening of the abdomen and search for injuries of the intestine. A number of cases were seen in which undoubtedly the intestine had been perforated and yet the patient recovered. Except under peculiar circumstances demanding the opening of the abdomen, it is thought wise in military surgery to pursue the conservative plan of treatment. The writer is also opposed to the search for lodged bullets unless such give rise to trouble.

Reference is made to the practical absence of such infectious diseases as tetanus, erysipelas, pyemia, and hospital gangrene. Thomson agrees with von Nussbaum that "the fate of the wounded rests in the hands of the one who applies the first dressing." The bravery and conscientiousness of the medical officers of the British Army is shown by the num-

ber who have been killed or who have died from disease.

The Substitution and Adulteration of Drugs.—

The greed for gain is strongly developed in most modern business methods. Competition, perhaps, is responsible to some extent, as it is likely to reduce profit. This often leads dishonest individuals to substitute and adulterate the products of merchandise which they have for sale, so as to meet competition and still make a fair or even large profit. While this practice is confined to merchandise and materials which are not used as food or as medicine, the practice is simply dishonest, but when the methods of substitution and adulteration are applied to food and drugs the practice in addition becomes dangerous. We are concerned here mainly with the substitution and adulteration of drugs, and it is our intention not only to call attention to the fact that such a practice exists, being carried almost to an alarming extent, but also to suggest a remedy which will partly control and perhaps entirely stop the pernicious practice among pharmacists and manufacturers of drugs and chemicals with which we, as physicians, are mostly concerned. We remember an instance which occurred in Philadelphia in which a celebrated chemist had procured quite a large number of samples of laudanum from local druggists, and found the great majority of them to be below the pharmacopeal strength. Under such circumstances what physician can be certain of the dosage of tinctures and extracts which he orders in his prescriptions? Where proprietary remedies have been ordered in the original package, the package has in many instances been opened and cheaper and inferior substitutes been added. What physician does not know of this harmful and dangerous practice, yet what has been done by the profession to put a stop to it? Very little, if anything. If a physician sends patients to a pharmacist whom he knows to be honest (and unquestionably there are many conscientious and honest pharmacists), it is soon said that "the doctor gets a percentage on every prescription which he sends there." Even this is sometimes true, we are sorry to admit. The original package is not practical for prescription writing. But there is a remedy. Whenever a physician has his attention called to the fact that a prescription has been adulterated, that inferior drugs or substitutes have been used, the druggist should be reported to the County Medical Society or other local organizations, so that all physicians may know of it and see to it that their prescriptions do not go to such a pharmacist. This is honest ostracism, and will compel perhaps involuntary honesty.

Virchow vs. Koch.—A clash between two luminaries of the medical world cannot fail to excite interest. In vivid contrast with Koch's radical views on the non-transmissibility of human and bovine tuberculosis stands the conservative pronouncement of Virchow in his address before the Berlin Medical Society, on July 24th of this year. Virchow, who is prominently connected with the German investigation committee on the subject under discussion, believes that Lister's views should be given the preference, and that there is a strong possibility of Koch's views being refuted in the future. Virchow emphasizes, in a most forceful manner, that only those lesions should be considered as tubercular, in which anatomical tubercles can be demonstrated with certainty, bacillary invasion not being sufficient evidence. Regarding the identity of bovine and human tuberculosis, he states, it seems peculiar to him, that after he had claimed their dissimilarity as early as 1863 (*Virchow on Tumors, Vol. II, p. 739-41-45*), Koch should do so now, after Koch and his school had practically ignored Virchow's opinion on this subject for thirty-eight years.

The Etymology of Medical Terms.—A correspondent whose opinion we esteem highly, has sent us a protest against the word "Zomotherapy" which appeared in these columns recently. The etymology does not suit him. The Greek word means "broth," not "meat," and our correspondent takes occasion to inveigh not only against this word, but also against a great many other compound Hellenic words now used in medicine. As for ourselves, we are willing to agree to almost anything about etymology (or, in this instance, onomatology). Mankind have always taken great liberties in coining words, and doubtless will continue to take such liberties, and we do not blame them. Language was made for man, not man for language. Exactness and purity in the derivation of words are not always practicable. A certain poetic license is allowable. When we consider the word "melancholia" and reflect that it means literally "black bile," we may be melancholy as a consequence, but it does not follow that our bile is black. "Hysteria" means a disease of the womb, but men and boys have it, nevertheless. We need not take language too literally. The purists who wish to reform language and spelling, do not pause to reflect that these things existed long before reformers were born, and will continue to exist long after they are forgotten. As for "Zomotherapy," we did not invent the word, and so we do not feel called upon to defend it.

The Anti-Diphtheritic Serum.—Although physicians have reached a practical unanimity regarding the value of anti-diphtheritic serum if used early in the disease, that is to say, the negative voice is no stronger than it is regarding vaccination; nevertheless, carefully compiled statistics are still interesting. We wish to call particular attention to those obtained by Cuno (*Muenchener Medicinische Wochenschrift*, May, 1901), in the course of 18 years' service in Christ's Children's Hospital, at Frankfurt. The diphtheritic serum was commenced on the 1st of October, 1894. Up to that time 1928 children had been treated for diphtheria by him. Seven hundred and eight died, that is 36.7%. Of the total number 561 were operated upon for stenosis of the larynx, and 363 died; a mortality of 64.7%. Since the antitoxic serum was introduced, 1257 children have been treated by him. One hundred and eighteen died; that is, 9.4%. One hundred and sixty-four were operated upon for stenosis of the larynx, with 55 deaths, a percentage of 33.5%. The most striking features of these figures are first, the extraordinary reduction in mortality, from 36% to 9%, and secondly, the very marked reduction in the number of cases requiring operation. Statistics such as these are more impressive than any amount of animal experimentation.

The Anatomy of Melancholia.—Few medical readers who have attempted to wade through Burton's quaint and pedantic old book have probably stopped to think that the time might come when the "Anatomy of Melancholy" would be rewritten in a serious vein by a modern pathologist. But we have lived to see that day. In the August number of the *Journal of Mental Science* there appears a paper by Dr. Bernard Hollander, entitled the "Cerebral Localization of Melancholia." The author, with a show of learning that would have done credit to old Burton himself, attempts to locate the "centre" for melancholia in the parietal lobe. It is necessary to read the paper in order to fully appreciate it. Since Burton's time there surely has been no such attempt as this to write the anatomy of melancholy. Dr. Hollander has collected from the journals a vast array of cases in which there were all sorts of lesions in this particular region of the brain and in which he finds evidence of melancholia as a symptom. From this standpoint he boldly advances to his thesis, which is that melancholia is located in and about the angular and supramarginal gyri. The paper is somewhat scholastic: that is to say, it is the result of a diligent still hunt through books and medical journals. The thesis is an assumption for which the proof is gathered by a conscientious resort to the libraries.

Dr. Hollander argues that simple melancholia has for its basis a morbid emotion of fear. This emotion must take its rise in a limited region of the brain. This region is in the parietal lobe, as proved by the facts that the physical expression of fear (in the facial muscles) is reproduced in animals by excitation of the central parietal area; that this same area has a close connection with the sympathetic nervous system and the vaso-motor nerves which are both affected in melancholia; and that, finally, lesions of this area cause rise of blood pressure, alterations of sensibility, disturbances of vision and cortical blindness, all of which may accompany the melancholic state.

Such is the logic of the paper. But we maintain that fear is not the badge of melancholia. The true psychical state is the sense of personal unworthiness. However, we may point out that the idea of localization in psychiatry is not entirely new. The hallucinations of the insane have been thought to be due to circumscribed lesions in the cortex; fixed ideas or imperative conceptions have also been assigned a local habitation in the brain; and, again, a distinct inhibition of thought (an unmistakable symptom to one who has once seen it) is caused by lesions of the frontal lobes. Therefore, while Dr. Hollander's paper may not be entirely convincing, it is at least suggestive.

Lead Forward the Horned Ruminant.—In the last number of the *Medical Record*, Dr. Wallace Wood, of New York, has issued another of his remarkable and characteristic papers on cerebral localization. His paper is entitled "The Summit Fissure." We shall not attempt a criticism of Dr. Wallace Wood's paper. We confess that the task is quite beyond our capacity. The paper is phenomenal; no other word will describe it. After a panegyric on the ox for the simplicity of its cerebral topography, Dr. Wallace Wood demands that the Horned Ruminant be led forward. We merely desire to suggest that when the Horned Ruminant is led forward, the useful beast be loaded up with a translation and an exegesis of Dr. Wallace Wood's papers on cerebral localization so that an ordinary scientist may be able to understand them.

Compression of the Spinal Roots in the Paraplegia of Pott's Disease.—Touche reviews 22 cases of paraplegia in Pott's Disease, seen in the last two years. 12 of them died, the diagnosis being confirmed by autopsy. Pain was generally present in the legs, occasionally lamenating in character. It appeared in zones, descending the extremities. Areas of anesthesia appeared in the same way, each spinal root showing the effect of pressure. The motor symptoms were not so plainly radical. Touche believes that these root symptoms are hidden in many cases by medullary symptoms. Therefore the diagnosis is difficult. When the lumbar and sacral roots are affected, there is retention of urine; when only the medulla is diseased, there is incontinence. Histological examination proves this. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, 1901, No. 2). [M. O.]

Reviews.

Mosquitoes. How they Live; How they carry Disease; How they are Classified; and how they may be Destroyed. By L. O. Howard, Ph. D., of the Department of Agriculture, Washington, D. C., New York, McClure, Phillips & Co., 1901.

The author of this book is a distinguished entomologist who has seized the opportunity when it is ripe to write a full description of the mosquito. If not much can be said in defense of this insect there is at least a great deal that can be said about it that is highly interesting. This is shown on every page of Dr. Howard's book. The central idea in the work is, of course, that the mosquito is a pest, and an agent for the dissemination of disease; but Dr. Howard shows everywhere that he is an enthusiastic naturalist, and that, as a scientist, he is not a little in love with the object of his research. This is as it should be, and it has inspired the author to write a little treatise which is an entertaining contribution to popular natural history at the same time that it fulfils its purpose admirably as a work in hygiene and preventive medicine. We know of no book in fact (and we imagine there is none in the English language) that gives so much and so useful information in short space on this subject as the one before us. We can fully appreciate its value as a supplementary volume in the wide literature of malaria.

The mosquito, in truth, is an extraordinary creature when seen under a magnifying glass. Like all animate creation it has its own adaptation to its environment; like all created forms it is wonderful in its perfection, and in the mystery of its existence. All nature is a symphony, and even the mosquito is not to be despised as a contributor to the general harmony. This truth may be difficult to realize until one approaches the subject through the end of a microscope. Dr. Howard describes the *Culicidae* (which is their scientific cognomen) from the egg, through the larva and pupa, to the perfect insect. Their habits, their life history, their anatomy, their many genera and species, their distribution, their relation to disease, their many natural enemies (and they have quite a lot) and the best way of getting rid of them—all these subjects are discussed in this small compact book in a way to interest and instruct all kinds of readers alike. The work is too full of matter for us to attempt to dissect it here, but we have read it with such pleasure and profit that we do not hesitate to recommend it to our readers. [J. H. L.]

Transactions of the American Climatological Association for the year 1900. Vol. XVI. Philadelphia. Printed for the Association, 1900.

It does seem that a year is a long time to elapse between the reading of the papers contained in this volume and their publication, and that their value and interest would suffer by the delay. The force of this criticism, it is true, is somewhat neutralized by the fact that many of the communications probably have already been published elsewhere, but this circumstance raises a question as to the wisdom of the present method of publication. The time has come, it appears to us, when papers of the quality of those in this volume receive the earliest publication possible, and their presentation in the present after so long an interval seems to be like a waste of good money. While many of the subjects here discussed have some relation to climate, all do not, as will be indicated by the statement that among the papers are two on endocarditis, one on aneurysm, and one on leukemia. Of the whole number of 21, 13 are on various phases of tuberculosis. The volume contains also a good photograph of the late Dr. Alfred Stillé. [A. A. E.]

Correspondence.

ECHOES FROM THE TUBERCULOSIS CONGRESS.

By M. P. RAVENEL, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

The sensation of the meeting was Koch's ill-advised and unfounded dictum on the uselessness of precautions against the transmission of bovine tuberculosis to man. It has raised universal opposition among those who work. Lord Lister followed him in a strong protest against his conclusions, and after him Nocard, Bang, and Sims Woodhead, all spoke in the same strain. The next day at the general meeting Prof. McFadyen read his paper. I think he demonstrated the fallacy of Koch's views. I have spoken to many men of almost all nations, and all condemn the method of his announcement, as well as the insufficiency of his grounds. I am told on responsible authority that even the Germans are against Koch's views. All the papers read by the German delegates showed that they held views opposed to Koch. I had a talk with Koch himself on the subject. He advises further studies, and feeling this he should not have made such a positive statement. I have visited the State Veterinary School at Brussels, and spoken with most of the leading men there. Without exception they oppose Koch's view, and Prof. Gratala said to me "He has made trouble for all the world." In the *Lancet* for August 3rd, there is a strong letter from Copeman showing a grave omission of post mortem testimony by Koch; namely that he does not tell us what intestinal lesions he found in his calves infected by feeding. Dr. Pearson and I have held for a long time that *food tuberculosis may appear first in the lungs or cervical glands*. I have just received a letter from Dr. Pearson saying that he has killed two cows fed on tuberculous matter, and "both had extensively tubercular lungs, and lesions nowhere else. The post-pharyngeal lymph glands were normal. Neither had the slightest disease along the digestive tract." We have made similar observations repeatedly on dogs and pigs. One matter was clearly brought out in the section on Pathology and Bacteriology, which Dr. Pearson and I have held also for a long time—namely that the tubercle bacillus can penetrate certain membranes or tissues like the intestine, and leave no trace of its entrance, the lesions appearing in neighboring glands, or even further away. In view of this, which was almost the unanimous opinion of those present, it seems most fallacious to deny the possibility of a given tuberculosis being of intestinal origin because the primary lesions are found elsewhere than in the intestine. In other words, it is possible for the tubercle bacillus to penetrate the intestinal wall, perhaps with fat globules; they enter the thoracic duct, and get into the blood stream, which desposits them by ejection in the lungs, leaving no trace of intestinal tuberculosis. Taking this view we may claim that tuberculosis of intestinal origin is more common than post mortem examinations indicate.

We had a most interesting general meeting devoted to the discussion of tuberculin, and its use as a diagnostic and curative agent in man. Dr. Herron advocated it strongly. Koch spoke also, and of course in support of tuberculin. The most important point brought out was, that tuberculin should be used only when the temperature is normal; and a second injection should not be given until the temperature has returned to normal. This it seems is not always obtainable, especially in those rapid cases of phthisis florida. Koch was asked to reply to a question on this point, and said that the temperature could generally be brought to normal by absolute rest. This was doubted by many present. I should say that my impression was that as a whole the meeting was in favor of the use of tuberculin as a diagnostic agent; less so as regarded its use for treatment. Some very strong men, such as Dr. Williams, of the Brompton Hospital, were opposed to the use of tuberculin

under any circumstances, regarding it as useless and dangerous. This opinion of Dr. Williams was based on extensive trials of it.

You will have seen the resolutions passed at the close of the Congress before this letter reaches you. I cannot say that they contained anything new. Sanatoria are urged and recommended, not only to cure those sick, but as means to prevent the spread of the disease. While no resolution directly condemnatory of Koch's views was passed, it was stated in one that no effort should be relaxed to prevent the spread of tuberculosis from animals to man. (Not the exact words). The prevention of spitting was urged strongly, spitting being regarded as the chief means of the spread of tuberculosis.

I was asked to appear before the Local Government Board and give a talk on tuberculosis, which I did. The English feel that tremendous damage has been done to their efforts to secure a good meat and milk supply. I have never seen such excitement over any scientific paper. Many men are bitter in their denunciation of Koch, holding that even if he proves correct, he should not have made such a statement on such slight evidence in view of the money interests at stake, to say nothing of the danger to health of multitudes. They hold that the matter is too important to be settled by the word of one man based on 19 experiments. One good will result—the experimental work which will be inaugurated in consequence. The English demand a Royal Commission unanimously, and I think one will certainly be ordered shortly. A committee of the strongest men in England will soon wait on the Premier with a strong presentation of the case, and ask for a Royal Commission.

MOSQUITOES AND YELLOW FEVER.

By W. N. BISPHAM, M. D., Lieutenant and Asst. Surgeon,
U. S. A., Havana, Cuba.

To the Editor of the Philadelphia Medical Journal:

I have just read in your issue of August 3d, the excellent article by Dr. Purnell on the Etiology of Yellow Fever, but I find that I cannot agree with him in the conclusions he deduces from the observations cited, and furthermore careful investigations carried on in and about this city for the last two years disprove them decidedly. In the first place he cites several cases of fever occurring on ships some days out from port; one as long as 68 days. In mentioning this he says "It seems to me to be utterly impossible to reconcile the mosquito theory with any of the above; while the life of the mosquito has not been determined, the shortest period mentioned above, certainly exceeds a mosquito's existence." Referring to the article by Dr. Reed in the *Journal of American Medicine* I find it stated that one infected mosquito lived until the 71st day and had bitten a non-immune with a positive result on the 57th day. Mosquitoes observed by Mr. Le Prince of the Havana Sanitary office, have lived up to 70 days. On this reservation I have also observed some mosquitoes living nearly 60 days after all breeding places have been destroyed. This last was particularly suggestive as the insects were living in the open where they could be preyed upon by their numerous enemies. In all of these cases "*Culex Fasciatus*" was the species observed.

From these observations it seems that the life of the mosquito has not been decidedly determined and it would not surprise me if in the future, insects were observed to live even longer than has been reported. In another portion of his article he gives statistics of the number of cases occurring at certain places in a definite length of time. In the epidemic of 1897, in Edwards, Miss., 726 cases in 60 days, and that of 1878, in the Mississippi Valley, 72,000 cases presumably during the whole summer. He ends the paragraph by this sentence "Is it reasonable to suppose it was accomplished by the mosquito?" This statement strikes me as being absurd, for any one who has observed

the life cycle of the mosquito, is familiar with the extreme fecundity of this insect. Howard observed that 19,110 mosquitoes were counted in one barrel, and I have noticed here that one small can of water raised enough mosquitoes to make it extremely unpleasant for any one to come within one hundred yards of it. This certainly shows that there would be no lack of insects to spread the disease, and as it has been decidedly proven that mosquitoes are carried on railroad trains, in baggage, etc. I see nothing in his statement which presents proof against this theory. Further on he mentions several cases of recrudescence observed during warm months of the summer of the year following one in which an epidemic had taken place, stating, "It can scarcely be conceived that the mosquito could harbor the germ for such a time." This is another point in which he shows lack of information on the subject, for it is distinctly stated by Howard and others that the mosquito has frequently been observed to hibernate throughout an entire winter and if a non-infected insect could hibernate why could not an infected one do so?

In the first part of his article he makes this observation "Unless the proper meteorological conditions prevail the poison seems to be inert." That is perfectly true and it has been well proven by different authorities including La Roche, and is a well known fact that mosquitoes are only active in warm and mild weather and that their activity is inhibited by cold. This is distinctly shown even in Havana where the temperature is never very low. Here the mosquito is quieted by a temperature between 50° and 60° F. On this point he brings up a comparison between a Yellow fever camp outside of Memphis, during the epidemic of 1878 and the experiment camp at Quemados in 1900. He says "If the bedding and clothing in the hospital at camp Joe Williams, during the summer weather did not become infected, is there not good reason to suppose that the material taken from Las Animas Hospital and Quemados in November and December, escaped likewise?" In the first place it has been observed from time immemorial that moving from a place which is suffering from an epidemic has enabled those taking the move to escape the fever though very often a few cases have been reported in the first camp. The reason of all this is that what few mosquitoes might be taken to the camp in the first place can find no suitable place to breed as very little water is allowed to stand in cans about the grounds on account of the usual trouble in obtaining it and therefore they are soon killed. In the second place, during the months of November and December of last year in Havana, the thermometer only once registered a temperature below 70 F. and also the fomites were kept in a building which was closed at all times and during twelve out of 24 hours the thermometer registered between 92 F. and 95 F. and never sank below 70 F. at any time.

Further on he mentions the fact that there are many mosquitoes in and about Memphis, but he does not remember that recent investigations have proven that the *Culex* almost always breeds in artificial collections of water which are more usually found about houses (Manson) and the variety of mosquito inhabiting the country districts is likely to be *Anopheles*, or some other, not *Culex*.

He also lays some stress on the Epidemic of Yellow fever in Edwards, Miss., during the year 1897, giving a partial history of several cases, with stress laid upon the point that the patients mentioned were taken sick after a short interval (not more than 11 days) after the supposed first exposure. In these accounts he does not give a complete enough elimination of all other chances of exposures to the infection. The reports are given with stress laid upon only one supposed means of infection and no other method is considered. This lack of a complete history is very noticeable, particularly in reports of cases twenty years or more ago when bacteriology was in its infancy and observations were not made as carefully as they are at present. Furthermore in "conclusion 3" of Dr. Reed he does not state as a positive fact that twelve days are requisite

before the mosquito can convey the infection but says that it appears to be so.

In one case it is stated that no other cases occurred in a house after the death of an inmate until the lapse of twenty days. The recrudescence of the fever he attributes to fomites. Why could not infected mosquitoes remain in the house for that length of time when they have been observed to live for 70 days? Other cases brought up in the same way can be dismissed with the same query.

Finally he makes the statement; "Among the many sanitary measures adopted looking to the control of yellow fever epidemics and to the complete eradication of the disease no exertions were ever directed toward the mosquito extermination." That is a great mistake for from time immemorial sulphur has been used as a disinfectant and was always freely used in epidemics of all supposed contagious diseases. On investigation it has been found that sulphur destroys the mosquito and therefore it naturally served to put an end to the epidemic. Therefore the reason why disinfection aided in stamping out the disease was because it killed the infected mosquitoes.

In conclusion I take the liberty to call Dr. Purnell's attention to the fact that very many epidemics are spread by mild cases which are unsuspected and therefore unprotected. This is a factor which ought to receive more attention and study.

Ascending and Descending Renal Tuberculosis.—Dr. Alfred Pousson presented the case of a man of 44, of excellent ancestry, with a suspicion of tuberculosis. His wife and three children are healthy and he has never been ill himself. For the past seven months he has felt a frequent desire to urinate, and noticed a few drops of blood occasionally at the end of micturition. His appetite began to fail and he grew thin. Then his right testicle swelled. About a month ago he noted radiating pain in the right lumbar region. Examination shows the right epididymis swollen and indurated, the absence of cystitis, pain over the right ureter on pressure, and a palpable, slightly tender right kidney. Rectal examination shows the right seminal vesical and right lobe of the prostate to be enlarged and hard. Examination of the urine gives decreased urea, increased chlorides, a trace of albumen, and numerous tubercle bacilli. Tuberculosis of the kidney may be caused by the bacilli reaching the kidney in the blood, with a miliary tuberculosis of the kidney following. This eventually causes descending tuberculosis of the urinary tract with pyelonephritis. Or the bacilli reach the kidney by ascending tuberculosis, from the urethra, bladder, and ureter, with pyelonephritis resulting much sooner. The symptoms of descending tuberculosis are renal pain, first, in the lumbar region; then vesical symptoms; and finally hematuria. In the case reported the diagnosis of ascending renal tuberculosis was made. Pousson advises extirpation of the kidney when tuberculosis exists.—(*Bulletin Medical*, 1901, No. 42). [M. O.]

Spinal Anesthesia.—R. Jedlick (*Sbornik klinicky*, Vol. 11: *Vratch*, Vol. XXII, No. 12) places on record, together with a large number of cases collected from literature, 101 personal observations on spinal anesthesia. He employed eucain as the less poisonous drug. 1-1.5 c.c. of a 2-3% solution were injected. Complete anesthesia was obtained in laparotomies, operations on the lower extremities, perineum, large intestines, genital organs and gynecological cases. Anesthesia appears in the legs 4 minutes after the injection; in 7-10 minutes it reached the umbilicus. Occasionally it spread on a level with the nipples and exceptionally still higher. The spread of the anesthesia depends on the diffusion of the eucain in the spinal fluid, and the author recommends that the injections be made in a recumbent posture, allowing the escape of as much spinal fluid as the amount of the anesthetic used. The heart is never affected, except in the aged, in whom this method is contraindicated. In a few cases vomiting, paralysis of the rectal sphincter and erection of the penis were observed. These effects however, are transient. The author concludes by stating that eucainization is perfectly harmless and should receive the widest application.

[A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Disastrous Conflagration.—One of the most disastrous holocausts in the history of Philadelphia occurred this week. dent physicians from every hospital in the city are busily engaged reviving the prostrated and dressing the burns of the injured. The fire resulted from a bolt of lightning which struck a huge oil tank in the southern portion of the city. The indefatigable work done by the physicians on the scene of the catastrophe cannot be too highly commended.

Philadelphia Hospital Bequests.—By the will of Emily Phillips, who died on July 24th and left an estate of \$100,000, a large portion of the money was divided among charitable institutions. Following are some of the hospital bequests: Jefferson Hospital, \$10,000; Jewish Hospital, \$10,000; Pennsylvania Hospital, \$1,000. The Presbyterian Hospital received \$2,000 and the Medico-Chirurgical and Howard Hospitals \$1,000 each. Philadelphia Hospital for Incurables, \$5,000; Montefiore Home for Chronic Invalids, \$5,000; Home for Aged and Infirm Hebrews in Philadelphia, \$5,000. Aged Couples' Home, \$1,000; Children's Sanitarium Association, \$2,000.

Dysentery at Lancaster.—Dysentery recently became epidemic at the County Hospital and Insane Asylum, and has carried off five inmates since Wednesday, whilst a dozen are in a critical condition.

Vital Statistics of Philadelphia for the week ending August 17, 1901:

Total mortality	507	Cases.	Deaths.
Inflammation of the appendix 3,			
brain 11, bronchi 2, heart 1, kid-			
neys 18, nerves 1, liver 1, lungs			
28, pericardium 2, peritoneum 7,			
stomach and bowels 46, spine 1,			121
Tuberculosis of the lungs			58
Apoplexy 11, paralysis 5			16
Heart-disease of 24, dropsy of 2,			
fatty degeneration of 2, neuralgia			
of 1			29
Uremia 17, Bright's disease 8			25
Carcinoma of the face 1, breast 3,			
stomach 5, uterus 3, neck 1,			
hand 2, liver 1, pelvis 1, rectum 1,			
throat 2			
Convulsions 17, puerperal 1			18
Diphtheria	50		9
Brain, softening of			5
Typhoid fever	119		21
Old age			10
Scarlet fever	49		1
Asthma 5, anemia 1, casualties 14,			
child birth 1, cholera infantum			
28, cirrhosis of the liver 3, con-			
sumption of the bowels 1, debility			
5, diarrhea 3, drowned 3, dys-			
entery 3, fever, puerperal 1,			
hemorrhage from uterus 1, fistula			
1, inanition 26, jaundice 1, mar-			
asmus 38, obstruction of the bow-			
els 4, purpura hemorrhagica 2,			
pyemia 2, sclerosis, arterial 1, sep-			
ticemia 5, smallpox 1, suffocation			
3, suicide 5, sunstroke 1, syphilis			
1, whooping cough 11			171

NEW JERSEY.

New Jersey State Hospital for the Insane.—The investigation into the food supply at the State Hospital for the Insane has been resumed, several attendants giving testimony to the alleged bad food.

NEW YORK.

Superstition Abolishes a Ward Number.—According to the *Binghamton N. Y. Dispatch*, for medical reasons the State Hospital authorities have found it necessary to abolish Ward 13. It was found that this number had a depressing effect on many patients whose superstitions were increased by their infirmities. There is now no No. 13 in

the State Hospital, the ward numbers jumping from 12 to 14 for the benefit of the patients. It is the first time that this alleged unlucky number has received official recognition by State authorities.

NEW ENGLAND.

New Hospital for Tuberculosis.—Work has been begun on a new hospital for tuberculosis on Newington Mountain, a high suburban section of Hartford, Conn. The State has appropriated \$25,000 for the enterprise, and an amount nearly as large has been contributed by private individuals.

Smallpox in Boston.—Five cases have developed in Boston since one week.

WESTERN STATES.

A Neuropathist Fined.—A "Neuropathist," of Los Angeles, Cal., was recently fined \$100 for practicing medicine without a license; on appeal, the judgment of the lower court was affirmed by the Supreme Court.

Rigid Enforcement of Medical Laws in California.—The Los Angeles, Cal. board of health has issued a notice to every practicing physician, dentist and pharmacist in the city, notifying them that in case they have not registered according to law, but ten days more will be permitted them to do so, and that a failure to comply will be followed by legal prosecution. A fine of from \$50 to \$500, or imprisonment from 30 to 365 days, or both, is the penalty fixed for attempting to practice without a license.

Death of Dr. Cooper.—Dr. Charles B. Cooper, of San Francisco, died July 21, 1901, at his residence in San Francisco. The doctor was a prominent surgeon of that city, and a man of great ability. He graduated from Cooper Medical College in 1889, after which he spent some time in Europe. He was at one time Superintendent of the Waldeck Sanatorium, and at the time of his death was having constructed a hospital building in San Francisco.

Dr. Henry S. Nelson has succeeded Dr. William J. Byrnes as city physician of Minneapolis, Minn.

Stanford University.—Dr. T. D. Wood has resigned as Professor of Hygiene and Organic Training at Stanford University, and accepted a similar position in the Teachers' College of Columbia University.

Miami Medical College.—Dr. J. C. Oliver has been chosen Dean of Miami Medical College in place of Dr. N. P. Dandridge, resigned, and Dr. Fred. Forchheimer was elected professor of practice of medicine.

Chicago Lying-in Hospital.—The Chicago Lying-in Hospital has received a donation of \$5,000 from Abram Simmer, Waverly, Ia., for the erection of a new dispensary building, contingent upon the subscription of \$10,000 additional.

Dr. Gardner's Resignation.—Dr. M. Gardner, chief surgeon of the Southern Pacific Company, has forwarded to Governor Gage his resignation as a member of the board of managers of the Mendocino State Hospital.

College of Physicians and Surgeons.—The following officers have been elected for the coming year at the College of Physicians and Surgeons, Chicago: Dr. D. A. K. Steele, actuary; Dr. William E. Quine, dean, and Dr. Frank B. Earle, secretary, vice Dr. W. A. Pusey, resigned.

No College of Opticians.—A plan for a college for opticians was rejected at the fourth annual convention of opticians, just ended in Chicago, but it was decided to hold examinations to raise the standards of excellence among those entering the occupation. The next Convention will be held in Boston.

Medical Examination Before Marriage.—A bill has been introduced in the Colorado House of Representatives to provide for a board of medical examiners whose duty it shall be to decide upon the fitness for marriage of all applicants for marriage licenses, which may not be issued unless the Medical board recommends it. The board is to sit ten days in every month. A number of diseases and certain defects in family records are declared to be bars to marriage, after the passage of the act.

Dr. Albert P. Ohlemacher, Gallipolis, was reinstated in his position as pathologist of the State Hospital for Epileptics, August 5. This was the first official act of Superintendent Coleman.

Protest of Hospital Internes.—On account of the rule which was posted of Warden Healy, of the Cook County Hospital, Chicago, on August 1, providing that all major surgical operations must be performed by one of the attending staffs, the following statements in reply were made by the internes:

"1. Whereas, it has been stated that we are but 'students,' learning our 'trade' at the expense of county patients, we emphatically deny this. Every one of us has graduated from a reputable school, has passed the state board examination, and is entitled thereby to practice medicine and surgery in this state and is selected under civil service rules, by passing successfully an examination in medicine and surgery given every year, competitive in character, and held under the most rigid and impartial rules that govern any examination whatsoever. Such qualifications are not picked up by the wayside, but gotten only by constant application, by the expenditure of a great deal of time and of money. Moreover, every interne in this hospital has had a college training before starting in the study of medicine. 2. Whereas, it has been alleged, too much and unnecessary operating has been done by internes. We point out the fact that no operation, at any time, has been had but after a complete examination by a member of the attending staff, under his direct control and supervision. There is no authentic case in the hospital in which a patient was narcotized without the presence of an attending physician or surgeon. 3. Considering the qualifications necessary to become an interne, and the fact that every senior interne has served twelve months in preparing for surgical work, it is justly evident that we should be regarded competent to participate adequately in the care of patients. Such privileges are enjoyed by internes of every other hospital in this country and abroad. 4. Whereas, it appears as if there were friction between the hospital management and the internes. We assure you that there is nothing but good will between Warden Healy and the house surgeons.

A New Hospital for Steubenville.—Congressman J. J. Gill has given \$35,000 for the establishment of a hospital in the city of Steubenville, Ohio.

SOUTHERN STATES.

Ambulance has no Speed Limit.—A public hearing on the speed of the Emergency Hospital ambulance was recently held by the District Commissioners of Baltimore. It was decided that the recent order limiting the speed of that vehicle be rescinded.

Memorial to Dr. Rhett.—At Charleston, S. C., the proposition to erect an enduring memorial to the memory of the late Dr. Robert Barnwell Rhett, Jr., took practical shape on August 13 in the formation of the Robert Barnwell Rhett, Jr., M. D., Memorial Association. A number of leading citizens of Charleston met and discussed the subject at some length. The result was that a committee was appointed to draft a plan for a permanent organization such as desired, with instructions to report at its earliest convenience.

The Texas State Board of Medical Examiners, appointed by the Governor under the new Medical Practice Law, which went into effect July 8th (ult.), met in Austin, July 23rd, and organized. Dr. J. T. Wilson, of Sherman, was elected President; Dr. S. R. Burroughs, of Buffalo, Vice-President; and Dr. M. M. Smith, of Austin, Secretary and Treasurer. They formulated plans for future action and will hold their first meeting for examining applicants, at Austin, the first Tuesday in October.

Dr. Waters Returns to Johns Hopkins University.—Dr. Campbell Easter Waters, who was professor of chemistry and physics last year in the Connecticut Agricultural College, has returned to a teaching position in the University's chemical department.

Chemically Colored Sausage.—Health Commissioner Bosley, of Baltimore, is determined to pursue his crusade against chemically treated sausages. City Chemist Lehman, of Baltimore, who has examined hundreds of specimens of the chemically treated sausages stated that one aniline dye is employed to give the meat a fresh looking appearance and another aniline dye for the purpose of producing the smoked appearance of the sausage skin.

CANADA.

John Grant, M. R. C. S. Eng.—Dr. J. Grant, of Napanee, died suddenly at his home in the latter part of June. He had been practicing about forty years.

MISCELLANY.

Reward for Rats in Manila.—The Manila Board of Health offers one and one half cent for every rat killed. This action has been taken in the hope that it may assist in stamping out the plague in Manila.

A Martyr to Scientific Experiments.—It has been announced by Chief Surgeon Harvard that the experiments which have been conducted in the investigation of the propagation of yellow fever will be discontinued as far as the mosquito test is concerned. This was decided upon because one of the non-immunes who was recently bitten by an infected mosquito died of yellow fever. The man was a Spaniard, desired to become an immune, and therefore allowed himself to be bitten by an infected mosquito. Another man who was bitten is also suffering from a very bad case. Both were bitten by insects which had been set apart for the experiments of Dr. Calsdas, the Brazilian expert, who has been arranging to demonstrate the alleged efficiency of a serum as a preventive against yellow fever.

The Pathology of Sunstroke.—The editor of the *Medical Record* states that when death is sudden the condition appears to be either that of syncope from simple failure of heart action, or from direct shock to the cerebral and respiratory centers. The latter, or asphyxial form is most common and most rapidly fatal. In the more gradual hyperpyrexial variety the cerebral lesions are usually quite pronounced, including evidence of meningitis, serous effusions into the ventricles, occasionally hemorrhages into the brain substance and engorgement of the venous system with dark, fluid-blood. In general the attack is simply over-stimulation of the respiratory and circulatory centers by heat, followed by eventual exhaustion.

The Ambulatory Type of Plague.—The Board of Health of Manila in a circular letter called the attention of physicians to the necessity of extreme caution in the differentiation of the ambulatory type of plague.

Obituary.—Dr. Martin B. Cleveland, at Jacksonville, Fla., August 8, aged 66 years—Dr. Aaron E. Schaub, at Lancaster, Pa., August 8—Dr. Thomas Sappington, at Baltimore, Md., August 11, aged 85 years—Dr. Wiley Fussell, at Irwin county, Ga., August 14—Dr. James A. Williams, at New York City, August 15, aged 62 years—Dr. James Howard, Jr., at Fairmount, W. Va., August 18, aged 23 years—Dr. William W. S. Butler, at Harrisburg, Va., August 18—Dr. Frank Ravenscroft, at Friendsville, Garrett county, Md., August 11—Dr. G. Smith, at Spottsylvania county, Va., August 11, aged 71 years.

An Electrical Novelty.—Edson Brace, formerly connected with the Patent Office at Washington, has suggested to the Committee on Electricity and Electrical Appliances of the World's Fair to be held at St. Louis in 1903, that the building in which the electrical exhibits are to be displayed should be of glass and steel frame, as a means for more definitely ascertaining the physiological and therapeutic action of the electricity. In addition to this it is expected that it will also afford amusement.

Sanatoria for Tuberculosis.—E. W. Brabrook, C. B., Chief Registrar of Friendly Societies of Great Britain and Delegate of the Royal Statistical Society states that if the liability of friendly societies to claims for sickness and death would be diminished by the establishment of sanatoria, it would be to the interest of such societies to contribute to a certain extent toward their construction and maintenance. This the societies have the legal power to do, under certain conditions, by ss. 22 and 37 of the Friendly Societies Act, 1896. The extent of their interest is not so great as might be supposed. The liability of their members to phthisis is not so great as that of the general population. Again, early mortality relieves the society from its liability to future sick pay. Where children are admitted members, they are required to pass a second medical examination at the age of 16 or 18. The ages of 3,699,804 members of friendly societies are recorded: 7 per cent. being under 16; 7 per cent. between 16 and 20; 67½ per cent. between 20 and 50; 14½ per cent. between 50 and 65, and 4 per cent. over 65.

Trade unions may also, under certain conditions, join in the establishment or maintenance of a medical society. In four of these bodies, the deaths from phthisis were from 10 to 13 per cent. of the total number of deaths; and the average age at death from phthisis varied from 35½ to 39½, and from all causes from 43 to 52.

The conclusion arrived at is, that while theoretically the question put must be answered in the affirmative, the financial interest of the societies is too small to allow of its being reduced into practice to any material extent.

A New Simple Apparatus for Modifying Cow's Milk.—A new apparatus for modifying cow's milk has been constructed under the direction of Dr. C. Herman, who bases his calculations upon some of the data recently published by Dr. Holt. If milk were allowed to stand, the upper one-third gave 10 per cent. fat and the fats were in proportion to the proteids as 3 to 1. The upper half contained 7 per cent. fat and the proportion to proteids was as 2 to 1. The apparatus presented consists of a glass cylinder having an opening both above and below and being graduated into 1,000 cc. The milk is removed from below through a stopcock leaving the upper layer undisturbed. The cylinder is also graduated so as to show the fat and proteid percentages. In using the apparatus the milk is introduced up to the 1,000 cc. mark and the cream is allowed to separate. If it is desired to use milk containing fat and proteids in the proportion of 3 to 1, it is only necessary to allow the milk to flow off until it reaches the mark 3 to 1. If 3 per cent. fat is desired one has only to take 300 cc. Analysis showed that the proteid bore to the sugar a nearly fixed ratio, i. e. 1 to 1.3. per cent. A small graduated glass accompanies the cylinder and is used for determining the quantity of milk required. The apparatus was not only simple but allowed of an indefinite number of modifications. It could also be used to determine the quality of the milk, for after the cream had separated one could read off directly the percentage of cream. The specific gravity of the lower milk could be taken and from tables the composition of the milk readily calculated.

Changes in the Medical Corps of the Navy. For week ending August 17, 1901.

MEDICAL INSPECTOR F. ROGERS, detached from the Brooklyn, and ordered home—August 16.
SURGEON J. E. GARDNER, detached from the Naval Hospital, Cavite, P. I., and ordered to the Brooklyn, temporarily—August 16.
P. A. SURGEON M. S. ELLIOTT, detached from the Annapolis and ordered to the Kentucky—August 16.
P. A. Surgeon E. M. Shipp, ordered to the Cavite Naval Station—August 16.
ASST. SURGEON W. H. ULSH, detached from the Glacier and ordered to the Antipolis—August 16.
ASST. SURGEON W. E. C. HIGG, detached from the Kentucky and ordered to the Glacier—August 16.
ASST. SURGEON J. T. KENNEDY, detached from the Marine Brigade, and ordered to the Brooklyn—August 16.
ASST. SURGEON H. E. ODELL, detached from the Naval Hospital, Cavite, P. I., and to duty with the Marine Brigade—August 16.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 days ended August 15, 1901.

H. D. GEDDINGS, passed assistant surgeon, granted leave of absence for 1 month and 15 days from August 15—August 13, 1901.
C. H. GARDNER, passed assistant surgeon, granted leave of absence for 14 days from August 17—August 9, 1901.
S. B. GRUBBS, assistant surgeon, granted leave of absence for 3 days from August 12—August 9, 1901.
J. F. ANDERSON, assistant surgeon, relieved from duty at Liverpool, England and directed to proceed to New York, N. Y., and await orders—August 13, 1901.
C. H. D. LOHR, assistant surgeon, granted leave of absence for 7 days under paragraph 17 of the Regulations—July 7, 1901.
B. W. GOLDSBOROUGH, acting assistant surgeon, granted leave of absence for 7 days from August 11—August 13, 1901. Granted leave of absence for 21 days from September 5—August 13, 1901.
H. S. PRIMROSE, acting assistant surgeon—granted leave of absence, on account of sickness, for 21 days from August 10—August 10, 1901.
S. D. ROBINS, acting assistant surgeon, granted leave of absence for 30 days from August 5—August 10, 1901.
F. R. DANRATH, hospital steward, granted leave of absence for 10 days from August 12—August 13, 1901.
M. VALERIUS, hospital steward, granted leave of absence, on account of sickness, for 23 days from August 8—August 11, 1901.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended August 17, 1901.

SMALLPOX—United States.

		1901	1900
KANSAS:	Wichita	July 27-Aug. 3 .. 1	
NEW HAMPSHIRE:	Nashua	July 27-Aug. 3 .. 2	
NEW JERSEY:	Newark	Aug. 3-10 .. 4	1
NEW YORK:	New York	Aug. 3-10 .. 36	13
OHIO:	Cleveland	Aug. 3-10 .. 1	
PENNSYLVANIA:	Philadelphia	Aug. 3-10 .. 8	
UTAH:	Salt Lake City	Aug. 3-10 .. 1	
WASHINGTON:	Tacoma	July 28-Aug. 4 .. 3	
WISCONSIN:	Milwaukee	Aug. 3-10 .. 1	

SMALLPOX—Foreign.

BRAZIL:	Pernambuco	June 15-July 15 .. 51	
	Rio de Janeiro	June 1-30	52
COLOMBIA:	Panama	July 29-Aug. 5 .. 7	
EGYPT:	Cairo	June 1-22	2
FRANCE:	Marseilles	June 1-30	4
	Paris	July 20-27	3
GREAT BRITAIN:	Dundee	July 20-Aug. 3 .. 6	
	Glasgow	July 27-Aug. 2 .. 2	
	London	July 20-27	11
INDIA:	Bombay	July 8-16	6
	Calcutta	July 6-13	3
	Madras	July 6-13	8
ITALY:	Messina	July 20-27	19
	Naples	July 14-28	99
MEXICO:	Mexico	July 21-28	1
RUSSIA:	Moscow	July 13-20	4
	Odessa	July 20-27	3
	Warsaw	July 13-20	2
SPAIN:	Barcelona	July 1-20	5
URUGUAY:	Montevideo	June 8-15	12

YELLOW FEVER.

COLOMBIA:	Bocas del Toro	Aug. 2	1
COSTA RICO:	Port Limon	Aug. 3	4
CUBA:	Havana	July 27-Aug. 3 .. 3	1
	Marlanno	July 27-Aug. 3 .. 1	1
	Pinar del Rio	July 27-Aug. 3 .. 1	
	Begla	July 27-Aug. 3 .. 1	1

CHOLERA.

INDIA:	Bombay	July 6-13	15
	Calcutta	July 8-16	2
JAVA:	Batavia	June 22-July 6 .. 63	43

PLAGUE.

CHINA:	Hongkong	June 22-July 6 .. 107	
INDIA:	Bombay	June 8-16	101
	Calcutta	July 6-13	16

GREAT BRITAIN.

Medical Men Honored.—King Edward VII recently conferred the following honors upon prominent English medical men: Knight Commander of the Royal Victorian Order on Sir Thomas Smith, Bart., F. R. C. S., Deputy Surgeon-General Henry Julius Blanc, and Mr. William Henry Bennett, F. R. C. S.; Commander of the Royal Victorian Order on Dr. Donald W. C. Hood, Mr. John Hammond Morgan, F. R. C. S., and Mr. Charles Arthur Morris, F. R. C. S.

Liverpool School of Tropical Medicine.—Dr. R. Fielding-Ould, Dr. C. Balfour Stewart, and Dr. A. S. F. Grunbaum have been appointed assistant lecturers in the Liverpool

Glasgow Royal Infirmary.—Dr. T. K. Monro, one of the physicians to the infirmary has been elected Professor Medicine at St. Mungo's College.

Appointments.—The King has appointed Dr. William Hoffmeister and Dr. Edgar Hoffmeister medical attendants to the Royal establishment at Osborne.

A Worthy Retirement.—It is reported that Surgeon-Major-Gen. W. A. Thomson, M. B., who is Honorary Physician to King Edward, has been selected for a good-service pension of one hundred pounds a year. It is nearly fifty years since he received his first commission as an army surgeon. He has served in many parts of the world, and at the time of his retirement in 1892 he was principal medical Officer in India. He was appointed Honorary Physician to Queen Victoria in 1895.

CONTINENTAL EUROPE.

Dr. Combemale, Professor of Medicine at the University of Lille, has been appointed Dean of the Medical Faculty for three years.

Dr. Recourd, Professor of Chemistry at Lyons, has been appointed Professor of Chemistry at the University of Grenoble.

Dr. Caunery has been appointed Professor of Zoology at the University of Marseilles.

Enteric Fever Among Soldiers.—In one battalion of soldiers stationed at Metz, Germany, 291 cases of enteric fever recently occurred.

Medical Extension Classes.—For the past two or three years a number of German universities have established what are known as "medical extension classes," which serve the same purpose as the postgraduate schools of this country.

Palace to Become a Children's Hospital.—King Victor Emmanuel has decided that the Palace of Monza, near Milan, where King Humbert was staying at the time of his assassination last year, should be converted into a children's hospital and asylum, which is to bear the name of the unfortunate sovereign. Being spacious and surrounded by magnificent gardens and a park of vast extent, it is pre-eminently suited for the purpose to which it is now about to be put.

A New Library for the University of Berne.—Dr. von Zehender, formerly Professor of Ophthalmology in Rostock, has presented his library to the University of Berne.

The Air Cure for Tuberculosis at Havre.—Since February 1st, 1900, a special department, consisting of 22 beds, has been instituted by the Pasteur Hospital, Havre, for the cure of tuberculous patients by air, rest, and diet. This department, which has been established in an exceptionally favorable situation, 70 metres above the level of the sea, has received, during the first sixteen months of its working, 112 patients. The results attained were as follows: Much improved, 19 or 17 per cent.; Improved, 39 or 35 per cent.; Stationary, 30 or 27 per cent.; Become worse, 10 or 9 per cent.; Died, 14 or 13 per cent. Twenty-five patients had no bacilli in their sputa on admission; sixteen have improved. All the others were cases of advanced disease, with bad general condition, loss of appetite, and abundant expectoration. Seventy-two patients have gained in weight a little more than six pounds on an average, twenty-eight have lost weight, while twelve have remained stationary. It should be pointed out that the average duration of the stay in the hospital has been: Ninety days for those much improved; 54 days for those improved; 28 days for those stationary. These results might be better; the method can yield better results. The causes of the inadequacy were, that: 1. The patients come for treatment too late. 2. They will not continue long enough. A prominent member of the hospital stated that we must secure the co-operation of those concerned by organizing outdoor relief for their families, by propagating our views as much as possible by means of conferences, leaflets, etc., calculated to enlighten public opinion on this point; above all, by perseverance, for much can be done through time, and also by the help of new patients, who will prove our best propagandists. It is obvious that the best means of arresting the progress of tuberculosis is to employ all the resources of hygiene and of prophylaxis. But until we have succeeded in rendering the towns healthy, in overcoming intemperance, in educating public opinion, and in a good deal more besides, there will always remain poor tuberculous patients who should be isolated and cared for, to prevent them from becoming a source of danger. But up to the present the sanatorium gives the best results. All our efforts should tend in the direction of getting the system accepted and adopted by the public.

A New Protection Against Seasickness.—Dr. Galliano recently reported to the Medical Academy of Touran that a binder encircling the epigastrium was of decided value. He states that the preventive action is brought about by relieving the irritation upon the sympathetic and ganglia. He claims to have obtained excellent results.

Dr. Hermann von Widerhofer.—The sad news of the death of Dr. Widerhofer, Professor of Pediatrics at the University of Vienna, has just reached us. Almost a year

ago he was stricken with apoplexy, followed last winter by a second stroke. He never spoke again. His condition improved slightly this spring, and he was moved to Ischl in June. He grew gradually weaker there, and died on the morning of July 29th, 1901. Hermann von Widerhofer was born in Meyer on the Enns in Upper Austria on March 24th, 1832. He was graduated from the University of Vienna as a physician in 1856, and became at once both clinical assistant to Dr. Mayr, at that time Professor of Pediatrics, and physician to the Vienna Foundling Asylum. Appointed assistant to the Children's Hospital, he took charge of the pediatric clinic there after Mayr's death. He was then elected Director of the Children's Hospital, a position which he held until last year. In 1862 he became a "privat-docent" in Pediatrics; in 1865, extraordinary Professor; and in 1881, Professor of Pediatrics at the University of Vienna. His works include a number of smaller articles in the *Jahrbuch für Kinderheilkunde*, of which he was one of the editors, and several monographs published in book form. He wrote less than he taught; for his teaching was eminently practical. In 1863 Widerhofer was appointed Physician to the Imperial Family of Austria. During the 38 years of his service in that capacity, his extraordinary tact gained him the confidence not only of the Emperor, but also of the late Empress; and it is a fact that his advice, in questions concerning the Imperial Family, not only was listened to, but was always followed. The Imperial Princesses have always clung to the physician of their childhood, and have constantly shown their regard for him. The collection of tokens of the affection and esteem of Archduchesses Gisela and Marie Valerie and of their children are to be found in Widerhofer's study. Every summer he has been the guest of the Emperor at Ischl. The titles of Freiherr, Court Councillor and Baron were conferred upon him by the Emperor, the last upon the marriage of Archduchess Marie Valerie. She herself announced the fact to him, and was the first to congratulate him. At the funeral, held in Ischl July 30th, not only the Emperor, but his daughters, their husbands, and their children were present. The funeral in Vienna was held the 31st, when addresses were made by Professor Neumann, for the Medical Faculty; Professor Nothnagel, for the College of Professors; Professor Chrobak, in the name of the Association of Vienna Physicians; Professor Monti, representing Widerhofer's students; and Dr. Foltanek, representing the Children's Hospital. Baroness von Widerhofer and two sons survive him.

Budin gave an interesting report at the recent Tenth International Congress of Hygiene (*Annals of Gynecology and Pediatrics*, May, 1901), on the **Care of Young Infants**. Statistics were given from all cities in France of over 30,000 inhabitants, showing the mortality of infants under one year as compared with the total mortality during the years 1892 to 1897. The infant mortality during this time was 16.2% of the total. Budin pointed out that 53% of the children under one year died of diseases of the digestive tract and of the respiratory organs; 38.5% died of diarrhea. Budin urges that special attention should be given to the prevention of diarrheal affections in children. In Paris in 1892 was established at their lying-in hospitals what they call "first consultation for mothers." Each week mothers who are nursing their children bring them to the hospital where they were born. The child is examined and weighed and the mother is instructed in the care of the child, and when necessary furnished with sterilized milk to supplement nursing. Budin urges the duty of the municipality to furnish, especially for the poor, pure milk at low prices. He points out that the great mortality among nursing children is among those fed by the bottle, and urges this as the reason for municipal aid and inspection. [W. A. N. D.]

Syphilitic Disease of the Heart and its Curability.—S. I. Schwartz (*Medicinskoje Obozrenie*, June, 1901) reports a case of syphilitic mitral stenosis in a man who contracted syphilis 15 years back. The diagnosis was established from clinical symptoms. Antisyphilitic treatment restored the organ to an almost normal state. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

August 3, 1901.

1. President's Address. Scientific Research as the Indispensable Basis of all Medical and Material Progress. GEO. BAGOT FERGUSON.
2. Address in Medicine. JAMES F. GOODHART.
3. Address in Surgery. SIR WILLIAM THOMSON.

- 1.—See abstract of *Lancet* in *Philadelphia Medical Journal*, August 17.
- 2.—See abstract of *Lancet* in *Philadelphia Medical Journal*, August 17.
- 3.—To be treated editorially.

LANCET.

August 3, 1901.

1. An Address in Medicine. JAMES F. GOODHART.
2. Address in Surgery. SIR WILLIAM THOMSON.
3. An Address on Tubercle Bacilli in Cow's Milk as a Possible Source of Tuberculous Disease in Man. PROF. JOHN MFAYDEAN.
4. What Administrative Measures are Necessary for Preventing the Sale to the Public of Tuberculous Meat? SHIRLEY F. MURPHY.
5. The Veterinary Work done under the Milk Clauses in Manchester and the Difficulties met with. J. S. LLOYD.
6. The Relation of Alcoholism to Tuberculosis. T. N. KELYNACK.
7. Legislation Suggested for Controlling and Eradicating Tuberculosis in Animals. PROF. DUNCAN McEACHIRAN.
8. Tuberculosis among Australian Stock. G. PENTLAND.
9. On the Mortality among Rats at the Cape Town Docks, which preceded the present Epidemic of Plague. ALEXANDER EDINGTON.

2.—Treated editorially.

3.—McFadyean delivered an address before the British Congress on "Tubercle bacilli in cows' milk as a possible source of tuberculous disease in man." He briefly summarizes arguments upon which Prof. Koch based his recent claims: (1) Bovine tubercle bacilli are much more virulent for cattle and other domestic quadrupeds than human tubercle bacilli. (2) This difference is so marked as to constitute a means of differentiation between bovine and human tuberculosis. (3) Post-mortem observation lends proof that primary intestinal tuberculosis is extremely rare, therefore the human subject is immuned or very slightly susceptible to bovine tubercle bacilli. McFadyean states that we must admit that bovine tubercle bacilli are more virulent to cattle and also to the rabbit, dog, sheep, hog, so therefore it appears probable that man is also susceptible. He contends that the virulence of the average bovine tubercle bacillus might be reduced by passage through the human subject. In regard to the third proposition of Prof. Koch's, that primary intestinal tuberculosis from tuberculous milk and meat is extremely rare, the author gives ample post-mortem statistical evidence to show that this statement is not well founded. He is inclined to believe that animal tuberculosis is a source of human tuberculosis. [F. J. K.]

4.—Murphy makes a plea for the adoption of administrative measures necessary to prevent the sale of tuberculous meat to the public and makes the following suggestion: Meat of all animals intended for human food should be inspected before being sold. In urban, and as far as possible in rural districts, animals should be slaughtered in public slaughter-houses in order to secure efficient inspection. [F. J. K.]

5.—Lloyd reviews the veterinary work which was done under the milk clauses in Manchester and the difficulties encountered. Between January 11, 1901 and April 30, 1901, milk has been distributed from 401 farms and each farm averaged twenty-one cows. Forty-seven or 11.72 per cent. of the farms supplied samples of tuberculous milk. After careful investigation 63% of all the cows examined were found to be suffering from tuberculous udders. (F. J. K.)

6.—Kelynack communicated an article to the British Congress on Tuberculosis, on the relation of alcoholism to tuberculosis. This author contends that clinical, post-mortem, and experimental evidence supports the view that the use of alcohol predisposes to tuberculosis. [F. J. K.]

7.—McEachran suggests the following legislation for controlling and eradicating tuberculosis in animals: (1) In the list of contagious diseases tuberculosis should be placed and necessarily tuberculous animals should be dealt with under the provision of the Animal Contagious Disease Act. Local authorities should be given power to regulate the sale of the parts of carcasses which may convey infection. (2) Animals imported for breeding or dairy purposes should be subjected to the tuberculin test and if found diseased they should be prohibited from entering. (3) Only qualified veterinarians should apply the tuberculin test. (4) Animals showing clinical evidence of tuberculosis should be killed at once and animals which react to the tuberculin test should also be slaughtered. (5) Testing of an entire herd should be at the expense of the state except when dealing with imported animals. One and a half degrees should constitute a suspicious indication of tuberculosis. All animals acting in this manner are to be quarantined and re-tested unless clinical evidence of tuberculosis manifests itself, when they should be killed. A re-action of two degrees should constitute a proof of tuberculosis. (6) All disinfection should be under the supervision of Government Officials. [F. J. K.]

8.—Pentland discusses tuberculosis amongst Australian stock. This author mentions various statistics and includes several tables in his article which show the prevalence and mortality of this disease in Australia. He states that from 1894 to 1900 three thousand, one hundred and sixty head of cattle were killed for tuberculosis. He emphasizes that the most efficient plan for exterminating tuberculosis amongst cattle will be found in slaughtering all tuberculous animals. [F. J. K.]

9.—Edington writes on "the mortality amongst rats at the Cape Town docks which preceded the present epidemic of plague." As in a previous communication in the *Lancet* (June 1, 1901) he still believes that this fatality amongst the rats in these docks was not due to the plague bacillus, but to a variety of the bacillus of hemorrhagic septicemia. [F. J. K.]

MEDICAL RECORD.

August 17, 1901.

1. Syphilis of the Liver. MAX EINHORN.
2. Pregnancy Following Myomectomy. JAMES N. WEST.
3. The Summit Fissure. WALLACE WOOD.
4. Notes on Malarial Fevers in Central America. J. HOBART EGBERT.

1.—Max Einhorn discusses syphilis of the liver with notes on ten cases. He mentions that in the majority of cases of syphilis of the liver, pains in the hypochondrium are present, sometimes constantly and sometimes in the form of attacks, resembling in the latter case gall-stone colic. There were in his series various attacks of disturbances of digestion, and frequently there is general malaise, restless sleep, weakness, loss of weight, but never to such an extent as in malignant neoplasms of this organ. Icterus may be acute, persisting for a short time and then disappearing, or it may become chronic. The organ is usually found more or less swollen, extending in the right mamillary line beyond the free border of the ribs. The

organ presents a harder and smoother appearance than normally. Ascites may develop in a late stage of the disease. In none of the cases described has this stage been reached. Beside the specific treatment attention must be paid to the following points: when icterus is present, glycerine should be given, one teaspoonful doses half an hour before meals, and in the presence of an anemic condition, iron, or arsenic with iron is indicated. Marked ascites may have to be relieved by puncture. All alcoholic beverages must be forbidden, also strong tea and coffee. [T. L. C.]

2.—West is an ardent advocate of true conservatism in gynecology. He has made a study of pregnancy following myomectomy with the hope that the facts he now presents will aid in the founding of the proper course to pursue in dealing with a large portion of the cases of uterine fibro-myomata. The evolution of uterine myomectomy has been gradual since 1825, and is now one of the well recognized surgical procedures. The loss of the ovaries and uterus when occurring to a young married woman who has never borne children West regards as a tragedy in her life. The value of the ovaries on account of the secretion peculiar to them is now well recognized. The preservation of the uterus and its adnexa not only maintains the integrity of the pelvic structure and normal functions, but also offers a fair prospect of child-bearing. A comparatively large number of cases of pregnancy subsequent to myomectomy has been recorded. West gives a summary of some of these and relates a case that has occurred in his own practice. In his case 9 incisions had been made in the uterine tissue, and yet the labor lasted 12 hours and the expulsive force was ample. In 2 cases gestation was complicated by a flow of blood or amniotic fluid from utero-abdominal fistulae, which remained at the site of operation, but healthy children were born notwithstanding this complication. [W. A. N. D.]

3.—Noted editorially.

4.—J. H. Egbert presents notes on malarial fevers in Central America. The mountains of Honduras, four thousand feet above the sea level are above the mosquito belt and above the fever belt, and yet malarial fevers, both of the quotidian and tertian types, are of common occurrence. Egbert believes that they are propagated at least in part, by fleas. Malarial fevers in Tropical America are of special interest to the clinician. The spleen is frequently enlarged, especially in children. Under treatment the cases do well. He has found that a satisfactory plan of treatment is the combined administration of quinine and acetanilid, together with calomel or saline laxatives, during the run of the fever, and quinine and mineral acids, or Fowlers' solution, together with podophyllin or similar hepatic stimulants, for the subsequent disturbances. [T. L. C.]

MEDICAL NEWS.

August 17, 1901. (Vol. LXXIX, No. 7.)

1. Fibroma of the Mesentery. J. B. MURPHY.
2. Arsenic and Its Compounds; With Special Reference to Soda Cacodylate. CHARLES WILLIAM HEITZMAN.
3. Acute Peritonitis: Its Treatment upon an Etiological Basis. C. D. HILL.
4. A Plea for the Better Appreciation of the Limitations of Operative Work. A. M. CARTLEDGE.
5. The Etiology of Melancholia. H. H. STONER.

1.—In Fibroma of the Mesentery, J. B. Murphy divides the treatment as follows: (a) Aspiration. No deaths have been reported, although out of seventeen cases, nine recurred, and out of sixty-two cases, forty-seven recurred. It was found that the chylous cysts were more apt to recur; (b) Puncture with fixation of cyst wall in abdomen, incision and drainage. Pean's mortality in nineteen cases was five per cent.; (c) Primary enucleation of cyst. Very dangerous with a mortality of sixty percent., principally due to shock, peritonitis and intestinal gangrene; (d) Primary drainage with secondary enucleation. This procedure is one with very little danger when the tumors are greatly

reduced in size by drainage. The author also gives many varieties of the above condition from a histological and pathological standpoint. Histologically, they consist of (a) epithelial and endothelial growths; (b) connective tissue growths; (c) lymphoid growths; (d) vascular growths; (e) nerve tissue growths; (f) chylangoma. [T. M. T.]

2.—C. W. Heitzman recommends the use of soda cacodylate as a substitute for arsenic, and states that some of the reasons why arsenic does not always give the looked-for results is because it is given in too small doses and not continued long enough. The preparation of sodium cacodylate after five years' trial seems to exercise a beneficial, stimulating and tonic effect on all patients who took the drug. It is advised, especially in cases where large doses of arsenic must be given, and is absolutely safe even in massive doses, being non-toxic in comparison with other arsenical compounds. It is given hypodermically in doses of from one to one and one-half grains daily. By the mouth and rectum it can be given up to six grains daily. No matter in what way it is given the "garlicky" odor on the patient's breath is present in from three to seven days. [T. M. T.]

3.—C. D. Hill gives some of the various avenues for the entrance of bacteria into the peritoneum: (1) Any injury or disease of the alimentary canal sufficiently intense to cause a perforation, notably appendicitis and less frequently ulcers; (2) Any obstruction, such as invagination, intussusception, or strangulated hernia, which causes a necrosis of the gut; (3) Septic conditions of the abdominal or pelvic organs, such as abscess of the liver or kidneys, and especially disease of the Fallopian tubes, giving rise to pelvic peritonitis; septic conditions of the postpartum uterus, giving rise to puerperal nephritis, this latter often being classified under a distinct heading: (1) Traumatism from within or without the lumen of the bowel, or traumatism to the abdominal wall, such as penetrating injuries caused by gunshot or stab wounds, or traumatism caused by operations. [T. M. T.]

5.—H. H. Stoner, in his article on The Etiology of Melancholia, gives his opinion of its production. He believes that the stimuli which gives rise to these painful sensations is found in tissue metabolism. Melancholia is preeminently an emotional disease, and the emotions arising are invariably of a painful character. Now, if it can be established that the metabolic process is answerable for the normal emotions, he believes that we may have here the foundation laid for the so-called abnormal emotions attendant upon melancholia. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

August 17, 1901. (Vol. LXXIV, No. 7.)

1. The Relative Merits of Bipolar Version with Slow Extraction and Accouchement Force in the Treatment of Placenta Praevia. Report of Fourteen Cases. HENRY D. FRY.
2. The Present Status of the Surgery of the Prostate. WILLIAM N. WISHARD.
3. Infection Spread by Domestic Pets; Resemblances Between Diseases of the Lower Animals and the Human Subject. WILLIAM B. MEANY.
4. Hot Air as a Therapeutic Agent. ORRIN S. WIGHTMAN.
5. Dysentery in the Philippines. M. H. BOWMAN.
6. Antisepsis in Throat and Nose Surgery. HENRY WALLACE.
7. Some Observations on the Relation of the Alkaliescence of the Blood to the Urinary Reaction. HEINRICH STERN.

1.—H. D. Fry, in his article on The Relative Merits of Bipolar Version with Slow Extraction and Accouchement Force in the Treatment of Placenta Praevia, calls attention by his table to the large proportion of primiparae: seven out of the fourteen cases reported, or fifty per cent. Bipolar version and slow extraction were employed nine times; membranes ruptured and delivery left to nature, once; tampon and natural delivery, once; forceps extraction, four times, including one application to the after-coming head following bipolar version. All of the mothers recovered, and five out of the fifteen infants were born alive. Of the children lost, two (twins) were not viable; one was at the seventh month, and four were dead when the case came under observation.

[T. M. T.]

2.—In the present status of the surgery of the prostate, W. N. Wishard comes to the following conclusions: That the operative procedures are of the greatest values when undertaken early, and that where they are long deferred, serious resultant bladder, urethral and renal diseases make the outcome increasingly dangerous. It should also be remembered that where the catheter has failed to give adequate relief death is reasonably certain to occur very soon, especially in cases where the urethra has greatly increased in length by the elongation of its prostatic end unless the suprapubic opening for either prolonged drainage or for the removal of the obstruction is done. If the symptoms are not of a severe type and are not amenable to catheter, and if the length of the urethra from the meatus to the point where the urine is obtained does not exceed nine inches, a perineal opening generally affords opportunity for stretching the entire length of the prostate urethra, for dividing the small collar-shaped growths around the bladder end of the canal, and for removing the small projections by the finger, forceps, or cautery. One-fourth or, as asserted by some, one third of the operative cases are suitable for perineal opening. If the suprapubic operation has been thoroughly done and the obstruction all removed the patients afterward are assured of more perfect bladder function than by any other method. It must be conceded, however, that in view of the serious dangers involved, many cases should be subjected to nothing more than the formation of a suprapubic channel, as suggested by McGuire and modified by Morris. Morris's improvement lines the channel with skin, and hence it is not so apt to contract. [T. M. T.]

3.—W. B. Meany, after going quite exhaustively into the subject of infection spread by domestic pets, states that no child or person should be permitted to return to school until at least a month, or better, six weeks' time, has expired from the commencement of actual convalescence; or any one coming from a sick room until strictly modern methods of disinfection have been employed, with especial regard to personal hygiene, not only bodily, but of the wearing apparel of the individual as well. No patient, however, should be declared free from diphtheritic bacilli until at least two accurate culture tests have resulted negatively. All school books and other paraphernalia, toys, playthings, etc., or clothing that may have been brought into the sick room, or handled by the sufferer from contagious affections, or during the time of convalescence should be destroyed by incineration. [T. M. T.]

4.—O. S. Wightman sums up his paper on hot-air as a therapeutic agent as follows: Objections have been raised to dry heat, on the ground that the sedative action lasts but a short time. He says that in acute conditions we cannot hope to do more than alleviate a symptom in the acute stage, but this method is much to be preferred over the administration of a drug. Under the head of objections naturally come the elements of time, expense and convenience. As to time, there are few who would not freely devote time unlimited where there was any possibility of relief from pain. Where a chronic condition is being treated, and a full-body exposure is necessary, the time consumed in getting to the place where the bath is given, the necessity for special clothing, and the actual time consumed in the bath, with the possibility of subsequent chilling after it, all very properly enter as factors in considering this as a method of treatment. The expense, in the event of a full-body bath, with the addition of an attendant and massage, is a considerable item. In the treatment of joint affections, the Betz apparatus is very satisfactory, is easily moved from place to place, and should not be a serious monetary consideration. As to convenience, after a few intelligent observations on the part of those seeking treatment, hot air in almost every case can be administered without any difficulty whatever. There are few people who will make treatment a matter of duty if chance for improvement is held out and, with the prospect of relief at hand, gladly follow up a prescribed course of instructions. The author gives these advantages: (1) Dry heat is a valuable pain-reliever without any of the depressing effects common to drugs; (2) In connection with constitutional and medicinal treatment, we have in it a positive curative agent; (3) It is a stimulant to rapid repair and absorption; (4) It is one of the most valuable eliminative agents we possess; (5) Where indicated it possesses a sedative action on the nervous system obtained by no other means. [T. M. T.]

5.—M. H. Bowman has found that dysentery in the Philippines has been of such a character as to make the following facts advantageous: (1) dysentery, as it is seen here, is not a single, but consists of two distinct and separate diseases; (2) Acute dysentery does not produce abscess of the liver, nor does it produce ulceration of the colon. Its fatal result is due to inflammation of the bowel, rapid elimination of the watery fluids of the body, toxemia and exhaustion, much after the manner of cholera, though requiring four, six, and twelve days before its termination or crisis; (3) Amebic dysentery differs from acute dysentery anatomically, pathologically and etiologically. The only similarity between them is, the colon is the locus minoris resistentiae for both the bacillus of Shiga and the ameba. Here all similarity ends. The bacillus of Shiga leaves no other lesion behind, save its effect upon the mucous membrane of the colon and enlargement of the adjacent glands. The ameba of dysentery invades the three layers of the colon, producing pinched-out ulcers, or ulcers with undermined edges. It also passes to the liver and produces characteristic lesions. There are two varieties of the ameba which differ in no respect save as to size. The pathogenic variety is somewhat larger than the non-pathogenic. These two varieties of the ameba have been the cause of all the confusion regarding the ameba as an etiological factor in amebic dysentery. Finally, in regard to the dysenteries produced by the Shiga bacillus and ameba, he gives the following considerations: (1) The duality of dysentery is proved; (2) Acute dysentery is the result of infection with the bacillus of Shiga; (3) It is infectious in the same way as the bacillus of typhoid fever is infectious; (4) Amebic dysentery is caused by an ameba; (5) There are both a pathogenic and a non-pathogenic ameba, which fact has produced much confusion regarding the ameba as an etiological factor; (6) The lesions of amebic dysentery differ from those produced by the bacillus of Shiga; (7) The therapeutic agents generally used for the treatment of acute dysentery are in no way curative; (8) Magnesium sulphate should be included in this list; (9) Quinine solution is a specific for the amebic dysentery, but its employment in rapid, acute, ulcerating cases is fraught with danger, and from the nature of the lesions it cannot be retained for a sufficient length of time to produce beneficial effects. [T. M. T.]

7.—H. Stern concludes his article on the Relation of Blood Alkalescence to Urinary Reaction as follows: (a) The higher degree of urinary acidity concurs with a lessened blood alkalinity and the increased alkalescence of the blood with a decline of the urine's acidity; (b) There is no permanent and absolute relation between blood alkalescence and urine acidity; (c) The blood, under normal conditions, possesses a certain inherent alkalinity. The degree of alkalescence possibly varies slightly for certain periods of the 24 hours, but the influence of the ingesta upon these variations is neither a material one nor one always determinable; (d) The degree of blood alkalinity is normally not affected by the quantity of the ingesta. The quality of the nutritives may normally contribute toward the rise and fall of the blood's alkalinity, but only to a very limited extent; (e) A portion of the substances elaborated from the nutriment will be digested without having been conveyed to the blood; (f) Some of the nutritive material, isolated and not utilized in anabolism, may be transferred into the urine in a more direct manner, and thus the accidental variations in the urinary reaction may be partly explained. [T. M. H.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 15, 1901.

1. Address in Medicine, JAMES F. GOODHART.
2. Demonstration of a Model of the Abdominal Viscera.
THOMAS DWIGHT.
3. The Origin of Oxalic Acid from Protein and Protein Derivatives, ARTHUR E. AUSTIN.

3.—Austin's studies have led to the conclusion (1) that oxalic acid is derived from the carbohydrate group in albumins, presumably through the intervention of glycocholic acid by a process of splitting, through which the remainder is converted to urea, a vital process though limited by strong oxidizing agents. (2) That oxalic acid may also be derived from uric acid by fermentative action and oxidizing agents, and

perhaps also by vital processes. (3) That oxalic acid, present in many organs of the body, practically absent from the feces of animals fed on nonoxalic acid containing foods, yet ever present in the urine after long periods of fasting, may rightly be called a metabolic product and rightfully take its place with acetone, lactic acetoacetic and oxybutyric acids as a measure of abnormal retrograded metamorphosis. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

August 17, 1901.

1. Electro-Thermic Hemostasis in Abdominal and Pelvic Surgery. ANDREW J. DOWNES.
2. A New Operation for Retrodisplacement of the Uterus. EMIL RIES.
3. Surgical Treatment for Retroversion of the Uterus. FRANKLIN H. MARTIN.
4. Report of a Case of Unusual Tertiary Manifestations. G. HUDSON MAKUEN.
5. Symptoms of Typhoid Fever in Infancy and Childhood. J. P. CROZER GRIFFITH.
6. The Diagnosis of Typhoid Fever in the Laboratory. JOHN LOVETT MORSE.
7. The Treatment of Temperature by Drugs. EDWIN ROSENTHAL.
8. A Case of Multiple Gangrene—Associated with Cholangitis and Adenoma of the Liver Complicating Typhoid Fever. ISAAC A. ABT.
9. Two Cases of Suppuration of the Parotid Gland with Pus in the External Auditory Canal. FRANCIS R. PACKARD.
10. Tropical Diseases. RONALD ROSS.

1.—Downes remarks in speaking of **Electrothermic Hemostasis in Surgery** that with the development of aseptic surgery arose the necessity of hemostasis, that is, not only of a certain method of occluding the vessels but of doing it with an agent which would not add a complication to the case either immediately or remotely. No method of hemostasis generally used fulfils this definition. He objects to the actual cautery, silk ligature, the angiotribe, and even to sterile absorbable ligatures. He claims that the only practical method of obtaining heat in compressing blades in a measurable and controllable form is by electricity. Such electrothermohemostatic instruments he claims are ideal. The credit for their introduction belongs to the late Dr. Skene. Downes has improved on Skene's instruments and illustrates his article with a series of his own instruments which he has devised for use in pelvic and other surgery. Not only are they of value in hemostasis but they are also useful in occluding tubular structures usually requiring ligation, such as the vermiform appendix, the Fallopian tubes and the ureter. He records a series of 20 cases in which his instruments were employed successfully. [W. A. N. D.]

2.—Ries proposes a new operation for **retrodisplacement of the uterus**, which is in reality a shortening of the round ligaments through the vagina. The desirable points which his new method has intended to embody are the following: 1. A vaginal operation which would allow of all necessary operations on the appendages at the same time and through the same incision with that for the treatment of the retrodisplacement. 2. An operation that will preserve the mobility of the uterus so as not to interfere with possible pregnancy. 3. An operation that would not depend on serous adhesions, as these have proved unreliable. 4. An operation that required as little suturing as possible in the peritoneal cavity and still would leave no raw surfaces that might give rise to adhesions. 5. An operation that would not interfere with the physiological functions of the tubes. His operation consists of an anterior kolpotomy followed by delivery of the uterus through the incision into the vagina. A tunnel is then made through the anterior uterine wall from tube to tube and the two round ligaments drawn successively through this to the opposite side, the uterus in the meanwhile having been replaced. Traction upon the strings which are attached to the ligaments draws the fundus forward to the anterior abdominal wall, after which the sutures are tied and the vaginal incision closed. [W. A. N. D.]

3.—Martin in discussing the surgical treatment of **retroversion of the uterus** remarks that two operations have

become established in surgery as procedures of necessity in the successful treatment of persistent retroversion of the uterus. One is the operation of shortening the round ligaments of the uterus in the inguinal canal, or the Alexander operation; the other that of fixing the uterus by some means to the abdominal wall through an abdominal incision, or the operation of ventral fixation of the uterus. After describing the evolution of the two operations, he presents a method of ventral fixation devised by himself which consists of suspension of the uterus on a strip of peritoneum. This strip is taken from one side of the abdominal incision and parallel to it and is carried beneath the mucous membrane of the uterine fundus in the median line and then again secured to the anterior wall. The uterus is temporarily fixed by a small antiseptic cat-gut suture in order to remove strain upon the uterine attachment as described. He has operated successfully upon 173 cases by this method up to date. [W. A. N. D.]

4.—The patient, aged 22, had scarlet fever, followed by a severe attack of **Bright's disease** at the age of three years, from which he recovered and continued in good health up to September, 1899, when he contracted **syphilis**. Later he was attacked with **intermittent fever**. Both eyes presented a severe neuro-retinitis with lesions that were regarded as pathognomonic of Bright's disease. There were anemia, emaciation, asthenia, and cough. A pharyngoscopic examination revealed a single ulceration confined entirely to the lingual tonsil, presenting all the characteristics of a typical tertiary sore. Mixed treatment was administered with a speedy and happy result. [F. T. S.]

5.—Griffith mentions that the cardinal symptoms of enteric fever in infancy and childhood are not always present and in his article he gives an account of the symptoms during these periods of life. He mentions that there are two methods of onset in early life. One characterized by the absence of the early malaise, which is so common in the adult type, of fever and the presence of loss of appetite, slight headache, slight indisposition and fever. The diagnosis must often be made by exclusion. The second form of onset is characterized by vomiting and fever. The symptoms of enteric fever in childhood are decidedly more vague than the enteric fever of the adult, the course of the disease is shorter and the mortality lower. In all cases the spleen is probably enlarged, although this enlargement is not always discoverable. The fever is apt to begin suddenly without the step-like ascent; it runs a shorter course, constipation is more liable to be present than diarrhea. The tendency for nervous symptoms to predominate over the intestinal symptoms is characteristic of typhoid fever in children. [F. J. K.]

6. Morse discusses the **diagnosis of enteric fever in the laboratory**. He emphasizes that clinical methods of diagnosis should always be combined with laboratory methods, neither one being complete without the other and errors are liable to occur in any method. The leukocyte count and the Widal reaction are the most useful laboratory tests. Ninety-five per cent. of the cases of typhoid fever present a positive Widal reaction, which, however, seldom appears before the second week and may not occur until convalescence. When a number of negative tests appear the evidence against the existence of enteric fever is very strong. The Widal reaction occurs in other diseases, but this error does not exceed two per cent. There is absolute proof of typhoid fever when a negative reaction is followed by a positive one (with a dilution of 1 to 50). The finding of typhoid bacilli in the urine, in the blood, in the feces and in the rose spots, is a sign of little practical importance. The diazo-reaction is of comparatively little value as it is often present in tuberculosis, septicemia and other febrile diseases. The leukocyte count is of special importance in distinguishing septicemia and diseases accompanied by a leukocytosis, from enteric fever. It also affords a means in assisting in the early diagnosis of perforation and peritonitis in the course of typhoid fever. [F. J. K.]

7.—Rosenthal considers the **treatment of temperature by drugs in typhoid fever**. He finds that the so-called antipyretics, the coal-tar derivatives are of value in reducing temperature, but he does not claim any particular virtue for any of these drugs and if a single remedy is used too long or if too large a dose is given there is a tendency to collapse. The well-known neutral fever mixture of the U. S. Pharmacopeia is a valuable adjunct to the Brand treatment as it produces diaphoresis. He considers the Brand method as occupying the foremost position in the

treatment of enteric fever to reduce the temperature and that other antipyretics should be condemned. [F. J. K.]

8.—Abt reports a case of **multiple gangrene** which occurred in a female twenty-one months of age. This condition developed during an attack of enteric fever. The gangrenous areas were scattered on the back, neck and extremities. The eruption at first was papular, then became pustular, and finally gangrenous. The child was under observation for sixteen days when death occurred. The autopsy revealed a prominence of the solitary and agminated lymph follicles of the intestine—ulceration was not present. An adenoma was found in the left lobe of the liver. A bacteriological examination of the gangrenous areas showed that the staphylococcus pyogenes aureus and a bacillus—probably the typhoid bacillus—were present.

[F. J. K.]

9.—Packard reports two cases of suppuration of the parotid gland with pus in the external auditory canal. The first occurred in a boy nine months old. In this case the external auditory meatus contained pus. When the pus was removed the drum was found to be perfectly healthy and the purulent material exuded from the anterior surface of the auditory canal. The parotid gland was swollen. This mass was incised and it proved to be an abscess. Under anti-syphilitic treatment the child improved rapidly. The second case occurred in a boy two years of age and developed after an attack of measles. The right parotid gland was swollen and there was a purulent discharge from the right ear. Upon removing the pus the anterior wall of the external auditory canal was found perforated. Pus also discharged into the mouth just before death. [F.J.K.]

AMERICAN MEDICINE.

August 17, 1901.

1. Expectant Treatment. A. JACOBI. (Concluded).
2. Some Observations on the Treatment of Acute Insanity in General Hospitals. DANIEL R. BROWER.
3. A Report of 212 Cases of Ventrosuspension of the Uterus. RICHARD F. WOODS.
4. A Case of Gastritis Complicated by Myasthenia Gastrica, with Remarks on Weakness of the Gastric Muscle. EDWIN ZUGSMITH.
5. A Study of the Hemorrhoidal Circulation with Special Reference to the Prevention of Postbleeding in Radical Operations for Piles. WILL B. DAVIS.
6. Congenital Malformation of the Vagina. Report of two Cases. M. J. KONIKOW.
7. The Sodium Tungstate Test for Combined Chloride in Chyme. A. L. BENEDICT.

1.—A. Jacobi contributes an article on **expectant treatment** in which he briefly discusses the views current fifty years ago. He makes a plea for a timely and energetic medication and for the suppression of the very term of expectancy as needless. Expectancy in treatment has its well defined causes. First, reliance on nature; Second, the practitioner has no clear indications, and resorts to expectant treatment, which is merely no treatment, because it is of insufficient diagnosis and prognosis. Third, the physician is not sure of the action of his medicines; not even specifics, such as quinine, salicylic acid, etc. He mentions some untoward results observed by relying upon expectancy in treatment in his own practice. He believes that the platform of the physician should be, in order to obtain indications for treatment, to first make a diagnosis. That art is becoming more accessible, and, through honest and hard work, more easy with the aid of modern methods, and the physician is to remember that most diseases have a tendency to spontaneous recovery, and also that recovery is not always complete and that invalidism should not be invited through neglect of treatment. Complications are possible as long as an illness lasts, and with every day cut short, the dangers of another typical disease are diminished. The experience of old men in the profession who claim they employ less drugs with advancing years, means sometimes an inability to master new methods of diagnosis, or the wanting knowledge of new medicines of physical remedies. There is no one treatment for a disease adapted

to every patient. There is no such thing as a uniform treatment for pneumonia or for typhoid fever, even in spite of antitoxins. We should not try to treat the name of an illness, but the patient. [T. L. C.]

2.—Daniel R. Brower makes some observations in the treatment of **acute insanity in general hospitals**. He sums up the defects in our public institutions of to-day as follows: (1) That they are most of them too large, considering that they contain both acute and chronic cases. It is physically impossible for the medical superintendent to individualize the work; he must intrust a great part of the medical care and treatment to his subordinates. (2) They are too far from the homes of many of the patients. (3) The admission to these hospitals is by cumbersome, antiquated and unscientific methods, often subjecting the patient to a severe ordeal that sometimes does serious damage physically and mentally, and diminishes proportionately their chances of recovery. (4) In some of the commonwealths of this great nation, noticeably in the State of Illinois, these institutions have been degraded to the position of political machines, their organizations used to carry elections, to defray campaign expenses, and to reward those who have rendered some special party service. The New York Lunacy Commission estimates that the ultimate average charge for every patient admitted to a state hospital, who is not discharged recovered or improved, amounts to about \$6000. Brower urges that the admission for the insane to these wards of the general hospital should be as free as for other patients. There is no scientific reason why a case of brain disease causing insanity should be compelled to pass through the court, and a disease of the same organ producing hemiplegia should not. He would limit the cases for general hospital treatment to the primary curable conditions. Mania, melancholia, and stuporous insanity; the secondary insanity, the psychic degeneracies, and the arrests of the development should be excluded. [T. L. C.]

3.—Woods remarks that there have been 45 methods suggested and applied to cure the condition of chronic displacement of the uterus. The majority of these operations have been discarded because they were an insuperable barrier to pregnancy and labor or disturbed the functions of other organs, or failed to retain the uterus in its proper position. He has made a study of 212 cases of **ventrosuspension of the uterus** gathered from the case books of Penrose and Beyea, the series covering a period of 8 years. Of this number 129 were completely cured by the operation. Two thirds of them mentioned gained in weight. There were 52 cases improved by the operation, and there were 30 cases which were not benefited. Sixty of the women have been examined by the operation and only in one instance has the uterus fallen back. Twenty of the women have borne children during the operation and ten have miscarried. There has been one death which was avoidable. Hernia has not followed the operation in any of the cases. [W. A. N. D.]

4.—Edwin Zugsmith reports a case of **gastritis complicated by myasthenia gastrica**, with remarks on weakness of the gastric muscle. The patient was a laborer of 52 years who four months before seeking treatment, suffered from abdominal pains, which became worse about an hour after eating. The pains were of a burning character and were situated in the epigastrium and umbilical region. There was constant diarrhea, the stools containing mucus and occasionally undigested food, but no blood. After eating he felt heavy and bloated, and belched gas and sour liquid. Appetite was poor. He would often become dizzy and fall over his work. On examination the stomach was found to extend from the liver dulness above to one and a half inches below the umbilicus. There was no splanchnoptosis of any form, and nothing was discovered by palpation. The condition of acid secretion was normal after a test meal. A treatment of lavage was used daily, and the intragastric spray was used semi-weekly to apply silver nitrate (1-500), and a pill of strychnia, quinine

and nitrate of silver was administered. Intra-gastric electricity was applied, the fuse being the combined cathodal galvanic and slow faradic. The diarrhea stopped almost immediately, and the tendency was rather toward constipation. In six weeks after treatment the stomach had retracted to its normal condition, and ten months after treatment the patient was well. [T. L. C.]

5.—W. B. Davis calls attention to the fact that bleeding may follow any of the operations for the relief of hemorrhoids. He believes this is due to insufficient division of the sphincter ani. Hemorrhoids are composed of varicose veins and connective tissue, in the author's opinion, and never contain arteries of sufficient size to give troublesome hemorrhage. In the treatment of post-operative bleeding stretching of the rectum from the anus to the ampulla is recommended. This dilates the button-hole openings in the muscles through which the veins pass, thus relieving engorgement and hemorrhage. He deprecates the use of the rectal tampon. If an artery be found bleeding it is usually due to the invasion of the muscular coat and should be isolated and ligatured. [F. T. S.]

6.—Konikow reports two cases of congenital malformation of the vagina. In the one case the anomaly consisted in a transversal septum that divided the vagina into two cavities, lower and upper; the second anomaly was a longitudinal septum which divided the blind sac from the vagina. It is easy to comprehend and explain embryologically the anomalous condition of the vaginas with longitudinal septa, but the origin of the transversal septa is not clear. They may be due to adhesion of the vaginal walls at any point during the course of growth and development.

[W. A. N. D.]

VRATCH.

May 12, 1901. (Vol. XXII, No. 19).

1. Syphilitic Endocarditis. M. I. A. BREITMAN.
2. Genu Recurvatum. A. A. VOROBIEFF.
3. A Case of Hysterical Deaf-Mutism. N. U. KUMBERG.
4. A Case of a Rare Termination of Suppurative Periapendicitis. P. D. VEINGROFF.
5. A Case of Appendicitis Complicated by Acute Parenchymatous Nephritis. I. A. V. MOLDAVSKI.
6. Directorship or Collegueship. I. I. TROIANOVSKI.

1.—From a critical review of the published cases of syphilitic endocarditis Breitman draws the conclusion that this affection is never primary, being secondary to syphilitic affections of the myocardium. It cannot be recognized during life, owing to the fact that it is masked by the primary lesion. The pathognomonic symptom of endocarditis, the murmur, as a rule, is absent in syphilitic affections of the endocardium, and if present, changes its character and location. A complete cure is hardly to be expected even if the disease is recognized and treated early. The absorption of the syphilitic lesion will lead to valvular insufficiency, or stenosis, owing to the contractions taking place. Considerable improvement, however, may result even in very grave cases. [A. R.]

2.—Vorobieff reports, in connection with a number of cases collected from the literature, 10 cases of genu recurvatum which came under his observation. Case 1: A young peasant of 18 presented a curvature of the right knee forming an angle of 115 degrees. The etiologic factor in this case was osteomyelitis. A plastic operation restored the limb to the proper position and comparative usefulness. Case 2: A laborer, 35 years old, showed a backward curvature of both legs, the right forming an angle of 170, the left of 173 degrees. The patient suffered from an inguinal hernia, gave a history of a dislocation of the hip, also of abscess formation in the right hip when he was 18 years old. The direct cause of the deformity, however, is obscure. The probable diagnosis of genu recurvatum staticum is made. Case 3: A student of 16 complained of abnormal mobility of the right knee. The right leg was in the position of varus and when bent backward at the knee formed an angle of 140-165°. The muscles were atrophied. Osteomyelitis was the primary cause in this case. Case 4: A young man of 19 had an attack of osteomyelitis followed by suppuration of the right hip, atrophy of the muscles and a backward curvature of the leg, forming an angle of 160 degrees. Case 5: A peasant of

25 sustained an injury of the lower extremities, equinovarus and abnormal mobility of the knee joints, rendering the patient incapable of walking. Both knees curved backward to an angle of 135 degrees. Case 6 is one of genu recurvatum valgum developed as a result of congenital paralysis. The curvature reached 150 degrees. Case 7: This is more properly a case of curved leg dependent on a false joint formed after a fracture of the upper third of the tibia. Case 8 was one of genu recurvatum arthropaticum in a hysterical and demented woman of 46 with a family history of insanity. In Case 9 the genu recurvatum of both legs followed Pott's disease, being due to the position of the body. In Case 10 the deformity in the left leg followed an injury to the knee sustained 8 years back. [A. R.]

3.—Kumberg reports the following case: A soldier with an inherited predisposition to nervous diseases attended the funeral of his friend, having taken active part in the ceremony. Owing to the physical exertion involved, he was greatly fatigued, and, besides, was exposed to a strong wind blowing at the time. Having partaken liberally of some "vodka," he departed. On his way home he felt severe pain in the head and side and upon arrival began to cry, then fell asleep for ½ hour. A few hours later he had an attack of convulsions accompanied by foaming at the mouth and rigidity. When seen by the author, he was found on his back with his eyes open and the pupils dilated. He could not talk, move or put out his tongue, did not answer when questioned. Pulse, heart and temperature normal. On the following day he was found sitting and crying, could neither hear nor talk. At first he had difficulty in recollecting letters (agraphia) but soon began to write. A suggestion was made in writing that at 5 o'clock he will commence to talk. At the appointed time he pronounced two words ("who is here"). On the following day he asked for a drink. A day later he showed paresis of the right hand. Four days later he presented anesthesia and analgesia of the entire cutaneous surface. A needle pierced through the skin caused no sensation. Sensations of heat and cold were preserved. He could not open his mouth, could not hear the ticking of a watch applied close to the ear. On the following day he reported that his hearing in the right ear was restored for a "minute." Had pain in the legs, hands and abdomen. The following visit found him lying with eyes closed and in distress. Had a vision that his nose was bleeding and that he was going to die. His right hand was better, but paresis now occurred in the left. Had several attacks of pain on the following day. Lost consciousness once. The following visit found him much improved. From that time on he began to improve gradually and recovered completely in about 8 weeks, except for a slight anesthesia of the throat, the latter having been markedly insensible during the attack. The treatment was largely suggestive in character, towards the end faradization was employed.

[A. R.]

4.—Veingroff reports a case of suppurative appendicitis in which recovery was brought about by the circumscribed abscess discharging into the cecum. On the 15th day of the disease the entire appendix, together with pus and blood, was evacuated. A similar case was reported by O. O. Motchutkovski at the Sixth Congress of Russian Physicians in Kieff. [A. R.]

5.—Moldavski reports a case of appendicitis complicated by acute parenchymatous nephritis. He explains this complication by the supposition that the toxins generated by the virulent coli communis irritated the epithelium of the kidneys. [A. R.]

6.—Troianovski points out the evils which may and do result from the system of placing the entire management of the hospital in the hands of one man, the director. He makes an appeal for a council in which each member of the hospital staff should be represented, and questions relating to the medical affairs of the hospital decided by a majority. [A. R.]

EDINBURG MEDICAL JOURNAL.

June, 1901.

1. The Natural and Artificial Mineral Waters of Nauheim. Their Physiological and Therapeutical Effects and Their Employment in Disease by the Schott Methods. J. MCGREGOR ROBERTSON.
2. The Rational and Comprehensive Study of the Hepa-

tic System. FREDERICK T. ROBERTS.

3. The Treatment of the Cough in Pulmonary Consumption. ARTHUR LATHAM.
4. On Enlargement of the Spleen in Cancer of the Liver. C. O. HAWTHORNE.

1.—Will be abstracted when finished. [J. M. S.]

2.—The practitioner is in constant danger of forgetting that the hepatic system includes other structures beside the liver, and is consequently liable to frequent misapprehensions and errors in diagnosis.

The hepatic apparatus includes, (1) the liver, with its capsule and peritoneal investment and the ligaments by which it is supported, (2) the gall bladder, (3) the bile ducts, hepatic, cystic and common, (4) the hepatic artery, the hepatic vein, the portal vein and its tributaries. Morbid changes affecting the lymphatic glands in the portal fissure, or the capsule of Glisson and cellular tissue, have to be borne in mind as possible causes of symptoms, by pressing upon the bile ducts or bloodvessels, or perhaps upon nerves. It is highly desirable and advantageous to study the hepatic system intelligently as a whole, and on a comprehensive basis, from all aspects—pathological, etiological, clinical, and therapeutical—and not merely to fix attention on the liver. That the liver is liable to "functional disorders" cannot be questioned. What the exact nature of the disturbance may be is by no means always easy to determine, and the use of such expressions as "sluggish liver," "torpid liver," "disordered liver," "weak liver," and the like, in common use, even amongst the members of the profession, have really no definite meaning. "Congestion of the liver" is another expression that is in common use, but really, in the majority of cases, without any definite meaning. On the other hand, the fact must be emphasized that under certain circumstances congestion is a very important morbid condition, either acute or chronic, and if long continued it leads to further changes in the liver. Roberts feels sure that not a few cases of supposed "disordered liver," "biliousness" and the like are in reality cases of gallstones. An important aspect of morbid conditions of the hepatic apparatus is the frequency with which two or more exist in combination in the same case. There is a common belief that a strong hereditary or "family" tendency to "liver disorders," or actual hepatic disease may exist, but there seems to be no real foundation for this opinion. The more or less avoidable causes of hepatic affection include those associated with climate and meteorological conditions; errors in diet, especially habitually eating too much, indulgence in excess of meat or fat, or in rich dishes; abuse of hot condiments; intemperance as regards alcohol; want of exercise; and general luxurious and indolent habits. The hepatic system receives, as a rule, but scant attention in cases of the acute specific diseases with which we are familiar in this country, and yet several of these affections may lead directly or indirectly to morbid conditions of different kinds connected therewith, which are either in immediately serious, or lead to more or less permanent damage, the effects of which are revealed later on. It is very probable that some cases of cirrhotic liver in young subjects, which cannot otherwise be accounted for, have thus originated, and careful inquiry in this direction may perhaps clear up the etiology in such doubtful cases. There can be no doubt that disorders and diseases of the stomach or intestines often affect the hepatic system secondarily, and may thus lead to more or less serious damage. Injury of the liver may result from persistent neglect of a healthy action of the bowels. Indeed, the hepatic functions may be materially helped by getting rid of accumulated feces and by taking pains to prevent constipation. Moreover, neglect of the bowels is undoubtedly a frequent and potent factor in the production of gallstones. Pronounced jaundice, ascites, or both, have been regarded as due to primary diseases of the hepatic structures, and treated from that point of view, when really resulting from some neighboring morbid condition, which has pressed upon or implicated the bile duct, portal vein or both. These remarks apply more particularly, but by no means exclusively, to pancreatic disease, especially of a malignant nature, but it may be mere chronic pancreatitis; and to peritoneal changes, leading to adhesion and thickening. Secondary pathological effects associated with the hepatic structures often follow, and are the more or less direct consequences of venous intrathoracic morbid conditions, especially certain affections of the heart or pericardium. In cases of supposed enlarged liver, the organ is, in many

instances, not enlarged at all, but "displaced" downwards by a thoracic condition. (Rumon). A discussion of the symptomatology of diseases of the hepatic system follows. Roberts calls attention to the fact that in some affections of the liver, even of a pronounced character, anything like definite symptoms are entirely absent. Any interference with the hepatic or common duct or with the portal vein, is most likely to attract attention at once. The first step that suggests itself in any case in which there is reason to suspect the existence of any morbid condition of the hepatic system is to make a personal examination by the ordinary physical examination by the ordinary methods. The chief abnormal conditions to be looked for in the urine are, the presence of bile, an excessive discharge of uric acid and urates, deficiency or excess of urea, glucose, albumin, leucin and tyrosin. [J. M. S.]

3.—The cough which occurs in the course of pulmonary tuberculosis may be caused by reflex irritation, by the necessity of removing accumulated fluid, and by conditions other than, though often dependent upon, the original disease. In the latter class belong cases of cough due to chronic catarrh of the pharynx, tracheitis, laryngitis, intercurrent attacks of bronchitis and the like. The cough is not likely in all cases to be remedied or relieved by means of expectorant mixtures, and its routine treatment by means of anodynes is not based on very sound reasoning. Latham holds that it is not absolutely necessary that a patient suffering from tuberculosis should have a cough. In the treatment of the condition the first requisite is to place the patient, as far as possible, under ideal conditions for the treatment of the original disease. These conditions are well known. Some patients, however, cannot live under these ideal surroundings, even for short periods of time. In such cases our main efforts must be directed toward the improvement of their general condition and toward increasing the resistance of the tissue cells to the tuberculous and pyogenic microorganisms. The author recommends for this purpose the use of cod-liver oil, small doses of creasote, gualacol, and creasolal. All measures at our command should be exhausted before using such drugs as opium, chloral, henbane or the bromides; great care should be used, also, in prescribing sweet syrups. The cough that occurs the first thing in the morning and is accompanied by expectoration is useful, and must never be checked by a sedative. On the contrary, it may be aided by the use of some warm drink before the patient rises. When the cough is dry and hacking the condition of the upper air passages should be investigated with great care. If it is due to disease of the larynx, nothing does so well as fresh air at an even temperature. If we are forced to give drugs we may use a 2% solution of cocaine as a laryngeal spray. Inhalations of oil of peppermint or menthol, or local treatment with a 30% solution of lactic acid. If the dry hacking cough is due to pleuritic irritation, and if the pleurisy is at the apex of the lungs, nothing is better than counterirritation with iodine or a blister; if the irritation is basal nothing succeeds so well as effective strapping of the lower part of the chest. In other cases, incessant hacking cough is often kept up by the irritability of the nervomuscular mechanism of respiration. In such cases, food, stimulants and nervous sedatives are the best remedies. In some cases, the cough may be due to a reflex irritation from the stomach. Then gastric sedatives or counter irritation to the epigastrium or a gargle of fresh effervescent soda water will be found to give relief. When the cough is due to some associated catarrh of the larger bronchial tubes, an alkaline mixture containing ammonium carbonate or potassium iodide may be used. In the later stages of tuberculosis, when cavities are present, the accumulated secretion may be gotten rid of by the use of creasote in the form of vapor, small doses of creasote or its derivatives or turpentine. In the final stages of the disease opium often has to be used. [J. M. S.]

4.—Carcinoma of the liver exists without nodulation, without pain, without tenderness and without enlargement of the organ; just as it may pursue its entire course unaccompanied by either jaundice or ascites. The diagnosis must rest upon a review of all the facts of the case, and may be justified even though one or more of the characteristic features of the disease be entirely absent. Furthermore, carcinoma of the liver as a clinical condition, even in undoubted cases, is attended by physical facts and general symptoms common to it and other diseased states of the liver. Enlargement of the spleen in cases of car-

cinoma of the liver is quite an unusual occurrence. There are, however, occasional exceptions to the rule, and carcinomatous tumors may be found in the latter organ as well as in the liver. Enlargement of the left lobe of the liver, however, and the development of a carcinomatous mass contiguous to, though not involving the spleen, may be mistaken for enlargement of the spleen, and thus assist in producing an erroneous conclusion respecting the condition of the latter organ. [J. M. S.]

DEUTSCHE ZEITSCHRIFT FÜR NERVENHEILKUNDE.

Heft 2—4.

4. The Pathological Changes Produced in the Central Nervous System of Animals By Lumbar Puncture. OSSIPOW.
5. The Distribution of the Temperature Sense in Syringomyelia. ROSENFELD.
6. The Origin of the Cervical Sympathetic in the Spinal Cord. LAPINSKI and CASSIRER.
7. Ataxia. LENAZ.
8. Reports upon Friedreich's Disease. BIRO.
9. Loss of the Achilles Tendon Reflex in Tabes and Sciatica. BIRO.
10. The Physiology and Pathology of the Tendon Reflexes in the Upper Extremities. MOHR.
11. Changes in the Spinal Cord as the Result of Compression by a Tumor at the Level of the Highest Segment. GIESE.
12. Contribution to the Knowledge of Acute Mercurial Polyneuritis. SPITZER.
13. Clinical Contribution to the Diagnosis of Acute Focal Disease of the Medulla and Pons. WALLENBERG.
14. Spinal Muscular Atrophy as a Result of Lead Poisoning Following an Attack of Infantile Poliomyelitis. VON SARIO.
15. A Case of Extensive Disease of the Blood Vessels of the Meninges of the Brain and Spinal Cord in the Early Stages of Syphilis. FINKELNBURG.
16. A Case of Paralysis Agitans Combined with Various Symptoms of Myxedema and Studies and Thoughts on the Pathogenesis of Paralysis Agitans.

LUNDBORG.

4.—Ossipow calls attention to some of the accidents which have occurred as the result of spinal puncture, and to the fact that in many cases the pressure of the fluid was not found to be increased. He has therefore undertaken, at Oppenheim's suggestion, to test this question upon dogs. He performed 2 groups of experiments. In the first the pressure of the cerebro-spinal fluid was measured and then allowed to flow off by gravity, and in the second, actual aspiration was employed. The operation was performed on some of the dogs a number of times, and they were then killed and the central nervous system examined. The results showed that the removal of the cerebro-spinal fluid produced a persistent hyperemia of the blood vessels of the meninges, and of the substance of the brain and cord. When the punctures were repeated numerous punctiform hemorrhages appeared particularly in the upper lumbar and the lower cervical regions, and in some cases, even in the substance of the brain. When aspiration was employed, hemorrhage not infrequently occurred into the central canal. In the cases most severely treated by repeated punctures there were alterations in the nerve cells. He therefore concludes that lumbar puncture is not a trifling operation; that whenever the cerebro-spinal fluid is drained, there is danger of cerebral hemorrhage, or at least of hemorrhage into the cord. It is therefore contra-indicated in sclerosis of the blood vessels; in anemia of the cerebral blood vessels, and particularly in all acute chronic diseases of the central nervous system in which a distinct increase in the pressure of the cerebro-spinal fluid cannot be determined. Of course, if only a small quantity of the fluid is removed, the danger is not nearly so great. He does

not regard the value of lumbar puncture in cases of cerebral apoplexy very highly. Blood may be mixed with the cerebro-spinal fluid as the result of many other causes. He therefore believes that lumbar puncture should never be performed unless the indications are very clear, and that lumbar puncture with aspiration should be entirely abandoned. [J. S.]

5.—Rosenfeld has studied very carefully the temperature changes in a case of syringomyelia. The diagnosis appears to be very clear. In view of the researches of Webber, who found that when a large portion of the skin was subject to the action of heat or cold for a considerable length of time the temperature sense still persisted, he attempted to obtain the same results in this patient. The apparatus that he employed was quite ingenious. Small lead tubes were wound in the form of a spiral in a single plane, and then water of a certain temperature passed through them at considerable speed. It was found that the temperature of the water could be readily modified by adding hot or cold liquid, and that the temperature of the disks could be kept the same for an indefinite length of time. These disks were prepared in various sizes, and it was found that the largest size could usually be distinguished accurately in any parts in which the temperature anesthesia was apparently complete. He concludes that these results prove that there is actually a summation of stimuli in the sense of Webber, that is to say, very faint stimuli coming from numerous points are capable of causing the sensation of heat and cold. But as the patient was able to distinguish very accurately between a hand that had been artificially cooled, and one that had been artificially warmed, although the temperature difference was less than the minimum that could be distinguished in the disks, Rosenfeld believes that perhaps another explanation is possible. However, he admits that the hand is capable of applying itself more closely and thoroughly to the part tested. [J. S.]

6.—Lapinski and Cassirer have extirpated the superior cervical ganglion in 5 rabbits, and the inferior cervical ganglion in two. Five of the animals were killed in a period of from 14 to 16 days after the operation, and two 3 weeks later. The spinal cords were then removed and stained in serial sections, partly by the Marchi method, and partly by that of Nissl. The results were entirely negative, and they therefore conclude that the origin of the sympathetic nerve in the spinal cord is as yet an unsolved problem. [J. S.]

7.—Lenaz discusses ataxia, and calls attention particularly to certain facts in the ataxic gait. First, the flexion at the knee is not controlled in such a manner as to produce the greatest economy of energy. When the leg has reached its maximum height in the step, the flexion of the knee continues, and therefore at the end of the step the foot is abnormally high and falls strongly upon the ground. He therefore looks upon ataxia as a loss of the synergetic influence of the various joints. Against the theory that ataxia is produced by interference with the centripetal tracts is the fact that in many cases it may exist without any disturbance of this nature. Lenaz believes that even although the patient should feel perfectly well what degree of innervation he should impart to his muscles, it would be impossible to carry out coordinated motions unless each detail of the movement were perfect. He therefore concludes that there are probably 2 systems concerned in movement. First, that of the cerebrum which consists of the sensory fibres to the brain, and the motor fibres from the central region. Second, the cerebellar system which supplies the involuntary and unconscious but nevertheless, indispensable synergies. Disease of the cerebral system causes in general paralysis, of the cerebellar system ataxia. [J. S.]

8.—Biro reports 5 cases of Friedreich's ataxia. The first, a boy of 2 years, had the characteristic symptoms with the exception of normal knee-jerks, and Achilles ten-

don reflexes. A brother of 7 years had similar symptoms. There were marked ataxia, slight nystagmus, and the reflexes were diminished or lost. A third brother 15 years of age, was said to have suffered from the same disease. The 3d case, a girl of 18, with slightly impaired intelligence, noticed the first symptoms, tremors of the hands, some time before her 12th year. Subsequently she had extreme ataxia, Romberg's symptom, some intention tremor, and loss of reflexes. The 4th case, a woman of 40, developed the disease after pregnancy. There was marked ataxia, slight nystagmus, and loss of the reflexes. She had suffered from severe pains in the limbs. In the 5th case, a boy of 16, there was ataxia, loss of reflexes, peculiar deformity of the foot, Romberg's phenomenon, imperfect articulation, slight disturbance of sensation, and slight nystagmus. In the early stages of the disease he had had convulsions. The author quotes freely from the literature, and has prepared an elaborate table for the differential diagnosis of Friedreich's disease and the following conditions. The diseases of Moebius, of Nonne-Marie, tabes dorsalis, chorea, multiple sclerosis, hereditary spinal paraplegia, hereditary atactic paraplegia, hereditary syphilis, cerebellar disease, progressive muscular atrophy, progressive spinal muscular atrophy, and progressive neuro-muscular atrophy. The table however, is incomplete. [J. S.]

9.—Biro reports a number of cases showing the various changes that occur in the **Achilles tendon reflex in tabes dorsalis and sciatica**. He concludes that the existence of healthy persons without tendon reflexes is very doubtful, and it is still more so whether a tendon reflex can be absent in a healthy person from birth. In many cases of sciatica Achilles tendon reflex was impaired on the diseased side, but never on the healthy side. In some cases, in the very commencement of the disease there was slight impairment of the reflex on the diseased side, and therefore the dependence of the Achilles tendon reflex upon the sciatic nerve appears to be justified. In tabes dorsalis, in the early stages of the disease one Achilles tendon reflex may be affected, but later in the course both always disappear. In one case of general paresis he observed that on one side the Achilles tendon reflex was diminished. [J. S.]

10.—Mohr has studied the **tendon reflexes of the upper extremities upon 90 soldiers**, with the following results. The triceps reflex was present in 60 cases; the supinator in 78; the triceps was absent on both sides in 15 cases; absent on one side and diminished on the other in 2 cases, and absent on one side in 13. The supinator reflex was absent on both sides in 9 cases, and on one side in 3 cases. He has studied 22 cases of tabes dorsalis and found that the knee-jerk was absent in 16. In 7 of these the triceps was lost on both sides, and in one case, on one side. In the others the triceps was either normal or increased. The supinator was present slightly often. He also reports the case of a man 19 years of age, in whom the triceps was lost, the knee jerks preserved, and at the autopsy a cervical tabes was discovered. He reaches the conclusion that the tendon reflexes of the upper extremities are inconsistent, their absence is of no value in diagnosis, that they occur in about the normal frequency of occurrence in tabes dorsalis, and that only when they are normal or exaggerated can they be regarded as of diagnostic significance. In which case a distinction between functional and organic disease can be made by the detection or absence of increased muscle tone. [J. S.]

11. Giese reports a case of **tumor pressing upon the spinal cord**. It involved the lower portion of the medulla, and the third upper cervical segment on the right side, allowing a small slit through which the medulla and cord could pass. The greatest deformity was in the cervical portion of the cord below the third segment the cord seemed to be normal in consistency and appearance. A microscopic examination however, showed, as was to be expected, the degeneration in the pyramidal column, and areas of de-

generation in the posterior column corresponding to the comma degeneration of Schultze. This however, continued for only 3 segments and then disappeared, and could not be followed further by the Marchi method, apparently confirming the belief of Gombault and Philippe, that the fibres concerned in this degeneration have a very short course. The fact that this degeneration was unilateral indicates, according to Giese, that the fibres probably represent descending fibres of the posterior roots. [J. S.]

12.—Spitzer reports the case of a man 28 years of age, who had had several injuries, and at one time an eruption on the skin. When admitted to the hospital there was a macular papulo syphilitic on the trunk and extremities, besides local lesions. He was extremely anemic, and therefore was at first given syrup of the iodide of iron, and later mercurial inunctions were instituted. The patient rapidly developed diarrhea and stomatitis. Treatment was then discontinued, then recommenced, and the patient began to complain of pains in the limbs. Examination showed diminished motor power in the muscles; he had extreme ataxia; the tendon reflexes were increased; Romberg's symptom was present, but the pupils, and the bladder and rectum reacted normally. Cessation of the treatment caused rapid improvement. Acute mercurial polyneuritis is a very rare condition. Spitzer collects and analyzes 8 cases from the literature. [J. S.]

13.—Wallenberg reports the following interesting cases. A woman suffering from extreme arterial sclerosis had an apoplectic attack without loss of consciousness. Subsequently she presented the following symptoms. Vertigo, feeling of cold in the right temporal region, and difficulty in swallowing. Examinations showed disturbance of sensation, particularly of pain and temperature in the distribution of the 2 branches of the right trigeminal, dissociation of sensation on the back of the left hand, and the lower portion of the left thorax, involving the left leg. The right vocal cord was paralyzed and there were atactic movements of the extremities on the right side. He diagnoses thrombosis of the posterior inferior right cerebellar artery. The second patient, a man of 61, after severe exertion had weakness and tingling in the left foot. In the course of a few hours there was vertigo, difficulty in swallowing and speaking, and disturbance of sensation, and finally weakness in the right arm. Eight years later there was diminution of touch and temperature sense in the three branches of the trigeminal, total paralysis of swallowing, paralysis of the right vocal cord, atrophic paralysis of the right arm, trophic disturbances, atrophic paralysis, contractures of the left leg, and diminution of the reflexes on the left side. The whole left side of the body showed dissociation of sensation. A diagnosis was made of thrombosis of the right vertebral artery, commencing at its origin, from the right inferior posterior cerebellar artery. The 3d case, a man of 48, who had had syphilis, had an apoplectic attack without loss of consciousness but with vertigo and vomiting. The following symptoms persisted. Vertigo, a tendency to fall to the left, ataxia of the left leg, loss of the patellar reflexes, nystagmus upon looking toward the left, difficulty in hearing in the left ear. The diagnosis is difficult but Wallenberg believes that an acute lesion of the left restiform body is most likely. The 4th case, a man of 70, had an apoplectiform attack and mentioned curious sensations in the nose, and tinnitus in the right ear. Later there was paralysis of the right side of the face, deafness in the left ear, and trophic disturbances on the right side of the face. There was loss of pain sense in the distribution of both trigeminal nerves; paresis of the muscles of mastication on the right side; complete paralysis of the right abductors, and diminution of pain sense in the left neck, breast and shoulder. There was slight increase in the tendon reflexes in the left leg. The most likely diagnosis is hemorrhage into the right half of the pons between the sensory nuclei of the trigeminal. [J. S.]

14.—Von Sarbo reports the case of a man whose occupa-

tion was casting lead, and who from his 20th year gradually developed atrophy in the muscles of the body. Electric examination showed diminution of galvanic and faradic irritability, and some of the muscles refused to react at all. The patient had been working in lead from his 13th year. He had had several attacks of lead colic. Sarbo regards the case as one of spinal muscular atrophy, particularly in view of the fact that the patient was able to continue working until disabled by tuberculosis; whereas in acute poliomyelitis due to lead, inability to work comes suddenly. He believes that the lead disturbs the nutrition of the whole body, and affects particularly those parts which, as a result of intoxication, or for other reasons, constitute areas of lessened resistance. [J. S.]

15.—Finkelnburg reports the case of a man many of whose ancestors and immediate relations had died of tuberculosis. He acquired at the age of 42, a hard chancre, was extremely depressed about it, and 3 months later developed left-sided hemiplegia, after some prodromal symptoms that indicated involvement of the brain. Two months later he had a severe headache that yielded to specific treatment. A year after the infection and six months after the first symptoms he developed right-sided hemiplegia, followed by symptoms of paralysis of the vagus and death. At the autopsy in addition to a catarrhal pneumonia of both lower lobes there were found extensive changes in the arteries and veins of the central nervous system and its meninges, characterized by thickening of the interna, and round cell infiltration of the pia in the base of the brain and in the region of the right frontal lobe, and in the spinal cord. There were also inflammatory changes about the nerves at the base of the brain and about the roots of the cord, and finally an area of softening in the lenticular nucleus and in the pons. The difficulty in this case consisted in the discrimination between syphilitic and tuberculous lesions of the blood vessels. Arterial sclerosis is excluded on account of the age of the patient. However, the clinical course of the disease is strongly in favor of syphilis, and as all the symptoms could be explained by the lesions found; Finkelnburg concludes that the process probably was syphilitic in nature. [J. S.]

16.—Lundborg, as the result of a study of 2 cases of myoclonus, became convinced that they depended in some way upon alterations of the function of the thyroid gland. It also occurred to him that as the rigidity of the muscles is such a prominent symptom in paralysis agitans, it must also be due to condition of this kind, and that their treatment with thyroid extract would possibly be indicated. He reports the case of a woman, 54 years of age, always weakly, and in middle life very stout, who had attacks of biliary calculi with jaundice. Symptoms of paralysis agitans commenced at the age of 46, the first symptoms being a tremor of the left ring finger and of the toes of the left foot. Then pain appeared in the left arm and leg, the tremor became more severe, and involved the muscles of the breast and abdomen. The movements became stiff, and finally weakness was so severe that the patient required support when moving. At the same time certain other symptoms occurred. The patient became querulous and melancholy; the hair became thin; the eyes somewhat smaller; the features coarser and larger, and there was transitory edema in various parts of the body. The appetite was good and the patient from time to time had boulemia. Later the lower jaw became more prominent, and the teeth were separated. From time to time she had chilly feelings, and tremors of the whole body, and finally enormous thickening of the skin of the legs occurred. Intelligence gradually decreased and there was considerable loss of powder. Lundborg considers the case as unquestionably one of paralysis agitans and that the other symptoms resembled those of myxedema. He also mentions a case of exophthalmic goitre in which symptoms of myxedema were present. Before the paper was published the patient died, and at the autopsy a moderate chronic pachymen-

gitis around the cerebrum and a small tumor in its substance were found. The thyroid glands were small, the hypophysis was normal. Microscopically the thyroid gland showed symptoms of atrophy. Lundborg concludes that it must have been insufficient. [J. S.]

ARCHIV FUER KLINISCHE CHIRURGIE.

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31. Retrograde Sounding in Cicatricial Stricture of the Esophagus. H. ALAPY.
32. The Treatment of Complicated Fractures. P. FRANKE.
33. Carcinoma Occurring in a Dermoid Cyst. H. WOLFF.
34. Mechanical Appliances in Gastro-entero-anastomosis. G. KELLING.
35. Ileo-cecal Resection in Tuberculosis of the Intestines. K. HUGEL.
36. Congenital Bone Defects. U. GROSSE.
37. Upon Grafting the Facial Nerve upon the Accessorius. P. MANASSE.

31.—In those cases of narrow stricture, situated low down in the esophagus, in which gastrostomy must be performed, much depends upon whether even a small instrument will then pass through the stricture. If this first effort meets with success, all will probably go well. Alapy reports the case of a boy of 7, with two strictures of the esophagus following the ingestion of lye. The upper stricture could be passed, but the lower, just above the cardia, would not let even a filiform bougie by. Gastrostomy was performed. A week later, an elastic bougie was introduced through the stomach up to the site of the stricture, and a silk catheter was passed over it. Then the bougie was withdrawn, and a filiform inserted, which easily passed through the stricture and out to the mouth. After that, dilatation was accomplished quickly, and the child recovered. Alapy devised this method to overcome two difficulties: finding the cardia, and passing the stricture. As ordinary filiform bougies are not long enough, he advises the use of the Phillips bougies. [M. O.]

32.—Franke divides his researches in the treatment of complicated fractures into two parts, those of the extremities, and those of the skull. Modern aseptic treatment has made these wounds much less dangerous than they formerly were. In every case he tried to keep the wound aseptic, to put the fragments in good position, to keep up absolute rest, followed, after healing, by regulated movements. The region of the wound was disinfected, and if the wound was small, and contained a foreign body, it was removed, the wound dried out with sterile gauze, and a sterile dressing applied. In large wounds, counterincisions, drainage, removal of splinters of bone, etc., followed, but washing out with antiseptics was never done. Large pieces of bone were saved, sharp edges being sawed off first, to prevent pressure on the blood vessels, and gangrene. When dislocation seemed imminent, bones were sutured together with silver wire. Attempts were made to cover the bone with soft parts. The injection of a little iodoform-ether, and drying with sterile gauze, completed the treatment. With this many limbs escaped amputation. Even when gangrene was feared, conservative treatment was carried out. Yet some cases had to be amputated. Immobilization was secured by plaster bandages, extension, or splints. Roentgen photographs were taken regularly. The fractures of the skull were treated in much the same way. Wounds were generally enlarged, to see the amount of damage done. Even a greater attempt was made here, to make the surface smooth. Many blood vessels of the dura and pia were ligated. Where parts of the brain were badly injured, they were removed, as were foreign bodies, splinters etc. If possible, clefts in the dura were sutured. Great care was taken to prevent bone defects. The bone was replaced, after being washed in a boric acid solution, and the skin closed over it. Osteoplastic resection was necessary in some cases. The histories of 73 complicated fractures of the extremities, and of 24 complicated fractures of the skull are given in detail. [M. O.]

33.—Wolff reports the rare case of a carcinoma occurring in the wall of a closed dermoid cyst. He could find no similar case in literature. A Russian, aged 21, had always had a small tumor over the inner canthus of his left eye. This had increased in size during the past two years, but never caused any symptoms. It was elastic, but did not

decrease on pressure. A typical dermoid cyst was removed with difficulty, on account of its attachment to the pericæcum. Some of the surrounding connective tissue was removed with it. Microscopical examination showed carcinomatous degeneration of the cyst wall. He reports a similar case following the removal of a dermoid cyst of the sacrum. In both cases carcinomatous changes occurred in dermoid cysts. In one, closed and intact. In the other, upon the remaining wall left after excision of the cyst. [M. O.]

34. Kelling speaks of the prejudices against the use of the Murphy button in gastro-entero-anastomosis. Yet he considers that a good anastomosis button will resemble the Murphy button, for it must remain unchanged until the necrotic intestinal wall has been thrown off, and then be wholly digested in the stomach or intestines. Kelling has constructed a button from ivory that has been deprived of its calcium. It is in one piece, a cylinder with funnel-shaped ends, covered with rubber as a protection against the digestive juices. This covering is absent in the deep outside groove where the stitches will be placed. It is fixed in place by two sutures. Its application is fully described, with attention to every detail. A number of experiments on animals follow to show its usefulness. For operations on the colon, Kelling has devised a wooden button, which he has used in dogs. Kelling has also employed absorbable plates of bone or ivory from which the calcium has been removed. [M. O.]

35. Hugel reports three cases of colon tuberculosis in which operation was necessary. In the first the mass was in the iliocecal region; in the second, in the ileocecal region ascending and transverse colon; and in the third in the right colic flexure. Resection of the affected part of the intestine, with anastomosis, was performed. Two of the patients recovered, while the other died. Microscopic examination confirmed the diagnosis of all three cases. Hugel believes that the whole part affected should be removed. Should phthisis also exist, he thinks that the intestine should be stripped for its entire length, and the exposed ends of the intestine opened. With an iodoform gauze compress the stripped intestine can be cut off from the peritoneum, and resection can be performed later, when the strength of the patient permits, without a second laparotomy. But he believes that by ligating off the mesenteric vessels leading to the exposed section of the intestine, certain involution of the tubercular process will follow, and perhaps save later resection. [M. O.]

36. Grosse reports the case of a girl of 5, whose right leg, especially below the knee, was markedly smaller than the left, even at birth. Nor did the right leg grow below the knee. Various different supports had been used without effect. Roentgen photographs showed the absence of the tibia, the fibula being alone. Professor von Bramann operated, bringing the fibula into the knee joint, taking great care that the epiphyseal cartilage was not injured. Foot and leg were then put in plaster. With a support down the leg, about the waist and a block under the foot, she soon could run. In six weeks femur and fibula had grown together; and her leg has developed well in the two and a half years since. The former shortening of 5¾ cm. has been decreased 2 cm. She can now support herself without any splint, walking with a slight limp. Grosse reports another case of von Bramann's, with similar results, no splint now being needed. [M. O.]

37. Manasse reviews the experimental operations upon nerves before telling of his work in grafting one nerve upon the other. For a successful result, in investigations of this kind, he believes that function must be restored throughout the region supplied by the paralyzed nerve, the peripheral end of which has been grafted upon a neighboring nerve; that electricity must return; that the two nerves must grow together anatomically, which will be seen, histologically, by the continuity of the nerve-fibres. On account of its simplicity, Manasse decided to graft the facial nerve upon the accessorius, as treatment for traumatic paralysis of the facial nerve. He performed experiments upon 11 dogs, 5 of which were carried to a conclusion. Their histories follow in detail. A description of the different methods of operating is given. Manasse's results were not at all satisfactory, nor does he consider the operation an easy one. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

June 18, 1901. (No. 25).

1. Pathological Changes of the Bile. L. BRAUER.
2. The Tendons of Reindeer for Sutures and Ligatures. H. GREIFE.
3. Extra-Genital Syphilitic Infection of the Lips. LIEVEN.
4. Typhus Infection in the Dead Body. W. FUERNROHR.
5. Gonorrheal Exanthemata in the New Born. J. PAULSEN.
6. A New Sterilizable Laryngoscope. G. TRAUTTMAN.
7. The Pathological Conditions of Drunkenness. K. HEILBRONNER.
8. The Hygienic Conditions of the Larger Cities of Europe in Old and Recent Times. O. SCHWARTZ.

1.—Brauer, after discussing the unsatisfactory results of attempts to find definite pathological changes in the quantity and quality of the bile, mentions two alterations in its constitution that he thinks may be regarded as certain indications of pathological processes. The first is the presence of sugar. This is extremely rare, and even in cases of alimentary diabetes with 4% of sugar in the urine, glycocholia did not occur. But in experimental diabetes produced in dogs by the removal of the pancreas sugar was found in the bile almost invariably. It is not certain to what extent this glycocholia is due to the solution of glycogen in the liver. In cases of profound alcoholic intoxication in dogs, alcohol could always be obtained from the bile by distillation, a small amount of sugar was obtained in one case, and invariably there was a considerable amount of albumen. Microscopically Brauer has been able to find in the bile branching epithelial casts, especially in cases of alcoholic intoxication. He suggests that the latter may possibly be simply an inspissated secretion. [J. S.]

2.—Greife calls attention to the great superiority of the fibres obtained from the ligamentum nuchae of the reindeer over various other forms of materials employed for ligatures. In the first place the material when collected is practically sterile, there are no germs in it normally, as is the case with cat-gut. It may be readily sterilized, either by juniper oil or bichloride without losing any of its desirable qualities, and the degree of its flexibility may be preserved by placing it in water about 30°. In a moist condition it maintains its elasticity if it is not unduly stretched. It seems to act as a drain quite as efficiently as the other forms of ligature, and is much more slowly absorbed. Thus, a ligature removed 31 days after an operation seemed to be perfectly normal, but in another case 124 days after an operation no trace of the ligature could be found. In dogs a slight trace could be found in the kidneys after 122 days. No bad effects can be observed from its use, and Greife has suggested an ingenious carrier consisting of 2 test tubes, one slipped within the other, thus preventing the entrance of germs, and yet enabling the ligatures to be obtained with very little difficulty.

3.—Lieven calls attention to the great danger of extra-genital infection with syphilis upon the lips in ordinary family life, especially from the servants, and he relates cases in which such infection occurred, either as a result of the kissing of children by their nurses, or of the use of similar utensils for drinking or tasting by the cook and housewife. He believes that chancres of the lips do not resemble the ordinary genital forms sufficiently closely to enable us to make a diagnosis at a glance. He believes that there are 3 characteristic forms of lip chancre. One, in which the sclerosis is about the consistency of parchment; second, a large form covered with crusts; and the third, an ulcerated sore with suppuration of the edges. The usual associated symptoms are, of course, the enlargement of the submental glands. The most important conditions from which the differential diagnosis should be made are sores due to caustics, to cigarettes, and herpes labialis. The prognosis of this condition is good, so far as the cosmetic results are concerned. The general infection is, of course, equally severe, no matter where the original sore is located. A differential diagnostic point is the situation of the buboes. If behind the sternocleidomastoid the initial infection must be in the pharynx. [J. S.]

4.—Fuernrohr performed an autopsy upon a patient dying

of typhoid fever, and about three weeks later developed symptoms of the disease. As all other forms of infection could be eliminated, and as no other cases of the disease existed in the neighborhood, he is convinced that he was infected from the body of the patient, and he supposes that this infection was due to the small particles that were blown into the air during the washing of the intestines. [J. S.]

5.—Paulsen has had the opportunity of studying the manifestations of gonorrhea in the new-born. Of course the commonest primary infection is that of the conjunctiva; he calls particular attention to the various forms of skin lesions that may be manifested as a result of primary inoculation or of metastasis. In one instance he observed numerous papules and blisters containing gonococci, upon the skin. In another, a profuse exanthema consisting of papules and blisters, and in various other cases similar lesions. The commonest situation for this process is the head. There is no reason to suppose that prolongation of the birth increases the tendency to infection. The diagnosis is to be made exclusively by the discovery of the gonococci in the contents of the blisters, or in the pus of the conjunctiva. The general symptoms are usually very slight. Treatment consists in scrupulous cleanliness, and in opening the larger blisters. These lesions are very uncommon in adults. [J. S.]

6.—Trautmann has devised an ingenious laryngoscope consisting essentially of a small metal container, to which the handle is attached and a little cap that fits over this and retains the mirror in position. The metal parts can be boiled, and the mirror sterilized by careful polishing. [J. S.]

7.—Heilbronner concludes his article upon the pathological forms of drunkenness. Among the important predisposing causes are injuries to the head. In other cases no predisposing conditions can be detected. When more than one attack occurs in the same individual, the symptoms of the second usually resemble those of the first. Another frequent cause is sexual excess. The diagnosis is usually easy, a state of confusion, excessive motor unrest, and the other characteristic changes being present. For the differential diagnosis, from profound drunkenness may be utilized the fact that in the latter state the patients usually fall asleep at once, and in the pathological conditions it is very difficult to get them to sleep at all. The degree of amnesia that follows is very variable; usually it is complete, but not invariably so, and it is also noteworthy that amnesia may follow ordinary states of drunkenness or even epileptic attacks. Probably the most difficult differential diagnosis is from the various aberrant forms of epilepsy. The greatest importance attaches to this condition on account of the medico-legal element that many of them contain. [J. S.]

8.—Schwartz defends the hygienic conditions of Rome under the Popes, and contends that in spite of statistics, it is really little better under the civil government of Italy. He calls attention to the fact that in all countries the death rate varies very closely in accordance with the degree of concentration in the population. [J. S.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

May 30, 1901.

1. Observations and Investigations Concerning Chronic Pentosuria. M. BIAL and F. BLUMENTHAL.
2. My Experience with the Bacillus of Danysz. A. KRAUSZ.
3. Contribution to the Treatment of Knee-joint Contractions. HEUSNER.
4. Cerebral Hemorrhage with Verrucose Endocarditis. M. SIMMONDS.
5. The Condition of the Blood Pressure During the Treatment of Chronic Heart Disease. SCHOTT.

1.—The authors disagree with Naunyn in his statement that the pentoses of the urine are derived from the pentosans of the food. Blumenthal has found persistent pentosuria when the food contained no pentosans. The authors made the interesting report that they gave a patient with chronic pentosuria 100 gm. of glucose without producing glycosuria, 100 gm. of levulose without any change in the urine, 100 gm. of galactose, which latter caused galactosuria to the extent of 5 gm. only—i. e., the patient had no ten-

dency to diabetes, and not even the slightest tendency to alimentary glycosuria (or mellituria of any form). The injection of 0.5 gm. of phloridzin caused the excretion of 21 gm. of fermentable glucose polarizing to the right—i. e., the patient reacted quite normally. The blood also contained a normal amount of glucose. Hence the glucose production was normal in amount and the authors decide that the affection has no evident relationship to diabetes, and must be considered a disease *sui generis*. The food taken did not influence the pentosuria, therefore it did not depend to any applicable extent on the diet. It was thought that the pentose might be derived from the body or food nucleins. This was rendered extremely improbable, however, by the fact that 500 gm. of thymus, which is extremely rich in nucleins, caused only slight increase in the pentose excretion. Pentoses were found in the blood to the extent of 0.08% (reckoned as arabinose). Hence they are not found in the kidneys. The authors then thought that perhaps pentoses are normally found in the body and oxidized there, but that this patient and similar subjects have lost the power of oxidizing pentoses; hence they gave her 50 gm. L-arabinose and were astonished to find that only 6 gm. was excreted, this meaning that the assimilative powers for pentoses taken by the mouth were normal. Hence the affection is again very different from glycosuria and diabetes, for in either of these the assimilative powers for glucose are much reduced. [D. L. E.]

2.—Krausz disagrees with Köttgen (*Deutsch. Med. Woch.*, May 2nd, 1901) concerning the bacillus of Danysz. He finds that it does not cause any striking and characteristic lesions in rats, and though it is pathogenic to these animals, it is not strikingly so, and does not cause epidemics among these animals. There is no danger, in his opinion, of confusing it with the plague bacillus, and also no hope that it can be used as a means of ridding various infested regions of rats. His opinions are based upon laboratory experiments and upon the results of placing food infected with the bacillus in sewers. In the latter case rats were not afterward found dead in large numbers as it was thought they would have been were the bacillus capable of producing fatal epidemics in rats. [D. L. E.]

4.—Simmonds reports several very interesting cases. It is known that cerebral hemorrhages often follow the development of small aneurysms, and it is also known that infested emboli lodging in arteries may cause the development of aneurysms. In several of the cases reported the development of aneurysm with subsequent cerebral hemorrhage seemed to have occurred very definitely as the result of verrucose endocarditis, and Simmonds insists that we must think much more commonly than is customary of such a series of events rather than of embolism or ordinary hemorrhage following arteriosclerosis. In three cases occurring respectively in patients 32, 45 and 50 years of age, fatal cerebral hemorrhage was thought to be the final result of the lodgment of a septic embolus because fresh endocarditis in all cases engrafted on old disease was found, and excepting for the point of hemorrhage the arteries and the kidneys also were healthy. In two further cases similar conditions existed, excepting that actual aneurysms were found at the point of hemorrhage. These were both girls, aged respectively 32 and 27 years. The most important cases, however, were those of two children, one ten and the other eleven years old. Both died of cerebral hemorrhage. Both had otherwise normal arteries, but an aneurysm existed at the point of rupture, and recurrent mitral endocarditis. Gromé-Wegert staining showed in both cases staphylococci in both the endocardial vegetations and the tissues of the cerebral aneurysms which in their staining and morphological characteristics seemed identical. [D. L. E.]

5.—To be concluded.

ARCHIV FUER ANATOMIE UND PHYSIOLOGIE. 1901. (Vol. 163, Heft 1).

1. Compound Granular Cells and Contribution to the Knowledge of Granule. J. ARNOLD.
2. Five Cases of Osteoplastic Carcinoma. W. ERBSLOEH.
3. The Liquefaction of Connective Tissue Fibres with a Contribution to the Knowledge of Fibrinoid Degeneration. G. RICKER.
4. The Weight of Certain Human Organs. M. MUEHLMANN.
5. The Aleuronat Pleuritis of Rabbits, and Experimental

Contributions to the Knowledge of Leukocytes and Exudates. H. COENAN.

6. Uterus Cysticus. M. A. WOSKRESENSKY.
7. The Occurrence of Lycopodium Spores in the Interior of a Carcinoma of Skin. A. De Meser.
8. The Question of Experimental Granuloma.

W. KONSTANTINOWITSCH.

9. A Rare Case of Congenital Medial Fissure of the Upper Portion of the Face. R. LEHMANN-NITSCHKE.
10. The Etiology of Abscess of the Liver. G. KOBLER.
11. Pneumococci Endocarditis. FR. HENKE.
12. Brief Communications. (1) Hemosiderin and Melanin. M. SCHMIDT. (2) A New Method of Operation for Opening the Cranial Cavity for Pathological, Anatomical and Surgical Purposes. G. C. VAN WALSEM. (3) Anaplasia Again. HENKE. (4) A New Method for Examination of the Nasal Cavity and the Neighboring Region of the Orbit, of the Epipharynx, the Base of the Skull and the Cerebrum. L. LOEWE. (5) The Conflagration in the Pathological Institute of the Berlin University. R. VIRCHOW.

1.—Arnold has made a number of experiments of which the technique consists essentially in soaking thin sections of pith in various oily substances, such as milk, tallow, etc., and then placing them in the lymph sac in the backs of frogs. He concludes that the fatty particles can be absorbed by the cells in the form of small drops that lie between the structural elements of the protoplasm, and thinks that this process is akin to phagocytosis. In addition fat granules may occur in cells as the result of the modification of the plasmosomes. This is proved by their peculiar position, and their relations to the cell fibres, and particularly to the presence in the cells of granules that give the fat reaction in various degrees of intensity. He regards it as possible that the fat absorbed by the cells may in time be replaced by the modified plasmosomes. [J. S.]

2.—Erbstoh has studied five cases of carcinoma. Three of the prostate, one of the stomach and one of the biliary passages. In the primary foci of the disease there was very little tendency to degeneration. In some of the metastases bone had been found. Injection of the tumors gave rise to curious appearances, particularly in some places it seemed as if a tubular system had been injected, and that the tubes were lined with epithelium. The author suggests that perhaps the capillary system had become infiltrated by the epithelial growth. The bone was formed in the spaces between this tubular system, as a result of a capillary occlusion that gave rise to a venous congestion, and it is possible that this promoted the formation of bone. Apparently this new-formed bone underwent changes similar to those of osteomalacia. The metastases usually invaded the bone marrow and the lymph glands. Other organs remained unaffected. [J. S.]

3.—Icker reports a number of cases of hygroma, one of dermoid cyst, and two of fibroma of the uterus. All these exhibited the typical degenerative character. As a result of a careful study he reaches the conclusion that the fluid filling the cysts is formed by the gradual liquefaction of the connective tissue fibres. The blood vessels are not concerned in the formation of this fluid directly, but may produce it secondarily by themselves degenerating, and thus interfering with the nutrition of the fibrous tissue. He regards this liquefaction as identical with fibrinoid degeneration. [J. S.]

4.—Muhlmann has carefully weighed the majority of the organs in 27 men and 29 women, and gives the results in tabular form. The patients died of various diseases, and represented ages from birth to 90 years. He calls particular attention to the results obtained by weighing the intestines and lungs. He found that the absolute weight of the intestines is lowest at birth, then rises steadily until the age of 19 is reached, and then gradually diminishes until from 70 to 80 it reaches the minimum. The relative weight, however, does not vary very much, although it may be slightly greater in age than in childhood. Although as a rule the relative weight of the other organs decreases, the lungs apparently increase and decrease in weight with the rest of the body, and maintain an almost uniform proportion to the body weight, of 2 to 3%. The heart shows steady increase in weight during life. [J. S.]

5.—Coenan has injected the pleural cavities of rabbits with an emulsion of aleuronat, and studied the changes that occur at varying intervals up to 1 week. He observed the following types of cells: Pseudo-eosinophile contain-

ing numerous oxyphillic granules, the so-called true eosinophiles, lymphocytes, basophiles, desquamated and necrotic pleural epithelium cells with numerous small nuclear-like formations, in their substance. He concludes that the aleuronat emulsion produces a sterile purulent pleuritis, rapidly going on to complete recovery, reaching its acme at the end of the second day, at which time proliferation changes begin to appear. The giant cells appear on the 4th day. The epithelium of the pleura is reformed by proliferation of that remaining. The leukocytes are nearly all pseudo-eosinophiles; the protoplasm contained both oxyphillic and neutrophilic granules. The true eosinophiles are usually found in the neighborhood of the inflammatory process, and gradually increase as the pseudo-eosinophiles disappear. Both forms appear to be subject to the same chemotactic principle. In the red substances lymphocytes appear. [J. S.]

6.—Woskresensky reports a curious uterus, characterized by a peculiar cellular-like construction of the muscle wall, which, microscopically, was shown to consist of numerous small cavities lined with epithelium. The tissue between these cavities consisted of the ordinary fibrous connective tissue. The diagnosis rested between a cysto adenomyoma and cystic degeneration. It was finally decided that the latter was probably the case, because the entire substance of the uterus was involved in the process, a condition that rarely occurs in the true tumor formation, and he therefore makes a diagnosis of uterus cysticus degeneratus. [J. S.]

7.—DeMeser, while studying, microscopically, sections of an epithelioma of the right forearm, observed peculiar bodies in the interior of the tumor that were determined to be lycopodium spores. It was subsequently learned that the patient was in the habit of dressing the ulcerated surface with a powder containing these bodies. They were found either in the fibrous tissue, or enclosed in the giant cells, and in this case it was very evident that cariokinesis of the nucleus produced the multi-nuclear formation. DeMeser calls attention to the great diversity of opinion that exists between the German and French schools regarding the ability of granulating surfaces to absorb foreign bodies, and he believes that, as a matter of fact, great differences do exist, and are produced partly by the nature of the body, and partly by the dressing employed. These observations are particularly interesting because they prove that foreign bodies can penetrate deeply into tumor masses, and that various peculiar appearances in them that might be mistaken for parasites, could be due to this cause. [J. S.]

8.—Konstantinowitsch has made a series of experiments by injecting thick emulsions of lycopodium powder beneath the skin of rabbits. As a result, small tumors formed, which consisted of great masses of polygonal cells, with pale nuclei and numerous giant cells. In a few instances polynuclear cells were found in masses about the blood vessels. The spores of lycopodium are found in the giant cells and in the connective tissue. At the removal of the tumor several weeks after the injection, there was considerable formation of fibrous connective tissue. [J. S.]

9.—The following extraordinary case was observed in the year 1900, by Dr. Lehmann-Nitsche. The subject, a man of 18 years, who has been several times in the hands of the police, and who is at present serving a sentence in prison, was born in Italy and then taken to Argentina. The deformity existed at birth. His parents were peasants normally formed. He was the 3d of 12 children of whom 4 others are alive and healthy, and none of those that died were in any way deformed. The patient has a cleft that involves the frontal bone and the nose, giving rise to an abnormal breadth of the forehead, and a deep depression between the two portions of the nose, causing separation of the eyes. The space between this cleft has probably in the course of time, been filled by bone, which can be plainly felt beneath the skin. Binocular vision is impossible, but the eyes are apparently entirely normal with the exception of a slight impairment of vision on the right side. The nasal septum is on the left side, and the left nasal fossa is larger than the right. There is no separation between the two superior maxillary bones, but a distinct groove can be felt where they are united. The mouth is normal in formation. Two of the incisors are only rudimentary in the upper jaw. Otherwise the patient is normal. His intelligence is only moderate. An operation is not under consideration. [J. S.]

10.—Kobler, discussing the etiology of tropical abscess of the liver, calls attention to the great importance of

dysentery in its causation. In the hospital at Sarajew, he has observed 10 cases of liver abscess in 1397 autopsies. In 8 of these the cause was dysentery, and in 2 suppuration of the biliary vessels. In addition 2 other cases have come to his knowledge, in which the diagnosis of liver abscess was confirmed by operation. In both of these the cause was dysentery. [J. S.]

11.—Henke reports 3 cases of malignant endocarditis; 2 associated with meningitis. In all three the cause was the diplococcus of Fränkel. He concludes that therefore the diplococcus may be the cause of septicemia and pus formation. There are not, however, changes in the heart that are characteristic of the action of this organism. [J. S.]

12.—(1) Schmidt insists that in his experiments published in 1889, he proved that hemosiderin is formed from the blood, and that it gradually loses the micro-chemical reaction of iron. He also thinks that the pigment occurring in tumors is probably derived from hemoglobin. Virchow adds a brief note to this, and states that in 1817 he suggested that the brown pigment in cases of chronic passive congestion of the lungs was derived from hemoglobin. He now believes that it is in part at least, the result of infiltration of coal dust. He calls attention to the fact that many so-called modern discoveries are merely reiterations of things already carefully described in the literature.

(2) Van Walsen, in order to avoid injury to the dura and the brain itself in sawing through the skull, has devised an ingenious instrument which consists essentially of a saw with a guard placed alongside the blade, to prevent its penetrating too deeply into the bone. This guard can be adjusted with the thumb that holds the saw. This is employed first by making a shallow groove all around the skull, and then gradually deepening this, paying particular attention to those regions where the skull is normally thin. The calvarium is then separated with a few blows of the chisel and carefully removed. Occasionally a temporary hemi-craniotomy may be made with advantage. In this case an incision runs parallel to the sagittal suture, then from the frontal bone to the fronto-malar articulation, and from the occipital bone to the external ear. The flap may then be readily fractured by bending it outward. He considers the advantages of his saw are: The rapidity of its operation; its simplicity; the possibility of perfect re-coaptation, and the very slight loss of substance. (3) Beneke replies vigorously to Hansemann. He believes that anaplasia is a physiological process, and he does not find in Hansemann's writing anything that leads him to believe that the latter regards tumor cells as really anaplastic embryonal cells. (4) Löwe suggests that in order to see the cavities of the nose the upper jaw be separated from the maxillary bone, then the cavity of the nose separated from the hard part with the chisel thrown back, and the resulting cavity illuminated by means of the ordinary electric reflector. Further dissection with the chisel exposes the base of the brain. (5) Virchow reports the amount of damage done to his museum. It appears that the fire did not injure the pathological collection, nor the new lecture-room, but did interfere considerably with the laboratory work of the institution, and caused great loss in the anthropological and pre-historical collections. These collections were largely the personal property of Virchow. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

June 29, 1901. (XIV Jahrgang, No. 25).

1. Subcutaneous Injections of Vaseline. LUDWIG MOSZKOWICZ.
2. Objective Disturbances of Sensibility in the Trunk in Aneurysm of the Aorta. H. FRICK.
3. A Case of Infantile Encephalopathy. HUGO LUKACS.

1.—Moszkowicz, who is Gersuny's assistant, reviews the work performed by Gersuny's method of subcutaneous injections of vaselin, (unguentum paraffini), during the two years since the idea originated. The "vaselinum albißimum medicinale" is used, the melting point of which is from 36° to 40°C. After refuting the opposition of a few experimentors, Moszkowicz describes the effect of the injections. Connective tissue soon forms, the vaselin is encapsulated, and hardens. Where the tissue is tightly bound down, Schleich's infiltration anesthesia will prepare for the injection, and only a small quantity of the vaselin should then be injected at a time. When not subjected to pressure, this encapsulated vaselin will remain for years

unchanged, and is not absorbed at all. The case histories of 30 cases treated by this method follow. The injections were used in the scrotum to take the place of a testicle removed; in the urethral mucous membrane for incontinence of urine in a woman; in the posterior wall of the pharynx for improving the speech after an operation for cleft palate; in the mouth and rectum, to close fistulae; in the inguinal canal to prevent the recurrence of herniae; in the vaginal wall for prolapse of the vagina; and for curing deformities in the nose, cheeks, eyes, skin, and chest wall. It was also employed to prevent ankylosis in the knee joint, and to separate nerves which had been severed for neuralgia. The vaselin is sterilized by boiling it, and is then cooled in the syringe. It is injected as a fine thread. The needle need make but one puncture. [M. O.]

2.—Frick reports a case of aneurysm of the aorta in a waiter aged 47, who had had syphilis. Five months ago he noticed pain in his back, so severe that he could not lie down. There was pulsation of the head and larynx, rhythmical, in time with the pulses, which were equal. There was also marked pulsation over the first intercostal space on the left side. A small area of dulness existed to the right of the sternum, but no other signs of an aneurysm. There was pain along the intercostal nerves, on both sides, with marked disturbances of sensibility. Hyperesthesia appeared at first, now hypoesthesia remains. The intercostal neuritis, due to pressure, was the main symptom of the aneurysm for months. Subjective symptoms were entirely absent. A full review of the literature of sensory disturbances with neuritis follows. In this case appearances changed quickly. Schlesinger considers this characteristic of an aneurysm of the aorta. There were no suspicions of hysteria in this case. [M. O.]

3.—Hugo Lukács reports a case which he terms infantile encephalopathy. A man, aged 26, who had two imbeciles in his mother's family, had convulsions when teething. He walked at two, and talked at three years. He was always disobedient and angry. It took him eight years to learn to write and read. Until the age of 13, he had enuresis nocturna. Then followed attacks of vomiting with convulsions and amnesia. He has illusions, optic atrophy, right hemiplegia, and the right radial pulse shows half the pressure of the left. The hemiplegia, moral insanity, and epilepsy all three make up the condition of infantile encephalopathy, most probably due to the cause of the first convulsions when he was teething. This may have been an infectious disease, a traumatism, etc. [M. O.]

CENTRALBLATT FUER INNERE MEDIZIN.

June 1, 1901.

On Artificial Glycocoll Poverty of the Human Organism and the Dependence of the Amount of Glycocoll in the Organism upon the Secretion of Bile.

OTTO ZIMMERMANN.

It is well known that the glycocoll in the organism combines, so far as is necessary, with certain poisonous substances rendering these substances harmless and being itself excreted in combination with the poison. Chief among these poisonous substances is benzoic acid, which unites with glycocoll to form hippuric acid. Zimmermann thought that if it were possible to combine all the glycocoll with benzoic acid we could estimate the amount of glycocoll being formed by determining the amount of hippuric acid in the urine. It is impossible under normal circumstances to give so much benzoic acid as would be necessary for this purpose without causing poisoning, but Zimmermann took advantage of a case of biliary fistula in which practically all or perhaps all of the bile was excreted through the fistula, and administered 5 gr. daily of sidonal which is a quinate of piperazin, whose quinic acid, either entirely or to a greater part becomes changed in the economy to benzoic acid. He found that on the days when the bile was flowing through the fistula, no hippuric acid was found in the urine, but when the fistula was closed and the bile again passed normally into the intestine, hippuric acid appeared in the urine in considerable amounts. During the first period free benzoic acid was found; during the latter period it was not. He decides from this that the liver is the only organ that produces glycocoll and that in this case none was produced. He believes that glycocoll is produced from the bile acids after their reabsorption from the intestines. Hence he also considers that in the case reported no bile

acids were absorbed from the intestines and none reached there since the feces contained none. Therefore he believes that he demonstrated that this was a case of absolutely complete acholia; and he also considers that complete acholia may be satisfactorily demonstrated in this way for either clinical or experimental purposes. [D.L.E.]

LA PRESSE MEDICALE.

June 15, 1901. (No. 48).

1. Is Leprosy Contagious? DOMINIQUE SAUTON.
2. Injuries to the Sinuses of the Dura Mater
GEORGE LUYSS.
3. Puncture of the Sacral Canal by the Epidural Method.
FERNAND CATHELIN.

1.—Sauton, who has done a good deal of work upon leprosy, reviews the subject, concluding that leprosy is contagious, though this is rather rarely noted, because hygiene, cleanliness, asepsis and antisepsis prevent contagion. In spite of this, Sauton has been able to collect 70 cases of leprosy by contagion. [M. O.]

2.—Of the sinuses of the dura, those most often injured are the superior longitudinal sinus (41 cases reported) and the lateral sinus (16 cases reported). The cause of injury may be a fall upon the head, a blow with some force, or trephining. These injuries may occur in child-birth, from compression; in childhood, by disjunction of the bones of the skull; and in adult age, with or without fracture of the skull. If a fracture of the skull occurs, splinters of bone may penetrate the sinus. Without fracture of the skull, the lateral sinus may be injured by forcible extension of its walls. Pathologically the injuries may consist of one or more small or large perforations, tears, or ruptures of the sinus. If a fissure exists, the blood may escape through it. If the hemorrhage remain inside the skull, it may collect outside the dura (extradural) or inside the dura (intradural). In either case, infection may occur. The article is illustrated with drawings to show the injuries of the sinuses. [M. O.]

3.—Cathelin reports the experiments upon animals which led to his puncturing the sacral canal by the epidural method in man, and describes the technique of the operation. He introduces the needle (6 cm. long) just below the fifth sacral vertebra, the point entering obliquely in the median line. Then, when the injection is slowly made, the fluid is well diffused. The advantages of the method are that the injections remain exclusively vertebral; that large injections can be given; that it is easy and causes no pain. Cathelin advises this method for administering cocaine anesthesia, and for the injection of drugs, especially in the treatment of neuralgia. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

June 2, 1901. (31me. Année, No. 22).

1. Primary Tuberculosis of the Spleen. B. AUCHE.
2. Syphilis in the Horse. M. Rouget.

1.—Secondary tuberculosis of the spleen is almost as common as tuberculosis of the lymph-glands. On the other hand, primary splenic tuberculosis is rare. Auché describes the tenth published case. A man of 38, of excellent family and personal history, had always easily caught cold. Eight years ago he first noted pain in the left hypochondrium, supposed to be due to a dilated stomach. Two years ago Professor Demons found an enlarged spleen. The patient entered the hospital three days before death, emaciated, ascitic, and dyspneic. The autopsy showed a huge spleen, weighing 1250 g., hard, granular, and caseous. Liver and kidneys were also enlarged. The peritoneum, pleura, and pericardium showed white granulations. No tubercle bacilli were found in the spleen, but rabbits inoculated died, showing tubercle bacilli. But one case of the 10 reported was acute; the rest were all chronic. The lymph-glands of the hilum of the spleen, mesentery, mediastinum, peritoneum, pleura, and diaphragm were tuberculous. The liver showed sclerosis and tubercles. The peritoneum was only affected at the end of the illness. The point of entrance of the bacilli is unknown. Auché believes this case to have been of the spleno-hepato-peritoneal type. [M. O.]

2.—Very similar to syphilis in man is "dourine," the syphilis of the horse. History shows that the disease in

the horse was probably acquired originally from man. In the horse its course is always chronic. It is now found principally in Algeria. About 20 days after colitis the genitalia show a chancre, and enlarged inguinal glands. Later the eruptions appear. This eruption was the origin of the name of "dourine," as it resembled the old coin, "douro." Finally comes paralysis of the posterior horns. In mares the disease occasionally runs an acute course, causing death in three days. Nocart, after long experimentation, found a parasite in the blood, which, when inoculated into white mice, caused the disease, showing the parasite after death. The parasites were flagellated protozoa. Besides, inoculated rabbits caused the disease in other rabbits by sexual intercourse. Rouget suggests that such a parasite may be the cause of syphilis in man. Yet while all the animals take "dourine," hardly any will take syphilis. Not only has mercury no therapeutic action upon "dourine," but it even seems to act deleteriously. [M. O.]

JOURNAL DES PRATICIENS.

June 8, 1901. (15me. Année, No. 23).

1. Neuralgia With Latent Aneurysm of the Aorta.
HENRY HUCHARD.
2. Delirium In Senile Gangrene. PAUL FABRE.

1.—Huchard reviews the case of a man of 50, who came to him complaining of neurasthenia, frequent palpitation and left-sided intercostal neuralgia, for years. Nothing had done any good. He leaned over all the time. When forced to stand up straight, characteristic expansile pulsations were felt at the base of the axillary region, with almost syncope. To sleep, he had to lie upon his abdomen. Huchard diagnosed an aneurysm, which was confirmed by radioscopy. Neuralgia is one of the main symptoms of latent aneurysm of the descending thoracic aorta. Abdominal aneurysms also will cause neuralgic pain. Huchard reports the case of a man of 46, with pain about the left shoulder occurring in paroxysms. There were signs of aortic insufficiency, but the sphygmographic tracings were normal. Radioscopy showed an aneurysm of the descending aorta. Rest with potassium iodide, 450 grains daily, and 120 grains of calcium glycerophosphate, caused diminution of the pain and of the aneurysm. Neuralgia is the only outspoken symptom of latent aneurysm. It will remain in one spot, and be increased or decreased by changes of position. The diagnosis is settled by Röntgen photographs. This is not new, as Morgagni discovered it, but, as Huchard says, it will bear repetition. [M. O.]

2.—Fabre describes two cases of senile gangrene with delirium. The first case was in a man of 77, with gangrene of the little toe of the right foot. Lypemania and hypochondriacal delirium occurred. He was continually wishing to die. He recovered. The second case was a man of 68, with gangrene of the fourth and fifth toes of the left foot. He had acute delirium with hallucinations, singing aloud. In neither case had alcohol been used; and both cases lasted about three weeks. Other cases of delirium in senile gangrene are quoted. Fabre believes that the cause varies; it may be due to arterio-sclerosis, septicemia, or nervous exhaustion from the pain. [M. O.]

Hemoglobiuria in Malaria.—In discussing hemoglobiuria in malaria, in (*La Presse Médicale*, 1901, No. 41), Troussaint describes four conditions which favor exodus of the hemoglobin from the erythrocytes, and its solution in the blood serum. These conditions are (1) the presence in the blood serum of two categories of hemolytic substances, those which demineralize the plasma like bile, urea, etc., and those which act like ammonium chloride; (2) globulolysis by the normal hemolytic serum and (3) by the serum acquired by vaccination; and (4) direct mechanical globular effraction due to the penetration of the hematozoa into the erythrocytes. After a long discussion of the subject, Troussaint concludes that the relation between malaria and hemoglobiuria is that of cause and effect; that hemoglobiuria results from demineralization of the blood due to alterations in the liver from the malaria; and that its treatment should be small doses of quinine, enough to destroy the plasmodium, with subcutaneous injections of sodium chloride solution, which will oppose globulolysis by favoring the elimination of urea, bile, etc., and by increasing the isotonic power of the blood serum. [M. O.]

British Congress On Tuberculosis

(Continued from Page 263).

On the Transformation of Tuberculous Soil Deficient in Acidity into an Arthritic Soil with Excess of Acid.—By Dr. Samuel Bernheim, Paris. The author commences by studying the character of the tuberculous soil, the biochemical condition of which should be well known to everyone at the present day. The measure of the mineral richness and of the chemical condition of the organism may in some degree be the measure of its resistance. But we know, that the tuberculous patient possesses a soil deficient in mineral constituents, wanting in chlorides, lacking phosphates, and above all deficient in acids, whilst the arthritic patient has a soil that is over-mineralized, exceedingly rich in chlorides and superabundant in acidity. That is to say, in chemical language, these two soils are in inverse proportion to one another. Similarly, from a clinical point of view, there exists a kind of antagonism between tuberculosis and the arthritic diathesis. Phthisis is rare among arthritics and of benign manifestation in them. From these first data—chemical, biological and clinical—the author draws numerous therapeutic deductions. It is thus, according to him, that the system of sanatoria, the absolute rest, the abundant feeding, the high-altitude cure, have no other end and no effects than the transformation of the soil. All these beneficent factors which have less effect on the bacillus than on the general system, tend to increase the organic acidity of the patient. And, in fact, the author has submitted a certain number of patients to complete repose, and he has proved in their case, at the end of a certain period, the existence of a very evident increase in urinary acidity. Similarly, the meat cure, so highly recommended by MM. Richet and Héricourt, does not act by means of antitoxins, but by a transformation of soil, the acidity of which they enrich.

After thus giving an interpretation of facts M. Bernheim adds that it is possible to obtain this transformation of soil, especially in the case of tuberculous patients who are treated early, by a hygienic and dietic regimen, and by saturating the general system with a powerful acid such as phosphate of creosote or phosphoric acid. At the Anti-Tubercular Dispensaries of Paris he has observed a large number of patients in whom he has frequently estimated the urinary acidity. Now he has proved that under the influence of phosphate of creosote, taken in doses of three grammes every two days, the acidity rapidly increases and the general condition improves; whence we are right in concluding that it is possible, by artificial methods, to transform a soil deficient in acid and favorable to tuberculous evolution into a hyper-acid soil, and one that is antagonistic to Koch's bacillus. This transformation, which is, according to the author, the sheet-anchor of the subject of phthisis, should be sought by means of, and perhaps obtained by, a hygienic and dietetic regimen, as well as by powerful therapeutic measures.

Tuberculosis of the Eye. By Dr. Allen T. Haigh, Chicago. The paper begins with the history of Tuberculosis in the various parts of the eye; treats of ocular disease as possibly the only and earliest manifestation of tubercular affection; gives the ages in which the local disease may occur, and quotes numerous authorities and conclusions; tabulates the number of published cases; gives the countries in which they occur; report of cases; treats of hereditary and primary Tuberculosis of the eye, and concludes that ocular tuberculosis is due to two causes; urges early enucleation of the affected organ, with the belief that such procedure saves many lives.

Treatment of Anorexia in the Tuberculous by Persodine (Persulphate of Soda). By Dr. J. Hobbs, Bordeaux. We all know that the condition of a tuberculous patient is measured by that of his stomach. The subject of tuberculosis who can take nourishment is in a good condition to struggle against the bacillus, and to hope for cure; unfortunately, it frequently happens that from the time of the first symptoms, and even when the pulmonary symptoms are little advanced, there is an absolute anorexia. In spite

of the advice of his physician, who orders him abundant feeding, the tuberculous patient makes every effort, and does not succeed, in eating. It is in vain that one bitter after another is tried; they all fail, emaciation proceeds apace, and cachexia little by little is established. Many drugs besides bitters have been tried with a view to combating the anorexia, and quite lately chemistry has supplied us with a new product destined to restore the function of nutrition in the tuberculous, and call oxidation into activity. This product is persulphate of soda, the first preparation of which under the name of persodine is due to MM. A. and L. Lémère, of Lyons.

These workers have at the same time produced mineral persulphates of potassium, sodium, ammonium, barium, and lead, and some organic persulphates, the chief of which are the persulphates of cocaine and quinine. These very instable salts have been studied from different points of view by MM. J. Nicolai, Garel, Rigot (of Lyons).

In this study we shall confine ourselves solely to the part they play in nutrition, and we shall direct our attention to one salt alone, persodine (persulphate of soda). Leaving also on one side those cases in which we have prescribed this drug for chorea, anemia, neurasthenia, etc., we shall concentrate our attention on one particular instance: anorexia in the tuberculous treated by persodine.

The cases we have observed are six in number. Summing them up very briefly we class them in the following manner: A case of doubtful pulmonary tuberculosis in a girl of twelve years—doubtful in the sense of our not finding bacilli in the sputa, in spite of positive stethoscopic signs. Three cases of pulmonary tuberculosis in the first stage in two children of five and eight respectively, and in an adult male of twenty-four years, the latter with fever. Tuberculosis in the second stage in an adult male of forty-nine, also the subject of fever. Tuberculosis in the third stage in a male adult of twenty-eight, with great increase of temperature.

These six patients were troubled with an anorexia more or less severe, the children principally suffering. We have given persodine to all of them an hour before meals, in a little water—a teaspoonful at a time for children; for adults, a tablespoonful.

From the second day, in the case of the child attacked with doubtful tuberculosis, and in the case of one of those that had reached the first stage, the appetite returned; and from the fourth day it was regained in the cases of the other patients.

In all of them it was shown by a sensation of emptiness at a level with the pit of the stomach, together with a real craving for nourishment. On the fifth day the parents of one of our little patients told us that the child ate greedily.

All our patients increased in weight: the little girl attacked with doubtful tuberculosis gained 4 kilogrammes in twenty days! the other two from 3 to 3½ lbs. Two of our adult patients noticed their weight increase by 60 to 62, and by 70 to 71.500 kilogrammes respectively in twenty-five days.

Even our patient in the third stage derived some benefit from it. The emaciation, which had been progressive, was arrested; there was an increase in weight of 500 grammes, which unhappily at that point went no farther. To sum up we may say that all our patients have increased in weight from the use of persulphate of soda.

In the case of one patient we were able to make a full analysis of urine, dephosphatization was arrested.

In spite of the rather large doses—two tablespoonsful a day—none of our patients suffered from diarrhea.

We conclude, therefore, that persulphate of soda stimulates nutrition, and that it is effectual in combating anorexia in tuberculous patients.

Devitalized Air Toxemia a Prime Cause of Tuberculosis. By Charles Denison, Denver, Col. Under this head it is intended to discuss the degenerative effects of deficient ventilation, and to show how, through the devitalization of the air, by its loss of vitality, due probably to a change in its normal electrical state, a dyscrasia (in persons breathing it) is created, which gradually drifts into degeneration of tissue, the so-called "soil" of tuberculosis.

The Richardson experiment is discussed, and the need is emphasized of further experimentation on this line in order to throw more light upon this important matter. The prevailing idea among medical men that the tuberculosis germ is the only cause to the exclusion of as important

predisposing causes, is criticised. The question of "soil" is now even more important than that of "seed," in order to successfully combat this dyscrasic disease.

Man, under our present civilization, is very generally tainted with a dyscrasia which goes back to this devitalized air toxemia for its cause. The fault is the disproportion of breathing-space and sun influence to the needs of man in sleeping, living, and working rooms.

The *deficient ventilation cure*, upon which the most civilized peoples are living will, by illustration, be contrasted with the *normal life cure*, which should represent the longer and uncontaminated lives of a people living under natural conditions.

Out door life is thus suggested as the *key note* to this congress.

The need of education along these lines will be emphasized and plans for legislative control, through yet to be enacted laws, will be suggested.

I. Tuberculosis in Bovine Animals: Its Dangers, Its Progress, its Prophylaxis. By Ed. M. Nocard, Alfort. *Conclusions:* A.—Tuberculosis is one of the diseases of cattle which causes most loss to agriculture in all countries.

B.—Everywhere the disease is on the increase; everywhere it forms a menacing danger to public health as well as to public wealth.

C.—Infection being the only formidable cause of the increase of tuberculosis, there is need for the adoption of legal measures prescribing:—

1. The complete separation of unhealthy from healthy animals.
2. The slaughtering without delay, of those sick animals which show clinical signs of the disease, and especially of cows attacked with tuberculous mastitis;
3. The interdiction from selling other tuberculous animals for a destination other than the slaughter-house.
4. The pasteurization of all the sub-products of butter and cheese manufactories.

II. On the Risks Involved to Man From Tuberculous animals (co-occupation, Meat, Milk), Means of Guarding Against Them. *Conclusions:* A.—The resemblance of tuberculosis in man and in mammals is no longer denied. Healthy cattle-sheds have been infected by lengthened occupation by consumptive cattle-men.

The converse is equally possible, at least theoretically. If it is not thought possible to prohibit cattle-men from sleeping in cattle houses containing tuberculous cows, the least that can be done is to warn the proprietors of the risks of this practice, and of the responsibility they may eventually incur. The nightly supervision of the suspected cowshed can be effected by means of a glass building looking on to the cattle-sheds, but having no direct communication with them.

B.—Meat obtained from tuberculous animals is rarely dangerous, and when it is dangerous it is only slightly so. The established regulations for the inspection of tuberculous meat would be sufficient to prevent even the shadow of danger, if such regulations were applied always and everywhere.

Unfortunately this is not the case.

The inspection of meat is organized only in a small number of large towns; it ought to be done everywhere, in villages as well as in towns, and it should be everywhere forbidden to sell meat not bearing the stamp showing that it has been declared to be wholesome by a competent inspector. This inspection could be easily carried out, and at little cost, on a similar plan to that adopted in Belgium for many years.

C.—The milk given by tuberculous cows is rarely dangerous, but when it is dangerous it is most often so in a very high degree; hence the necessity of submitting cow-houses to a periodical inspection when the milk yielded is destined for public consumption. Cows being really only dangerous when they have a tuberculous udder, the inspector's attention should be drawn to the state of the udder. Any cow showing clinical signs causing suspicion of the existence of a tuberculous mastitis, or of serious visceral tuberculosis ought to be isolated at once, pending the making of a diagnosis, this being easily and rapidly done by the present process; the milk should be boiled before being sold and consumed, even by the animals on the farm.

The dairyman should be obliged to give information to the inspector as soon as he has ascertained the appearance of a mastitis of any sort. When the diagnosis is confirmed, the diseased cow should be rigorously excluded from giving milk, and should be slaughtered without the least possible delay. Lastly, the sub-products of butter or cheese manufactories (skimmed milk, butter-milk whey, etc.) should not be delivered for the consumption of persons or animal until they have been pasteurized at the minimum temperature of 85 centigrade.

III. Presentation of a goat attacked with experimental mastitis, and demonstration of diagnosis called "harponnage."

IV. Presentation of tables demonstrating the efficacy of the procedure recommended by the author for rendering cow houses, that are most seriously infected with tuberculosis, healthy and to restore them to their original state without being obliged to buy a single animal from outside. Calves born of tuberculous cows remain healthy on the only condition of isolating them from their mothers as soon as they are born and of feeding them by bottle with boiled milk.

On the Relation of the Tubercle Bacillus to the "Acid-Fast" Bacteria and to Actinomyces. By Dr. Moeller, Belgig. The discovery in recent years of "acid-fast" bacteria, other than that of tuberculosis, has rendered the diagnosis of the tubercle bacillus by the microscope alone impossible. There has been a considerable amount of discussion as to the cause of this "acid-fast" property. Klein and Marmoreck have recently shown that quite young tubercle bacilli do not exhibit it, probably from the absence of the waxy and fatty envelope present in the full-grown bacillus. Borrel, by the prolonged action of warm xylol, has removed this waxy envelope, and the bacilli are then found to be no longer "acid-fast," though still capable of producing tuberculosis. Bacilli which closely resemble that of tuberculosis, and which have been known for some years, are the bacillus of leprosy, the smegma bacillus, and the bacillus of avian tuberculosis.

The characters of these and the points in which they differ from the bacillus of tuberculosis are briefly described. The writer then passes on to consider a series of organisms whose presence in our environment has been recently demonstrated, and which closely resemble the tubercle bacillus. Some of these, such as the Petri-Rabinowitsch and the Korn bacillus, occur in butter and in milk. The butter bacillus is not so resistant to acids as that of tubercle, and though when injected into guinea pigs along with butter appearances closely resembling those of tuberculosis are produced, yet an indurative peritonitis usually results as well. As the milk bacilli present such a close resemblance to the grass bacilli that the author considers we are justified in regarding them as modifications of the latter. The grass bacilli (Timothy bacillus and grass bacillus II.) resemble in staining reactions and morphology the tubercle bacillus but grow more slowly, and the temperature relations are different. Like all acid-fast bacilli they produce on inoculation a pseudo-tuberculosis; they do not, however, appear to play any part in the etiology of genuine tuberculosis, and we still know the tubercle bacillus as a *saprophyte* only in artificial cultures. Babes has recently described actinomycotic formations after the subdural inoculation of tubercle bacilli in rabbits, and others have got similar results by other methods. It would appear, however, that the tubercle-actinomyces differs from actinomyces-bovis, in that the direct relation of a bacillus to a club formation can only rarely be shown. Lubarsch has shown that other acid-fast organisms can also produce actinomycotic formations. Although the tubercle bacillus is thus shown to be one of the highly-organized myces, it has not as yet been kept constant in that form. Perhaps in course of time the necessary conditions will be discovered. In the meantime the tubercle bacillus is of most importance in the stage in which we know it best, *i. e.*, as a parasite in the form of little rods.

Discussion of the Role of Dispensaries in the Prevention of Tuberculosis. By Dr. Samuel Bernheim, Paris. After having recognized the salutary action of sanatoria, the author declares that the dispensaries recently founded in Belgium and France are also called upon to operate in the struggle against the Koch bacillus. These dispensaries are, so to speak, branches of the large sister hospitals, and are for the reception and care of poor people. These pa-

tients, who crowded (at once) in large numbers to the dispensaries in Paris, are minutely examined in order to discover the earliest possible symptoms of tuberculosis. They are not only provided gratuitously with medicine, food and clothing, and even money, but they are warned to be on their guard against contagion. They are taught to take all precautionary measures in the schools, workshops, and in their homes. A certain number of sanitary officials attached to this philanthropic undertaking for preservation of life look after the patient at his own home, and keep a strict watch over him to ensure that existing rules are observed. Any patient who disobeys these hygienic rules is immediately deprived of the advantages afforded by these dispensaries. In addition, every month the Society of Philanthropic Dispensaries gives a popular lecture to warn the public of the dangers of tuberculosis and the forms of it likely to attack them in their various walks of life. Phthisical patients are so numerous in most countries that nations which have established large numbers of sanatoria cannot provide classified and separate accommodation for patients. Consumptives treated by these dispensaries, especially those in the early stages of the disease, can derive the very greatest benefit from them. From a prophylactic point of view they will be found more efficacious even than sanatoria.

On the Function of the Anti-Tubercular Dispensaries in France and on the General Work of Anti-Tubercular Dispensaries. By Dr. Robert Bonnet Léon, of Paris. Tuberculosis causes terrible ravages in France. More than 150,000 persons annually fall victims to this scourge and the numbers are always on the increase. The whole medical world is agreed that tuberculosis is contagious and avoidable; also that it is curable, especially in the early stages. It is considered that a simple and inexpensive method of action should be adopted by which the laboring classes, who are always, owing to their wretched homes, the most exposed to the disease, should be gratuitously provided with:—

1. Education in methods for the prevention of tuberculosis to enable them to avoid infection.
2. Medical advice, nursing and treatment in as early a stage as possible, to cure them.
3. Necessary assistance, especially in the providing of proper food.

Sanatoria are exceedingly costly, they can only deal with an insignificant portion of the population, they do not provide any general education on the subject, and their construction occupies a period of several years. In January, 1900, Dr. Bonnet Léon, one of the first men in France to do so, founded an establishment, which appeared to fulfil all the desired conditions. He called it an anti-tubercular dispensary, and published an account of its methods of working. The results attained there were so conclusive that they led, several months later, to the founding of "The General Association of Anti-Tubercular Dispensaries for the Prevention and Cure of Pulmonary Tuberculosis."

The Government Commission on Tuberculosis in its report, published in January, 1901, expressed its approval of the new dispensary scheme laid before it by Dr. Calmette, of Lille.

At this date Dr. Bonnet's dispensary, which had just been set up in the Rue St. Lazare, was transferred to Montmartre, a very populous and infected area. It consists merely of a small suite of five rooms on the ground floor, very simply furnished, with some medical apparatus such as a microscope, a machine for weighing the patients, Röntgen Ray apparatus, appliances for inhalation and respiratory exercises. Glazed walls, parquet floors and tiles which are easily washed, and the whole lighted by electric light. Registers are kept of admissions, diagnoses, enquiries, assistance given, etc. Medical aid is given after the closing of the workshops by two doctors, two assistants, and an attendant. A large number of patients come, *the majority in early stages of the disease*. This last result, which is *exceedingly important in the cure of tuberculosis*, appears to be due to the title "*Anti-tubercular Dispensary*," which indicates its special aim without frightening the public, to the situation of the dispensary, the easy access that can be had to it, and above all to the patronage of the General Committee, of which Professor Brouardel is President. At the same time people living in

the neighborhood are treated in their own homes, and, while following their ordinary occupations, they are given advice in matters of hygiene against tuberculosis and alcoholism. Thorough inspections of insanitary dwellings are also made. The average of a year's work at the dispensary gives the following statistics:—4000 to 5000 examinations, consultations and special instructions, 400 to 500 courses of three months' treatment (meat, muscle juice, milk, rest and open-air cure in the establishment). In this way conditions similar to those of a sanatorium are obtained for one class of patients, and a practical and real prophylaxis is arrived at. The expenditure of the dispensary amounts to 30,000 francs a year (8000 francs for maintenance and service, 22,000 francs for board of 120 patients for three months, 30 at a time; cost estimated at two francs per head per day). The expenses of the starting of the establishment amounted to barely 5000 francs. The sanatorium, containing 100 beds, and treating 400 patients in periods of three months, costs 300,000 francs to build, and nearly 300,000 francs yearly to keep up on eight francs a bed per day. One can thus see the immense difference in the sums spent and the services rendered. In France there are one hundred thousand workmen who die of tuberculosis every year, or owing to this disease are prevented from working. This represents a loss of two hundred millions to the country.

1. To treat these 100,000 cases of tuberculosis in sanatoria 250 of these establishments would have to be erected in many years' time at a cost of 200,000 frs. $\times 250 = 75$ millions. Each year the maintenance of them would also cost 300,000 frs. $\times 250 = 75$ millions.

2. If the dispensary system were adopted the cost of founding 250 would be: $5000 \times 250 = 1,250,000$ frs. Cost of working $30,000 \times 250 = 7,500,000$ frs. For a million and a quarter on the one hand and seven millions and a-half on the other hand the dispensaries would give every year:—

- (1) Consultations and advice on the prevention of tuberculosis to *more than one million people*.
- (2) Nursing and treatment for three consecutive months to *a hundred thousand patients*.
- (3) Rest, extra nourishment, and special treatment for the prevention of tuberculosis, to *more than three million out-patients*.

This comparison between dispensaries and sanatoria does not imply that the sanatoria should in consequence be abandoned, the latter should to some extent supplement the former by receiving patients chosen and sent by them. I may add that a dispensary in a crowded quarter attracts public attention to the question of tuberculosis, and by nursing patients at their own houses avoids the necessity of scattering them all over the country where they are sources of great danger to others.

The results of the dispensary at Montmartre are very satisfactory from a prophylactic and curative point of view. *A great number of similar dispensaries should be founded by districts or by the State.*

Their establishment would not fail to ameliorate the social conditions of the country. Already the Association of Dispensaries for the Prevention of Tuberculosis has led to the establishment of several dispensaries in Paris and the provinces. The future of France and that of other great nations, who are absolutely defenceless against tuberculosis is dependent upon the success of these dispensaries for the prevention of tuberculosis.

Para-Tuberculous Hereditary Dystrophy. By Dr. E. Mosny, Paris. Clinical study and experimental medicine demonstrate the fact that subjects of phthisis do not transmit the bacillus of tuberculosis to their offspring (*typical conceptional heredity*), and that the very rare cases of *congenital tuberculosis* are due to intra-uterine contamination of the fetus by the tuberculous mother.

Clinical observation, moreover, goes to prove that subjects of phthisis do not transmit to their offspring either a specific predisposition to bacillary contamination or any marked degree of immunity (*atypical specific heredity*). But we should not, however, conclude from this that tuberculosis of parents exercises no influence on the health of their offspring.

Both clinical and experimental medicine, indeed, agree in demonstrating that the tuberculosis of parents has an influence on fecundity and the products of conception similar to that which is exercised by the majority of chronic intoxications such as alcoholism, saturnism, or the infections the evolution of which is slow or prolonged, e.g.

syphilis (*underevent atypical heredity*). These consequences, early or late of the tuberculosis of parents on their future descendants, may be conveniently grouped under the title *para-tuberculous hereditary dystrophy*.

Their frequency is a witness to the grave evil of tuberculosis from a social point of view, which compromises not only the existence of the individual it attacks, but also involves the future, affecting posterity with an irrevocable and permanent taint.

Tuberculosis may even influence conception by producing sterility in the subjects attacked. It may also exercise on the product of conception, from the time of its origin or during the course of pregnancy, either a general influence or one localized more precisely in one of the organs of the embryo or fetus.

Generalized manifestations of hereditary dystrophy appear at all stages of its existence; from conception, or during the course of pregnancy, they are shown by sterility, death of the fetus, abortion, premature birth; when pregnancy arrives at its normal limit, by still-birth, weakness of the off-spring, which is reared badly, pines away, and dies prematurely without adequate cause, or, indeed, survives in a piteous condition, badly or incompletely developed (infantilism, juvenilism, dwarfism), a fit subject for all forms of decay, and exposed without defence to all kinds of contamination. At other times the influence of the tuberculosis of parents on the health of their offspring localizes itself, or shows under multiple forms of most varied manifestation, the consequences of arrest or perversion of normal development.

Among these localized manifestations of para-tuberculous dystrophy the following appear with a frequency that is very marked: hypoplasias of the vessels and blood, pure mitral stenosis, stenosis of the pulmonary artery, generalized stenosis of the arteries (arterial aplasia), and chlorosis.

Generalized or localized manifestations of para-tuberculous hereditary dystrophy and the functional troubles which sometimes depend on them, become apparent, either at birth or not till later on at one of the important stages of growth, *e.g.* weaning, dentition, puberty. Tuberculosis of the father or that of the mother, above all, the latter, is the determining course of these dystrophic congenital defects. Tuberculosis of the parents no more predisposes the offspring to bacillary contamination than it confers immunity against attack. But the offspring of phthisical subjects, organically and functionally imperfect, weak from the time of birth, and more tried than others by the vicissitudes of growth—seem to be pre-disposed to bacillary infection, because the risks of contagion are multiplied infinitely by contact, immediate and continuous, with contaminated parents, and because their weakened frame offers less resistance to the infection so produced. The apparent immunity of some descendants of tubercular subjects who carry with them certain manifestations of para-tuberculous hereditary dystrophy, is, in reality, the consequence of the very nature of the dystrophic lesion or of its localization, and not the manifestation of a real condition of resistance. Such is the *relative immunity* in regard to tuberculosis exhibited by the subjects of chlorosis or pure mitral stenosis.

The Changes requisite in Existing Legislative Measures and Administration for Improving the Condition of Cowsheds and Ensuring the Health and Cleanliness of Milch Cows. By Charles Porter, M. D., Irel., D. P. H. Camb. Almost incredible that under existing general law no sanitary authority possesses any legal right whatever, in regard to *tuberculosis*, to inspect any cows or cowsheds *even in its own district*, nor to make regulations under the Dairies, etc., Order for their inspection, nor to prohibit use of un-boiled tubercular milk for food of animals.

County Councils have no powers whatever in regard to dairies, cowsheds or tubercular animals. The Model Regulations of Local Government Board do not mention cubic space requirements for county cowsheds, though such structures are often specially bad; neither is there any requirement for sufficiency of air-space about heads of cows in cowsheds. The Tuberculosis Clauses of 1899 fail to prevent removal or sale of suspected animals. Hence compulsory slaughter of reacting animals necessary, with partial compensation except when tuberculosis is generalized. Gradual replacement of unhealthy by healthy herds is made possible by tuberculin testing under Bang's condi-

tions. Feeding of calves of tuberculous cows with boiled milk very important. Fraudulent use of tuberculin for fortifying against subsequent tests should be penalized (Young.) Sanitary officers acting *bona fide* should be protected against personal liability.

Legislation necessary. (1) To endow sanitary authorities and county councils with full rights to inspection of all sources of their milk supplies. (2) To amend dairies, etc., orders as above indicated. (3) To provide for gratuitous testing of herds with tuberculin. (4) To apply to country generally the Tuberculosis Clauses of 1899 *plus* powers to prohibit removal of suspected animals and of applying the tuberculin test. (5) For compulsory slaughter of all reacting milchcows, with partial compensation unless disease generalized. (6) For penalizing fraudulent fortifying. (7) For protection of health and veterinary officers from personal liability.

Administrative changes as above implied, and in addition:—(1) Some cubic space requirements for country cowsheds. (2) Periodic veterinary inspection of milch cows. (3) Dissemination of information *re* bovine tuberculosis, and especially *re* tuberculin test and *re* importance of wholesome milk for calves.

Destruction of Tuberculous Sputa. By Prof. Schrötter, Vienna. The best method of getting rid of this kind of sputum is, in my opinion, destroying it completely—by burning.

The sputum of patients walking about is collected in Dettweiler's bottle, somewhat modified by me; that of those lying in bed in my papier-maché spittoons, containing a little powdered turf. Then the contents of the bottles and the spittoons themselves, all well mixed with turf, are thrown into the fire.

Remarks on Tuberculosis and the Milk Supply. By John A. W. Dollar. The relations of bovine and human tuberculosis and their intercommunicability. Transmission of bovine tuberculosis to man; necessity for a certain concentration of the bacilli in transmission by the digestive tract. Reservations in regard to accepting results of inoculation and feeding experiments in rodents as applicable to man. Intestinal tuberculosis in children; rarity of primary tuberculosis of the bowel in children and in men; possible reasons for this. Bovine tuberculosis in Europe; proportion of tuberculous cows as shown respectively by slaughter house statistics and by tuberculin test; proportion of cows with tuberculosis of udder. Tuberculosis common to goats, asses and sheep, as well as to cows. Detection of tubercle bacilli in milk as sold.

Methods of preventing spread of tuberculosis by milk. Sterilization and pasteurization of milk, their advantages and drawbacks. Examples of commercial establishments supplying pasteurized milk. Sterilization of milk on a commercial scale. The eradication of tuberculosis from herds of milch cows. Examples of commercial establishments supplying milk from guaranteed tubercle-free herds; their success. Improved hygienic treatment of milch cows; Bang's system of stamping out tuberculosis. Experiments on Bang's system in Belgium, Canada, and the U. S. A. Tuberculosis in New Zealand. Legislation in regard to milk traffic proposed by German Milk Trade Union.

Tuberculosis and the Milk Supply. By James Lalthwood, F.R.C.V.S. This subject very forcibly brings to my mind the words of Sir William Broadbent when he said, "Already the number of deaths from consumption and other forms of Tuberculosis have been reduced by more than fifty per cent. in fifty years. The single sad exception to this statement is that *Tubercle mesenterica*, the disease of the bowels in children traceable to tubercle conveyed by milk, has increased." This was told to the country in 1898.

Royal Commissions have been appointed one after another, and told our legislators years ago in no uncertain voice the great danger of tuberculous milk especially to infants.

The intelligent law-makers in other countries continue to make regulations to control this dreaded disease, while the responsible authorities in this country do nothing but stand by and watch the pitiable and lingering yearly deaths of 70,000 of its population. Surely it is not British to shrink from this foe which is admittedly the most deadly enemy of our race. A great war is nothing to it, as this claims its number of victims every year.

How, then, can we best prevent it? So far as the milk supply is concerned, it is a most simple and easy matter.

1. The first thing is the establishment of a State Veterinary Service, to exercise functions co-ordinate with those of the Medical Officer of Health for each city, borough, or county, whose duty it will be to supervise the health and sanitary condition of all animals within their jurisdiction, and to carry out the regulations of the Contagious Diseases (Animals) Act.

Italy has set a very commendable example in this respect.

II. Include the disease in the Contagious Diseases (Animals) Act.

III. The detection of the disease. This can only be well done by the aid of tuberculin, and no other than a qualified veterinary surgeon should be permitted to use it on animals.

And now comes the question, Who is to pay him—the farmer, the retailer, the public, or the Government? Most other countries have decided on the latter, which really means the public indirectly; and as it is the public who are benefitted by it, they ought to pay for it.

IV. It should be made unlawful to sell, offer, or expose for sale milk with any representation of purity unless the seller can produce a certificate from a qualified veterinary surgeon that the animals which produced it have passed within six (or twelve) months the tuberculin test. (This is very necessary, as at this present time scores of milk retailers are selling what they represent to be non-tuberculous, which is from cows that have never been tested.)

V. Sterilization of all imported milk at the port of landing at the cost of the importer.

VI. Compulsory notification of all diseased udders.

VII. All cow-houses and cattle producing milk for human consumption should be under uniform official veterinary supervision, especially as to air space, ventilation, light, drainage, and water supply.

A very serious error appears prevalent in many quarters, viz., that the milk of a cow having no appearance of a diseased udder is perfectly safe for human consumption; but my experience teaches me that such is not the case.

In some experiments I was permitted to carry out for the County Council of Cheshire, Professor Delépine found numerous tuberculous bacilli in the milk of one cow that reacted to tuberculin, whose udder was perfect, so far as manual manipulation was concerned.

Under the above-mentioned grave mistake this animal would be allowed to remain to sow the seed of destruction.

The same has been proved by Nocard, Bang, May and Bollinger.

A most commendable example is being set by the "Manchester Pure Milk Supply Co.," who distribute milk from 500 cows, all of which are tested with tuberculin every six months, all reactors and doubtfuls being removed from the herd; and each homestead is visited by a veterinary surgeon once a month, who reports to the company the condition of cleanliness of cattle and cow-houses, the suitability of food consumed, and water supply, ventilation, drainage, etc.

This is the condition that should be attained by all, and if the above recommendations could be made compulsory, or even No. IV. alone enforced, all danger from tuberculous milk would be removed.

Remarks on Question on Control of Milk Supplies. By Dr. Malm, Christiania. 1. The tuberculin employed for diagnosis should be a tuberculin produced on the same principles as that of Koch in 1890.

Its strength should be uniform, and it should be of such toxical strength as to kill with certainty six to eight weeks' old tuberculous guinea-pigs within eight hours in doses of 20-30 centigrammes subcutaneously.

2. Such a tuberculin produces unfailingly in tuberculous animals a febrile reaction of a distinct type. It is recommended that large doses should be given, even to young animals; there is no danger or inconvenience in always employing doses of a half to one gramme.

3. Tuberculin may at times also produce fever in non-tuberculous animals, but this fever is not typical and does not attain such a degree as in tuberculous cases.

4. If a typical tuberculous reaction appears in an apparently healthy animal, and, on dissection, nothing tuberculous is found, it is the fault of the dissector.

5. To determine with certainty whether reaction exists or not, it is necessary to take the temperature from the 6th to the 20th hour after injecting, hourly or at least every second hour.

6. The fact that tuberculin in a few isolated instances produces fever in non-tuberculous animals, is of no importance when the question is its usefulness as a means to eradicate tuberculosis, for in this respect it is decisive, as tuberculin invariably causes reaction in tuberculous animals.

7. The foregoing refers to animals treated for the first time. Most animals become more or less accustomed to the tuberculin, but this is uncertain and unreliable and can be overcome by the use of an increased dose or a tuberculin of greater toxical strength.

8. The practical combating of tuberculosis concerns administrative, economical and social spheres, and the answer must vary in different countries according to the prevalence of the disease and its extent, the system of farming and cattle-trade, and the pecuniary means available.

JOURNAL DE CHIRURGIE.

May-June, 1901. (Première Année, No. 5).

1. Congenital Luxation of the Hip Treated by Schede's Method. HENDRIX.
2. The Treatment of Fracture of the Patella. LEBESGUE.
3. Chloride of Ethyl as a General Anesthetic. VERNEUIL.
4. Operative Depletion of the Portal Circulation. CHARLES WILLEMS.

1.—Hendrix reports two cases of congenital luxation of the hip treated by the Schede method. This method consists of rotation of the hip internally, not externally as in the Lorenz method, until the foot is at a right angle to the body, when a subcondyloid osteotomy is performed, after first solidly fixing the hip-joint with a steel nail which passes through the trochanter, neck, and head of the femur, and the acetabulum. In both cases the results, anatomically as well as functionally, were excellent. The Schede method is therefore superior to the Lorenz bloodless operation. Five radiographs accompany the article to show the position of the head of the femur in the different stages of the proceeding. [M. O.]

2.—Lebesgue reports five cases of fracture of the patella, which were treated with pads above and below the fragments, a long zinc rod behind the leg, and an extension apparatus, all held in place by bandages. These are kept in place five or six weeks, when the patient is cured. Massage will then be of help. Yet cases occur in which this treatment cannot be employed, when there are many splinters of bone, when the joint cavity is filled with effusion, etc. [M. O.]

3.—Verneuil has used ketene, pure chloride of ethyl, in 70 cases to produce general anesthesia. A special mask will be needed for its administration. Verneuil has thus far only used it in operating for a short time, changing to chloroform if the operation should be prolonged. The great advantage of chloride of ethyl is that it produces anesthesia at once, while ether and chloroform waste much time before the patient is anesthetized. It is even more rapid than bromide of ethyl. Nor do any disturbances follow its use. Verneuil forms no conclusions yet, as he intends making further experiments. [M. O.]

4.—Willems has collected 14 cases from the literature, in which the omentum was sutured to the abdominal wall in order to deplete the portal circulation by establishing an anastomosis of the blood vessels by which the ascites, in cirrhosis of the liver, will be relieved. In nine of these cases the effect upon the portal circulation was excellent, and recovery followed. Willems operated on a child of five years, with a large mesenteric tumor, without ascites. The abdominal wall was denuded of its peritoneum, and the omentum sutured to it. Both the spleen and liver decreased in size since. The child has been improving ever since the operation. Willems wonders whether this proceeding may not predispose to internal strangulation. [M. O.]

Original Articles.

SLOW PULSE WITH SPECIAL REFERENCE TO
STOKES—ADAMS DISEASE.*

By ROBERT T. EDES, M. D.,

of Boston.

Continued from Page 271.)

Kusnezow (*Arch. Arch.*, p. 132, p. 1.) Changes in acute and chronic endocarditis. In acute endarteritis disease of the ganglia is observed in the form of inflammatory granulation formation, increase and swelling of capsule-endothelium, and albuminoid and fatty degeneration of the nerve cells themselves. The changes of the ganglia situated in the lower part of the auricular septum depend for the most part on a spread of the granulation process by continuity from the valves to the fatty tissue surrounding the ganglia. Pigment changes are not always physiological. Changes in the muscle substance do not stand in most cases in direct relation to the changes in the ganglia. It is only in rare cases that it is possible to determine in a pathologico-anatomical way the dependence of alterations in the activity of the heart upon diseases of the heart ganglia.

Winogradoff (*Cbl. f. Chir.*, 1884, p. 847). (*St. Pet. Med. Woch.*, *Beilage*, p. 54). Changes in the automotor heart ganglia in hereditary syphilis. Especially marked in the interstitial stroma of ganglia and accompanied by changes in the vessels and the connective tissue surrounding ganglia. Also (*Wiener Med. Presse*, 1886, No. 6). Changes of ganglia in pneumonia.

Wassilieff (*Cbl. Med. Wiss.*, 1876, p. 785). Changes in heart ganglia in lyssa. Shrinkage in capsules from edema.

Ott (*Zeitschr. f. Heilkunde*, 1888, p. 271). There are no ganglia in or upon the ventricles. They are in the septum of the auricles and also in circumference of auricles, their number diminishing as distance from septum increases. They are especially found in subpericardial connective tissue, but some are found imbedded in muscular substance.

Finds two types of alteration. First, development of connective tissue substances (progressive) met with under conditions which lead to congestion and changes of size in the heart.

Second, changes in the nerve cells (regressive) found in cases with more deeply acting qualitative alterations of blood (parenchymatous). Thirty-two cases were examined, in nearly all of which some form of heart disease was present, but among them no cases of very slow pulse. In most of them, where the clinical phenomena are noted at all, the pulse was rapid and frequently irregular. In a single one it is noted as slow and rhythmic. This was a case of chronic endocarditis, with chronic Bright's, etc. The heart was pale and flabby. There was increase and swelling of nuclei of the sheath of Schwann, also of round interstitial cells. There were many ganglion cells which appeared as if compressed by the sheath (im Schwanden begriffen). The protoplasm was finely granular. In some cells the nuclei were still visible, in others not.

In four cases where the degenerative changes in the nerve cells were very marked the pulse had been noted as follows:

Tuberculosis and many other lesions. Pulse, frequent, strong, rhythmic.

Pneumonia. Alcoholism. P., frequent, weak, rhythmic.

Acute atrophy of liver. P., frequent, weak, rhythmic. Phosphorus poisoning. P., frequent, weak, rhythmic.

The paper of Eisenlohr I have not seen, but judge from many references to it his results are much like those of Ott.

The two balancing systems of nerves which regulate the beat of the heart take their origin in the medulla oblongata, and, although in a manner opposing, their centres are probably quite near to each other. (Porter in *American System of Physiology*, 2nd Ed., p. 177.)

From this region they take different routes, that of the regulatory or inhibitory passing directly in the vagus to the cardiac plexus, while the accelerator or augmentor passes down the cervical cord to its lower portion, where it unites with the stellate ganglion formed by the union of the last cervical and first dorsal sympathetic ganglia, which in turn sends branches to the cardiac plexus. After the cardiac plexus is formed by the union of the two nerves on each side, joined by some smaller filaments from the upper ganglia, it is impossible to say from what source any special bundle is derived. The cardiac plexuses are united with the intrinsic ganglia of the heart situated as already described, breaking up into smaller and smaller branches, and are distributed plentifully over the heart muscle.

Anatomically the heart muscle agrees neither with the smooth nor with the voluntary muscular fibre and physiologically stands between them. Although having striae like the voluntary muscle, a structural condition undoubtedly connected with its capacity, or rather necessity, for rapid contraction, yet it may contract, not only many times but rhythmically, without any new stimulus from the nervous centres and, so far as can be seen, without assistance from nerve cells and perhaps even without any nervous fibres.

As the heart is simply a portion of a hollow tube surrounded by muscle for the purpose of propelling the fluid contents to the next segment beyond, each of its beats may be looked upon as the analogue of a limited peristaltic wave, such as propels the contents of the intestinal canal or the ureters, but differing from these in the very essential point of rapidity of propagation.

It is very probable that the intrinsic ganglia are to be looked upon not as exactly automotor, in the sense of initiating independently the cardiac cycle, as has been assumed by many writers, nor, on the other hand, as exclusively sensitive, as it is urged upon embryological grounds (vs. Romberg and His.) they should be, but reflex centres controlling the proper succession of impulses.

They are thus akin to the local regulatory centres connected with various organs like the ophthalmic ganglion with the iris, but more especially to the plexuses of Meissner and Auerbach in the intestinal walls.

Although it has been conclusively shown that the muscle of the ventricle does not require a nervous impulse from the auricle in order to contract and even to beat rhythmically, yet the nerves passing

from the cardiac plexuses over the auricle to the ventricle are necessary for the proper correlation of their beats and making their contractions effective in propulsion instead of disorderly and confused.

These small ganglionic centres to which the nerve fibres of the auricles and ventricles stand in the relation of afferent and efferent conductors are under the control of both the vagus and the sympathetic, the latter perhaps supplying a constant portion of potential energy or, in other words, keeping up their reflex tone, and the vagus controlling its discharge and regulating the intervals at which it shall take place.

In the table containing the cases which present the typical Stokes-Adams symptom-group during life and which were examined post mortem, there are to be found three (Nos. 4, 9, 31) where a distinct lesion of the bulb or the cervical portion of the cord was found, or four, including the horse (No. 35).

King (*Lancet*, 1845, Vol. II) states that a lesion in this region is the "only known cause of slow pulse" and brings forward a considerable number of cases where a slow pulse was connected with such a lesion, most of which, however, were not subject to the exacerbations which mark the type. He admits, however, that there are other possible causes.

We can say, as to brain lesions, that intracranial pressure frequently produces a certain amount of lowering of the pulse rate, but seldom of an extreme degree, and also according to Mr. Hutchinson, irregularity. This kind of slow pulse may arise from lesions differing in kind and position, but probably all producing ultimately a pressure on the bulb.

Table 2 makes no pretence to completeness and it could undoubtedly be considerably extended by a reference to surgical records of injuries to the cervical vertebrae, as well as medical reports.

The objections to considering the permanent slow pulse, whether existing as a single symptom or making a part of Stokes-Adams disease, to be dependent upon irritative lesions, involving the origin of the vague or of its inhibitory fibres, are the following:

A constant irritation rarely lasts so long and with so little change in character as happens in these cases. Some paralyzing degenerative lesion is much more naturally looked for.

In health the pneumogastric's function is to hold down the pulse within certain limits, in order to secure the most advantageous rate of expenditure. It is a sort of check upon and not an opponent to the activity of the augmentor nerves. In experiments upon mammals it is never possible to completely hold down the pulse for any length of time by stimulating the vagus. After a short pause the heart begins to beat again slowly and then resumes its usual rate or assumes a new regular rate, even while the stimulation of the vagus is still going on.

The alkaloid atropine is known to paralyze the inhibitory function of the vagus from one end to the other. If atropine is given in a case of slow pulse dependent upon intracranial lesions irritating the vagus, it quickens the pulse materially, but in the cases of permanent slow pulse it produces at most only a very slight effect or none at all. (*Dekio, St. Pet. Med. Woch.*, 1892, No. 1.)

It is singular that this well-known property of atropine should not have been utilized for diagnosis before. Atropine and belladonna are recorded as having been used in a considerable number of cases without benefit, but the special diagnostic significance of this seems to have been overlooked.

A lesion in the course of the vagus was found in one case (No. 8) and possibly in No. 1 of the first table.

In case 14 the authors consider the degenerative vascular changes in the brain, which they found most marked in the cerebellum, to be the most important. It will be seen by noting the condition of the brain found in many other cases that leaving out of consideration the general atheroma which is so frequently found when no definite symptoms, or varying symptoms of all kinds, have been present, and which (the atheroma) may or may not have involved the nutrient arteries of the bulb, we have nothing by which to connect any special intracranial lesion with the rapidity of the pulse.

Taking the three cases of Table 1 with the larger number of Table 2, some of which are very clear and distinct, we find little to sustain the theory that the permanent slow pulse is the consequence of an irritative lesion of the bulb, but there appears a very evident connection with a lesion of the cord lower down, i. e., from just below the bulb down to the first dorsal vertebra. See Charcot (*Système Nerveux*, Ser. II., p. 135). A narrowing of the canal at the occipital foramen affects the cord rather than the oblongata. The cases I have quoted are lacking in a minute description of the histological changes, but it is evident in many of them from the absolute paralysis of sensation and motion below the lesion that all fibres were thoroughly involved. The lesion was in all cases situated above the point where the augmentor fibres leave the cord to join the compound or stellate ganglion on their way to the heart. There can then be little doubt of the existence of one group of cases dependent upon a paralyzing lesion of the augmentor nerve fibres within the cord.

Lesions of the stellate cervico-dorsal ganglia have not been observed in such cases, but these ganglia have been very seldom examined.

Fränkel (*N. Y. Med. Rec.*, 1900, June 16) reports a case in which he found these ganglia seated in small abscesses connected with a limited pleurisy, but the symptoms were not such as to have any bearing on our subject, being largely of a hysterical character. In Prentiss' case I examined them, but found nothing characteristic.

Hutchinson (*Lond. Hosp. Rep.*, Vol. III, p. 366) says that when there is a fracture of the spine high up the pulse diminishes in frequency and is remarkably large and full, and remarks upon the peculiar impression made by a man screaming with pain and a countenance expressive of the utmost suffering and anxiety, but whose pulse was slow, full and deliberate, forty-eight in the minute.

The cases remaining in Table 1 may be distributed as follows, with reference to the cardiac and vascular lesions as follows:

Class I.—Pericarditis. Case 5.

Class II.

Group 1.—Valvular lesions and simple dilatation.

Cases 24, 27, 28, 30, 31, 32.

Group 2.—Atheroma of aorta and general. Cases 3, 6, 7, 12, 14, 15, 17, 18, 22, 23, 24, 25, 28, 29, 30, 34.

Group 3.—Atheroma of coronaries. Cases 3, 12, 18, 21, 24, 27, 29, 30.

Group 4.—Degenerative changes of the muscle.
A. Fatty. Cases 6, 13, 16, 17, 18, 21, 22, 24, 26, 29, 30, 31.

B. Fibroid. Cases 19, 20, 29, 32 and 35 in Table 2.

Group 5.—Degenerative changes of ganglia. Cases 6, 32.

Class III.—Nothing decisive. Cases 1, 7, 10, 11.

In Case 1 neither the aorta nor coronary arteries were atheromatous. The heart was rather large and firm.

In Case 7 the coronary arteries were normal. The aorta was smooth, except a few small plaques of atheroma in the beginning of the thoracic and above bifurcation.

In Case 10 the results were completely negative.

In Case 11 the arteries were remarkably free from atheroma and the coronaries pervious.

The connection of slow pulse with general arteriosclerosis is an interesting and important but far from invariable one. It was found in my table in about half the cases, but it is well known that by far the greater number of cases of arterial disease are attended by no such symptom.

The same things are true of the muscular degenerations, especially the fatty, of which the more common symptom is rapidity and irregularity. The fatty heart of which Kisch (*Berl. Klin. Woch.*, 1885, p. 215) makes the moderately slow pulse a rather common symptom is that which is a part of general corpulence and has little to do with paroxysmal bradycardia. It is only dangerous when permanently down to 50 or 30, which is very rare.

Much weight has been laid upon degeneration of the coronaries, first as a known cause of the muscular lesions, and secondly as a possible cause of a possible ganglionic lesion. It is recorded in eight of the thirty-four cases. The connection is far from an invariable or even extremely frequent one.

Loomis (*Trans. Am. Climatolog. Assoc.*, 1892, p. 73) makes the statement that "post mortem studies teach that fatty degeneration of the heart is usually associated with obstructive changes in the aorta and the origin of the coronary arteries, while, as I have already stated, fibroid changes are usually associated with obstructive changes in the coronary arterioles." If this association is a frequent one and if the degeneration of the ganglia depends upon obstruction of the small branches of the coronaries, which go to feed the auricular walls, we certainly ought to find a very frequent connection of slow pulse with fibroid degeneration, which is not the case. Only two such cases are in our table. Hilton Fagge (*Trans. Path. Soc. Lond.*, 1874, p. 64), among eleven autopsies made by himself where the walls of the heart were in a condition of fibroid degeneration mentions two cases as having had a slow pulse, and among nineteen others found in the records of the society, finds two, which are those mentioned in my table. He says: "My cases, however, do not at all support the opinion that a slow

pulse is to be regarded as a constant or even a frequent result of fibroid disease. These are problems which are still looking to minute anatomy and histology for their solution."

The intrinsic ganglia of the heart have been examined in but very few cases of this kind, and in only one microscopically (Jona, Case 32). That was not a typical one, inasmuch as mitral stenosis existed, which is likely to exhibit an apparently slow pulse when the heart is beating at a normal rate; and, indeed, it is stated that the heart beat nearly twice as fast as the pulse at the wrist; but since the minimum pulse (22), even if nearly doubled, would still have been slow, and as other observers find lesions of these ganglia in specially frequent association with valvular lesions, it might have been supposed that there would have been degenerative changes of the ganglia. But the reporter, who made a very careful examination, is not certain that the slight changes, chiefly in the chromatin of the cells, indicated anything more than such functional ones as have been found in other nerve cells from fatigue. Here again we are met with the opposing fact that in a large number of cases in which both sclerotic and degenerative changes were actually found, the pulse was rapid and usually weak. (See Ott. loc. cit.) Further histological researches are required when cases presenting the appropriate clinical phenomena arise.

From a combination of the positive results of interference with the augmentor nerve fibres higher up in their course, i. e., from fractures and dislocations, and one or two cases of disease, and on the other hand the insufficiency of the common and obvious cardiac lesions to account for the phenomena, it may fairly be said that the permanent or continued slow pulse is the result of a paresis of the augmentor nervous system, depending either on a lesion anywhere in its course from the bulb down to and including the intrinsic heart ganglia, or on a localized weakness which in acute or temporary cases would probably leave no anatomical traces behind, and in no case very obvious ones.

In the medical cases, i. e., the strictly Stokes-Adams, it may be claimed with less confidence but still with considerable probability that the lesion is situated in the auricular ganglia and is of a degenerative character. It is likely to be dependent upon fatty degeneration of special small branches of the coronaries destined for their nourishment. Why the special symptom should be at one time a rapid and at another, much less frequently, a slow pulse is probably dependent on the extent and degree of advancement of the degeneration, but there is no more inconsistency involved than in the closely allied facts of degeneration of other nerve cells where we have absence of reflex excitability succeeding an increase, anesthesia to hyperesthesia or dementia to excitement.

In fact, the transition from rapid to slow has been noticed in some of these very cases, and also in connection with the action of certain drugs. A very notable case is one reported by Platt (*Tr. Am. Climatolog. Assoc.*, 1892, p. 59), where a young lady recovering from pneumonia had for a number of days a pulse which underwent very rapid transitions, by the dropping of successive beats, from a little above the

normal (110) to considerably below (48). In a last and more severe attack attended with much prostration and vomiting, the pulse, when it could be counted at all, went down to 40 or 50 for several hours until it changed to 92 and final recovery. In this case and probably in many which resemble it in everything except the rapidity of the transitions there is probably a good deal of pneumogastric influence at work.

The slow pulse existing when there is evident general debility and nothing else, as in convalescence, dropping below the normal together with the temperature for a few days, as well as the low temperature often connected with the chronic cases point to a condition of local cardionervous debility.

The augmentor system is in a condition of diminished resistance as regards the action of the pneumogastric, which is simply a regulator when the augmentors have their proper tone, but which when their resistance is pathologically diminished goes beyond the due balance of forces and produces the phenomena of the still slower pulse.

Whether the original development of these conditions is due to a simple progressive increase of degenerative changes which have imperceptibly reached the effective degree, or to a rapid exhaustion of nerve centres by excessive stimulation analogous to the dilatation of the heart muscle under excessive exertion cannot now be answered by anatomy. A sudden shock is capable, judging by symptoms, of producing impairment of function which requires days or weeks to recover from or which may be permanent, but it is not known at what point the slight temporary changes which have within the last few years been found in so many nerve cells as a consequence of fatigue, pass into the degenerative ones that mark a chronic disability.

Without regard to the anatomical findings there are some physiological observations which show a very close analogy between the formation of the slow pulse and those cases in which the intermediate beats continue to be feebly represented, and the action of the vagus. It was found by Chauveau (*Revue de Med. and Lyon Med.*, 1883), and also by Vaquez and Bureau (*Mem. Soc. de Biol.*, 1893), that certain small intermediate beats which could be seen in the cardiogram and synchronously with this in the jugular pulsations, were referable to auricular contractions which were not communicated to the ventricle, and this condition of things was compared to what is found when the vagus of the horse is weakly stimulated, that is the inhibition of the ventricular contractions while the auricular are but little affected.

Pouzin (*Paris Thesis*, 1898) gives the same explanation of the weak beats, and Bristowe (*Lancet*, 1885) also suggests it without coming to a decision. Of course this condition is fairly referable to the want of efficient reflex nervous connection between the auricle and ventricle, and it is not only possible but highly probable that this connection may be impaired not only by a permanent degeneration of the ganglia but by the temporary interference of the pneumogastric.

Moritz (*St. Petersb. Med. W'och.*, 1897, p. 301), describes a case where there was a jugular venous pulse of 76-78, with a radial of 30, and a number of

weak tones in the heart. He entitles this "One-sided bradycardia," and thought it ought to have been due to a syphilitic neoplasm at the ventricular septum, but it seems much more like another instance of auricular pulsations persistent after the ventricle has taken up a slower rhythm, i. e., that the heart was cut in two functionally in the transverse instead of the longitudinal direction.

It has been shown, as already stated, that the point of the heart, if fed, may be made to beat not only irregularly but rhythmically, but it is also found that when the ventricle has been "crushed off" by a tight thread the rhythm of the ventricle is no longer the same as that of the auricle.

Langendorff (*Arch. f. Anat. und Phys.*, 1884, *Suppl.*) even claims that such slight relations between the two segments of the frog's heart after the ligature, as are shown by a "regular succession of auricular beats," i. e., a number of auricular without effect on the ventricle, and then one auricular followed by one ventricular, which sends along a wave of blood through the aorta, is due to imperfect crushing that has spared some fibres.

Kronecker (*Verh. d. XI. Cong. Inn. Med.*, p. 525) also states that stimulation can be conducted (in a dog's heart) from auricles to ventricles by a single nervous bundle, and when this is ligatured the ventricles beat independently some three times slower, until death.

These temporary and experimental resemblances of action, however, do not remove one of the main objections to applying the vagus theory to the permanent slow pulse, namely, that its inhibitory action is short, and soon overcome by normal augmentors.

The paroxysmal manifestations of Stokes-Adams disease fit in much more easily with a theory of vagus irritation than does the permanent condition. Such a theory, applied only to the paroxysms, calls for no lesions, gross or microscopic, of the bulb, since it is only a reflex centre whence the inhibitory impulse takes its origin by transformation of any temporary sensory irritation within or without the nervous centres. A very interesting case given by Romberg from Heine (*Syd. Soc.'s Trans.*, Vol II, p. 340) at too great length to be quoted in full, shows the probable action of the vagus in producing a temporary cessation of the heart's pulsation.

A man, aged 36, stated that his heart often stood still. At his next visit he was able to demonstrate the fact, for there was an intermission of five or six of the heart and of the pulse. The aspect of the patient showed, that at the time something terrible was going on within him; he sat there as if thunderstruck, speechless, motionless, his eyes wide open, his consciousness unimpaired. He had a violent pain at these times on both sides of the thorax, extending to the neck and head. He knew of nothing except mental emotions, which had a tendency to produce the attacks, which were much more frequent on some days than others.

The most accurate examination of the heart during the free intervals, failed to demonstrate any abnormality in the rhythm, the sounds, and the extent of the cardiac dulness. He lost strength, had vertigo, and died in a state of sopor.

The autopsy was made with great care by Rokitsky.

The nervus cardiacus magnus, which ascends from the plexus lying between the descending aorta and the pulmonary artery, was woven into a black knot of the size of a hazelnut by the lax, pale greyish cords forming the cardiac nervous plexus; before its entrance into the knot the nerve was thickened. The branches of the left vagus which descend upon the anterior side of the left bronchus to the pulmonary plexus, proved to be dragged in the same way by an underlying nodulated dark blue, lymphatic gland. The heart was of the usual size and tough. There were other enlarged and cretaceous lymphatic glands, one of which interrupted the phrenic nerve. The solar ganglion was very large. There were many pathological changes in the brain and cervical spinal cord.

Debove (*Soc. Med. des Hop. de Paris*, 1888, p. 441) reports the case of a patient whom he had observed for some years with a pulse of 36, who died in syncope. Nothing is said of the presence of any paroxysm previously. The bulb was found perfectly healthy, the pneumogastric nuclei being specially examined by the microscope.

The pneumogastric is more effectual in reducing the activity of the heart's beat in proportion, "as the augmentor system is weaker." It is possible to greatly slow or even stop the heart in a weak animal by the use of a stimulus which in the vigorous is unable to do more than cause a comparatively slight and transient slowing followed by a rapid and immediate escape. The heart of a dog or cat weakened by repeated inhibition very frequently toward the end of the experiment shows itself unable to escape effectively to a regular rate and force of beat." (Hough, *Journal of Physiology*, 1893, p. 161.)

These physiological observations show how the paroxysms in a case of slow pulse may be developed by causes which, acting against augmentors of normal resistance, would be inoperative.

If there were any increased reflex susceptibility on the part of the vagus, it would of course increase the intensity of the phenomena, but such an increase is not demanded by the hypothesis.

Some very suggestive experiments by Mayer and Pribram (*Sitzber. der Wien. Akad.*, 1872, p. 104) illustrate the efficiency of what is, in such cases as we are able to assign any definite cause, one of the most common causes of the paroxysms, i. e., digestive disturbances. By the aid of the usual registration methods they determined the action of gastric irritation in increasing the general vascular tension and in lowering the rate of the pulse. This seemed to be due more to action upon the muscular and serous coats of the stomach than on the mucous, for irritation of the latter by chemical irritants or by cold had no effect upon the pulse, while with electrical or mechanical applied to the outside it was decided.

An observation interesting as most closely simulating that condition which holds so prominent a place among our "gastric griefs and peristaltic woes," i. e., flatulence, depended upon the introduction of a rubber balloon into the stomach, and as

the dilatation of this increased and diminished, so did the vascular tension, while the frequency of the pulse varied in the opposite direction.

It would be very desirable to apply the atropine test during the paroxysm for the purpose of deciding in each case how far the two factors of weakened augmentors and irritated pneumogastric might be involved, but so far as I have found this has not often been done with a view to diagnosis. I regret extremely that I have not done it myself when the opportunity offered. One case, however, seems to be in accordance with the theory.

Kinkead (*Dubl. J. Med. Sci.*, 1898, p. 4) was called to see a man who was taken sick one evening with faintness and pain in the stomach, but without vomiting. The pulse was at first regular, but after another attack of faintness it became intermittent. The next day he vomited and had acute pain on pressure just below the ensiform cartilage, and the pulse had fallen to 6 per minute. The physician watched him for an hour, phonendoscope over heart, finger on pulse, and watch in hand, while the pulse beat at this rate. Atropin was injected hypodermically and a mustard leaf placed over stomach. After about an hour the faint feeling passed off, the pain at the pit of the stomach got better, and the next morning the pulse was 72. One cannot help regretting that he did not watch with the phonendoscope during this hour of recovery.

A day or two later there was a little tendency to irregularity, the joints became painful and swollen, but were relieved by salicylate of soda, after which there was no further trouble.

After looking over a considerable number of cases one finds that the origin or causes of this condition stated, are so vague or so general in the great majority of them, that any attempt at statistics would have only an apparent precision. But it seems quite evident in looking at the list of cases with autopsy that essentially the same causes have been at work as in the degenerative diseases of the heart in general, except so far as valvular disease, the result of acute rheumatism, is concerned as an important factor, and even this is not entirely absent. The wear and tear of life in general are undoubtedly not without their effect, and alcohol, also, but bradycardiacs are not to be found especially numerous among those who have suffered more than their neighbors, nor, on the other hand, among those who have drowned their sorrow in the flowing bowl. Severe bodily efforts, not necessarily extremely prolonged, and mental or emotional strain, come the nearest to being frequent causes. The first of these is interesting in connection with the observations of Allbutt, DaCosta, Leyden and others, where great strain with heavy weights and under conditions involving fixation of the thoracic muscles, is a potent cause of dilatation and disease of the heart, but entirely without the clinical phenomena of the cases now under discussion. The latter, i. e., psychic, causes have an interest as being frequently invoked in the origin of a condition almost the opposite, that is, Grave's disease with its extremely rapid pulse. It would seem as if certain shocks bringing to bear a strain upon the heart and finding it in a condition of unstable equilibrium, were liable to disturb its rhythm in either direction.

Is the determining factor in such cases an augmentor paresis already present or closely impending?

A case reported by Strübing (*Deutsch. Med. Woch.*, 1893) is a very interesting one as showing quite clearly the origin of a well-marked instance of this kind at a much earlier age than usual.

A boy of 15, well built and nourished, was fairly well and strong except that he did not easily keep up with the other boys in running. On one occasion he ran a considerable distance, not to be late at school, was attacked by vertigo, and his face grew pale. He fainted and lost consciousness, but after awaking with a headache, walked home and went to bed, where he had another attack with loss of consciousness and convulsions. This was the beginning of a series of attacks which involved no dyspnea or palpitation, but vertigo and headache. The heart was enlarged. The pulse usually 16-18, the contractions not of the same strength or same interval, dicrotic, (dicrotism is very rarely if ever seen in a well-marked case of this kind and in the tracings given in this, although, to be sure, they were taken at a later period, there is not the slightest trace of it). There were several occasions of improvement and a falling back, psychic excitations being of distinct effect in bringing on severe symptoms with a pulse of 14- or 12. With great care, especially as to effort, the pulse gradually rose to 44 at one time, but there were other relapses, and he finally died. At last a systolic murmur developed.

In Prentiss' first case there had been heavy lifting. Other cases are to be found in the tables.

In the etiology, as well as in other points, we find the weak heart with slow pulse coming very close to the weak heart with rapid and irregular pulse. Leyden (*Ztschr. f. Klin. Med.*, 1886, p. 105), after speaking of the symptoms of heart disease arising from over-exertion, including irregular pulse and "pulse more frequent or easily made so," mentions a rare group of cases of exhaustion connected with a slowing of the pulse to 40 or 30, and gives several cases. Sexual excesses are mentioned in a general way by some writers. My own experience would not point strongly in this direction, and I have found it mentioned distinctly but once in connection with the special case. There is no reason, of course, why it should not be placed among other depressing agents.

Saurel has written a thesis (Paris) on the permanent slow pulse in general and in particular in "surmenage et l'anémie," but his cases relate more definitely to the latter factor.

Prognosis.—The moderately slow pulse of convalescence or in the course of acute diseases, especially in rheumatism, is particularly of little importance, not adding to the gravity of the cases, as judged by other symptoms. It is usually quite temporary under these circumstances. The same may be said of its occurrence with a slightly lowered temperature in mere debility.

The permanent slow pulse should lead to careful inquiry into the condition of the heart, and the presence of nervous symptoms, even so slight as transitory vertigo would materially affect the prognosis. There are a good many of what may be

called acute or subacute cases, which improve not only as regards the nervous symptoms, but also in the frequency of the pulse within a few days or weeks. They are usually cases which originate in some special strain, and the recovery is complete.

Another group, and these are especially elderly or aged persons, get rid of the nervous symptoms and, living a moderate life, experience no inconvenience from the slow pulse, which remains the same. They are not, however, to be looked upon as completely well, and are liable to a return of the paroxysms under bodily or mental stress or even without special known cause. (Case IV.) The cases where very slight nervous symptoms still persist are to be classed with these.

In the fully developed disease, where the nervous symptoms remain, but perhaps leave the patient fairly comfortable in the interval, are eminently uncertain. No insurance company should look at them for a moment, and yet the cases are by no means unknown where they live for years.

An instance, however, is reported by Flint (*Am. Pract.*, Vol. 13, p. 1), in which a man whose pulse was supposed to have been slow for many years, and who had epileptiform convulsions, was not only looked at by an insurance company, but accepted, nine and eight years before Dr. Flint saw him. A little doubt is thrown upon the genuineness of this case as an instance of Cheyne-Stokes, by the fact that in the convulsions the pulse became rapid instead of slower.

Some writer has mentioned three and a half years as the probability of life, but a calculated average of that kind can have very little value, except as an item of statistics. The study of the individual case and, in particular, the severity of the symptoms and condition of the pulse during the paroxysms, would give much more important results. The great majority of such cases die during a paroxysm. The longest period I have seen mentioned was in a case of Osler's, 30 years.

Huchard calls attention to three sets of cases. Those in which there is no permanent slow pulse, but which correspond to the type in the occurrence of the nervous attacks, the pulse at the time being slow. In these it may be supposed that the accelerators, while sufficient to carry on the beats at the ordinary rate under ordinary circumstances, are so near the point of yielding that the vagus easily overcomes them.

Those in which the nervous symptoms are but slightly marked, transient attacks of vertigo or weakness.

What he calls "associated," which are simply the occurrence of Stokes-Adams with something else, without any special connection between them, or at least only such as is very common with other forms of heart disease, either the renal setting up the cardiac, as happens in some cases, interstitial nephritis or vascular degeneration lying at the foundation of both; or, on the other side, the kidney suffering from congestion. Such a case is reported by Whitridge (*Boston Med. and Surg. J.*, 1900, 329).

An important therapeutic observation gives rise, as has happened often enough before, to rather a loose piece of pathological classification. Several cases are called uremic, in which this diagnosis

rests solely on the scanty urine and the great improvement which takes place on a milk diet and consequently increased excretion.

The treatment of the permanent slow pulse consists in rest, which is to be more or less complete according to the special case, from the most absolute upward. Diet, tonics and such regulated exercises as have been found beneficial in other forms of heart disease. Cardiac tonics have been found of some value, although there is no specific. The nitrites have been favorably mentioned in some cases. Digitalis, the beneficial action of which in most cases of heart disease, consists in its slowing the pulse, has in a few cases resulted in quickening that which is already too slow, an action which it is not difficult to understand when we recollect that the tonic action of this drug consists not only in increasing the activity of the pneumogastric and the vaso motors, but to a certain extent that of the augmentors also. In these cases it may happen that the balance is so adjusted that the latter effect outweighs the former.

Belladonna has proved a distinct failure for the treatment of the permanent slow pulse.

The prophylaxis of the paroxysm consists in carefully adjusting the load to the weakened muscular system that has to carry it, and in avoiding the causes of exciting the reflex activity of the vagus, in particular, muscular strain and digestive disturbance. The bromide of potassium has been suggested on theoretic grounds to diminish reflex activity.

In the developed paroxysm cardiac stimulants like ammonia and the nitrites, are to be used, and especially atropine, which should be given subcutaneously in the dose of one or two milligrams. It has been remarked that the cases are not numerous in which the action of atropine given in efficient quantities has been carefully watched. In the case of Kinkead, it seems to have acted as it should do theoretically, and also in the case of Claybaugh, relieved the earlier paroxysms. The recumbent posture of course favors the return of blood to the brain. One of Stokes' patients found that he could ward off the fits by getting on his hands and knees and allowing his head to hang down.

THE INTIMATE ACTION OF THE SILVER NITRATE INJECTIONS IN THE TREATMENT OF PHTHISIS.

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of Philadelphia.

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One hears a great deal about the unsatisfactory state of our knowledge concerning medicinal action; about the blindness with which drugs are administered, and about the disappointing results which they often yield. This arraignment is so true that it needs no special verification. Nor is the reason for its existence far to seek. Therapeutic theories, like other hypotheses, are prone to move in ruts which become so staid and worn that it often costs a struggle to step beyond their bounds, and when this is undertaken the innovator is often pilloried as being bold, unscientific, and even tinged with blind prejudice. It is forgotten that the mutations of time lay waste many times both theory and dogma, and that nowhere is this change more lamentably and pathetically evident than it is within the domain of medicine itself. No one would have dreamed, for example, that within the comparatively short space of a few months our ideas regarding the contagiousness and propagation of yellow fever would be shattered so completely and so hopelessly as they have been. If a few years ago any one would have been rash enough to question the orthodox belief that the yellow fever germs are lurking in the clothing and bedding of yellow fever sufferers, and that they are directly transmitted to the healthy through contact, and would have made an effort to give his views practical expression, he would have placed his life and limb in serious jeopardy. Yet so transparent and feeble was the foundation on which the universally accepted and powerful dogma rested that it merely required the prick of a mosquito to puncture and to destroy it. This instance is not cited with a view of discrediting or of reflecting on the advancement of medicine, for he who estimates scientific progress rightly realizes full well that this is exceedingly slow, and comes only through the crumbling and deterioration of much of the work that paves the way for its final consummation, but only for the purpose of showing the infirmity and evanescence of many ideas which we highly revere and believe impregnable, and of demonstrating the wisdom of toleration and liberalism towards other views and theories. That which is true of medicine in general in this respect is particularly true of phthisio-therapy; and the writer expresses the belief that one of the principal causes which is responsible for the present lamentable decrepitude in this special field is the bacillus-etiology of pulmonary consumption. Not only has it proved itself an accomplished failure as a remedial helpmeet, but it has been the active cause of misdirecting and of wasting a great deal of mental energy in the sphere of pharmacologic research during the last fifteen years. Its discovery was at once welcomed and eagerly accepted by many members of the profession as the responsible head of phthisis, the writer being included among the latter, and it instantly inspired the almost universal hope that it would lead to the development of new therapeutic principles, the practical application of which would extinguish the

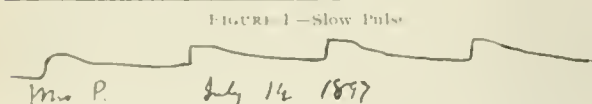
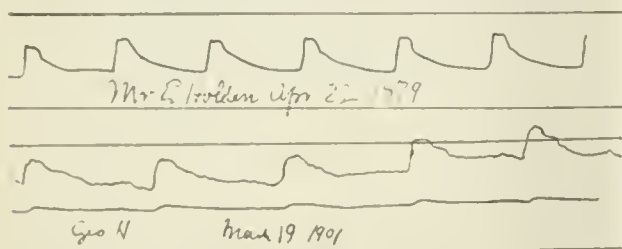
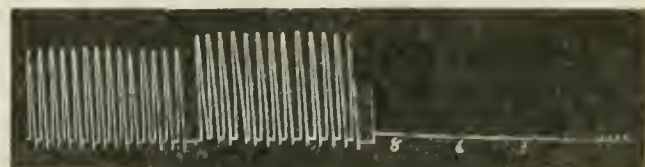


FIGURE 2.—Slow Pulse.
(To be concluded).

worst plague in the history of medicine. Instigated by the logic that the bacillus is the cause of consumption, and that eradication of the former would exterminate the latter, every conceivable agent or influence that gave the least promise to efface this microorganism, was invoked. Antiseptic inhalations of carbolic acid, fluorine, iodine, creosote, sulphurous acid, formaldehyde, of the oils of cinnamon, peppermint, and cloves, of superheated air, of bacterial sprays to antagonize the growth of the tubercle bacillus, the internal administration of creosote, carbolic acid, iodoform, aristol, asapol, creolin, guethol, guaiacol, ichthalbin, ichthyol, iodipin, iodole, thiacol, etc.; the hypodermic administration of tuberculin, anti-phthisin, serum of every description; and lastly, the somewhat famous enemata of sulphuretted hydrogen. Among the above-named remedies which created the widest, and perhaps, a world-wide interest, were creosote, tuberculin, the serums, and Bergeon's method; yet at the present day, with the exception of creosote, one scarcely sees a serious reference to any of them as remedies in this disease. Beaten from pillar to post, the bacillary therapists were finally forced to acknowledge tacitly that neither the bacillus nor its toxin can be destroyed, and are now obliged to fall back on the secure position that bodily resistance, nutritious food, and fresh air are, after all, the essential elements in the treatment of the disease under consideration.

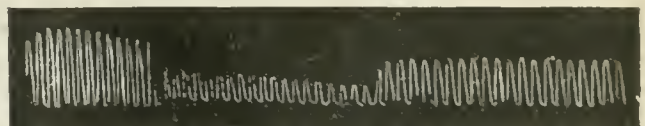
After this preliminary digression, the writer will discuss the physiologic and therapeutic behavior of the hypodermic injection* of silver nitrate over the vagi in phthisis, a method which he has evolved and tested during the last three years, and which he believes has claims on the scientific attention of the profession. The hypothesis on which this treatment rests is that pulmonary phthisis in the large majority of cases is primarily a neurosis, in which the vagi participate, and that the pulmonary disintegration is secondary; and that direct stimulation of the vagi favorably influences the condition of the lungs. For is it not a common practice to apply a stimulating fly-blister to or near the roots of the nerves which are involved in sciatica, intercostal neuralgia, herpes zoster, etc., and is it not fair to assume, therefore, that a similar favorable impression may be made on the lungs through excitement of the vagi, their most important nerve supply? That nerve energy is enhanced by pressure or irritation when locally applied is well shown by the experiments of Zederbaum,* who found that moderate pressure applied directly to the sciatic nerve elevates its function of transmitting impulses to muscle, while greater pressure diminishes and inhibits the same. It has also been demonstrated by the writer** that mini-

mum doses of most of our important drugs enhance and strengthen the contractions of the isolated heart, and that maximum doses of the same drugs depress and inhibit the function of that organ, as is well illustrated in the following tracing which was produced by the action of sodium hydrate:



Blood sol. 1:40,000 1:1,000
Figure I. Showing the contrast between the effects of a 2 per cent. solution of blood, and minimum and maximum doses of sodium hydrate

The minimum dose of this drug was found to be 1:40,000, i. e., one part of sodium hydrate to forty thousand parts of a 2% blood solution, and the maximum dose 1:1000; and the tracings which they yield demonstrate that the addition of a minimum dose of sodium hydrate to the blood produces larger heart beats and higher tracings than are given by the blood alone, and that a maximum dose arrests the heart in systole. This may be regarded as positive evidence that sodium hydrate when administered in suitable doses is capable of pushing the function of the heart beyond the point which it can exert when fed by blood alone. That which is true of sodium hydrate was found to be true of aconitine, alcohol, ammonia, brucine, caffeine, chloroform, cocaine, curare, ether, pilocarpine, potassium, quinine, strychnine, and of all the principal drugs in the materia medica. In these experiments the heart is not to be regarded as a circulating medium, but as an organic medium of vital simplicity and tenacity with which the fundamental action of therapeutic agents may be demonstrated and measured. Further investigation showed, and this is the point of special interest here, that minimum doses of many drugs are direct antagonists to maximum doses of other drugs. For example, a maximum dose of alcohol, which was found to be one part to twenty-five parts of blood, paralyzes the action of the heart almost entirely, but when the minimum dose of atropine, which was found to be one part to one hundred and sixty thousand parts of blood, is added to this dose and administered at the same time, the tracings are nearly as high under this combined influence as they are under the influences of minimum doses of atropine, or under blood itself, as is seen in the following tracing:



Atropine. 1:160,000. Alcohol. 1:25. Their combined effects.
Figure II. The first part gives the effects of minimum doses of atropine, the second part of those of maximum doses of alcohol; and the third part the combined effects of a minimum dose of atropine and a maximum dose of alcohol.

A similar antagonism to that of atropine and alcohol was found between aconitine and ether, curare and ether, atropine and chloroform, aconitine and chloroform, strychnine and chloroform, curare and

*DIRECTIONS. Select for injection a point immediately over, or slight ly behind, the pulsating carotid artery in the neck, between the angle of the jaw and the clavicle. Lift the skin between the thumb and forefinger of the left hand and puncture only immediately through the skin. Inject five minims of a 2½ per cent. solution of cocaine hydrochlorate, detach the syringe from the needle and let the latter remain in the puncture. Wash out the syringe with water, draw a 2½ per cent. solution of silver nitrate into the syringe, attach the latter to the needle and throw in 5 minims of same. Or if cocaine nitrate can be secured mix 6 grs. of this and 6 grs. of silver nitrate with half an ounce of water and inject 10 minims. This is a preferable method, but as yet there is very little cocaine nitrate in the market. As a rule most of the injection should be given on the side below which the affected lung is located.

*Nervendehnung und Nervendruck. Von Dr. Ad. Zederbaum. Archiv fuer Physiologie, 1883, p. 161.

**The action and antagonism of some drugs on the frog's ventricle, by Thos. J. Mays, M. D. Therapeutic Gazette, February 16, 1885, p. 73.

pactions, it will finally be forced to seek a new or another state of equilibrium, in which it will remain after the attacking force has ceased to act. Such a result is well illustrated by the following phenomena: When a gentle gale blows over a field of wheat the wheat stalks are generally blown into a leaning position which tends to become more or less permanent, but a steady wind applied afterwards from an opposite direction will cause the stalks to become straight again and to resume and to retain a normal position after the latter force has ceased to operate. It is, therefore, by regarding these agents or forces acting on the effects of the forces of disease, that we find an explanation of the mechanism that improves the integrity of a nerve when it is irritated or compressed, as in Zederbaum's observations, or when a blister is applied near it, as in sciatica, or herpes zoster; or when nitrate of silver is injected over it, as in pulmonary phthisis. For just as the convulsive muscular movements and the cramps in the legs in sciatica, the numbness of the skin, the formication and bullar and pustular eruption in herpes zoster, are the legitimate sequence of nerve disintegration, so the pulmonary manifestations in phthisis are chiefly the result of vagi degeneration; and just as the two former diseases respond to medication that is applied locally to the nerves in question, so does pulmonary phthisis yield to counterirritation of the vagi in the region of the neck. In the further practical application of our subject, it may be said that alcohol has a special affinity for the nervous system, and frequently produces what is known as alcoholic neuritis, and that chronic alcoholism is frequently followed by pulmonary phthisis, in which disease of the vagi and of the peripheral nervous system coexists. In my work* recently issued a number of post mortem cases of this kind are given (p. 61), in which the vagi were degenerated. In my clinical work during the last few years I have frequently seen the most favorable results follow the injection of silver nitrate in alcoholic phthisis. To my mind it does not require a very extended stretch of the imagination to see the possible connection between the influence of the silver-injections and the favorable effects on the lungs in alcoholic phthisis. The disintegration of the pneumogastric nerves produced by maximum doses of alcohol is antagonized by stimulant or minimum doses of silver nitrate, or, in other words, the latter overcomes the effects of the former in the same way as a minimum dose of atropine antagonizes the devitalizing effects of maximum doses of alcohol on the frog's heart. That which is true of the pernicious effects of alcohol so far as engendering disease of the nervous system, vagus and lungs is concerned, is also true of syphilis, mercury and lead, of the toxins of typhoid fever, diphtheria, measles, whooping cough, mumps, influenza and beri beri. Vagus disease and phthisis are also frequently associated with multiple neuritis, locomotor ataxia, epilepsy, hysteria, idiocy and insanity, and are commonly caused by any influence or condition that undermines the integrity of the brain or nervous system.* From all that has been said,

chloroform, aconitine and curare, atropine and curare, atropine and strychnine, and strychnine and atropine. In these experiments it is important to realize that it is not so much the drug as it is the dose of the same that plays the leading rôle in these phenomena of antagonism; for, since strychnine is an antagonist to atropine, atropine to strychnine, curare to atropine, atropine to curare, etc., the minimum dose of one drug is antagonistic to the maximum doses of many, and perhaps all other drugs. Moreover, the fact that one drug has the power of interfering with the action of another establishes the principle that a therapeutic force is capable of overcoming and of successfully resisting the action of other disintegrating forces. For if we look beneath the surface of these phenomena we find two forces at work, which, being properly adjusted, become antagonistic to each other in their action on organic tissue—the one tending to enhance or to elevate, and the other to depress the function of the latter. These antagonistic effects are displayed as decidedly as if they were produced by the mechanical forces of attraction and repulsion, and they give us an exact and measurable idea of the power which drugs exert in supporting and preserving life when attacked by adverse forces. If we admit that disease is but the manifestation of morbid forces—forces which move in a direction inimical to health—and if we agree to substitute for these the influence of maximum drug doses as given in the above illustrations, we have a clear picture before us as to how drugs combat disease, viz.: by interference or antagonism. Now what is the mechanism of antagonism? What is the intimate nature of the combat between drug action and disease? In a broad dynamic sense it must be remembered that all the textures of the body are in a state of molecular motion, maintained principally by the internal chemical changes which the food undergoes, and that so long as the molecular motion of each texture harmonizes with that of every other, health is the result; but that as soon as perturbation arises among anyone or a number of these forces the condition which is known as disease follows. How then do antagonistic forces like drugs restore or augment healthy molecular motion? In other words, how does compression or irritation of a nerve, as in Zederbaum's experiments, enhance the function of nerve and muscle? or, how do minimum doses of drugs increase the contractile energy of the heart? Let us say, for example, that when gentle friction or massage is applied to a group of tired muscles, as of the arm, molecular activity of the latter is greatly increased. In this instance we see the antagonism of two kinds of forces—the force of friction, and that inherent in the tissues—moving in different or antagonistic directions, both of which being governed by the same physical laws, viz.: if one force acts on another it always calls for a corresponding reaction. Then when two forces of equal strength meet each other from opposite directions rest is produced. When two forces of somewhat unequal strength come in conflict with each other, the stronger causes the weaker to move in a direction parallel to its own, and to a point where a mutual balance takes place; and although the latter may tend to rebound and to assume its former position, yet, through the operation of a series of such im-

*Pulmonary consumption, pneumonia, and allied diseases of the lung. By Thomas J. Mays, A. M., M. D. Published by E. B. Treat & Co., New York, 1901.

*For a fuller elucidation of this subject see Author's book (loc. cit.) pp. 61-114.

we may conclude that the mechanism of the silver nitrate injections is of such a nature that it arouses the vagi from a feeble to a more vigorous station, and that in this way they create an antagonism to disease which diffuses itself throughout the extensive ramifications of these nerves.

PELIOSIS RHEUMATICA.

By T. AVERY ROGERS, M. D.,

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President of the Clinton County Medical Society.

This disease was first described by Schönlein and is sometimes called Schönlein's disease. The patient usually has the prodromal symptoms of an acute infection, malaise and fever, followed by symptoms of articular inflammation as met with in ordinary articular rheumatism. The knees, ankles and wrists are the joints more commonly affected. In a short time, from a few hours to two or three days, a purpuric eruption appears, which remains for a time, when the blood is gradually absorbed and the petechial spots disappear as after ordinary contusions or extravasations. Fatal hemorrhages in this disease have been reported by Kaposi. This disease is said to be most common in young women from 20 to 30, although Osler says it is most common in males of this age. Rheumatism is said to predispose, as well as malaria, and other infectious diseases. Finger has reported the discovery of cocci during the course of the affection.

Opinion has differed greatly among different observers as to the cause of the disease. Some think it is rheumatic in origin, others think it due to systemic affection from a coccus peculiar to itself. It is certainly generally conceded that it sometimes occurs during the course of, or following acute infections.

The case which I am about to report seems to uphold the theory that in some cases at least the cause is a systemic infection from the presence of a pyogenic focus.

Edema is sometimes a very marked symptom, and large quantities of albumin are sometimes present in the urine.

Treatment, as a rule, does not seem to shorten the course of the disease. This should be symptomatic, as in the absence of complications recovery is usually rapid.

Mrs. A. F., age 19. Has had two children, older three years. Baby died three months ago, aged one month. Patient has always had very good health, and has been free from any serious illness, including rheumatism. She is a marked blonde, and a slight, delicate woman. On December 29, 1900, she had some fever and malaise, resulting in a few hours in severe pains in both ankle joints with heat, redness and swelling. She did not come under my observation until the next day. The physician who had her in charge at this time applied the usual remedies for acute rheumatism. The pain remained in the ankle joint for twenty-four hours when all symptoms of articular inflammation disappeared there and reappeared in the wrist joints where it remained for a few hours. After this all articular symptoms were absent. Coincident with the beginning of the articular symptoms a petechial extravasation appeared in small spots quite evenly distributed over the legs below the hips. This was dark red and was at first macular, later becoming papular and purple in color. It would not disappear on pressure. The spots were confined to the legs, with the exception of a few on the left breast. They were not more common over the affected

joints. Itching was severe, and when scratched a line of subcutaneous extravasation of blood was visible. The most interesting symptom of the disease from the beginning was violent cramp like pains through the abdomen. These resisted treatment and were frequent for a week, when they disappeared. After a violent paroxysm of pain an attack of vomiting would relieve the patient for perhaps half an hour when another attack would occur. The stomach would not retain water or food any time and evidently did not digest or absorb very much in spite of the fact that peptones and easily digested foods were given. Thirst was excessive. The kidneys secreted quite freely, but a small quantity of albumin was present in the urine for a week or two. There was a slight edema of the face, especially the eyelids. Constipation was obstinate and was only relieved by laxatives accompanied by enemas or suppositories. The amount of opiates given would not account for such severe constipation. The pulse and temperature were rather subnormal after the subsidence of the articular symptoms until convalescence. In eight days the vomiting ceased, the bowels became regular, appetite and strength returned, all pains stopped, and the extravasations of blood gradually became absorbed.

The treatment was occasional hypodermics of morphine for the pain and vomiting, also bismuth and occasionally a slight amount of cocaine for the vomiting. Strychnine sulphate, gr. 1, 30 was given t. i. d. Bromide of potassium was given every 4 hours in ten grain doses. Three months previous to this attack the patient had suffered from an abscess of one breast which was lanced by the physician in charge. The wound soon closed and the breast gave the patient no further trouble. Two or three weeks after this attack of peliosis the wound opened and discharged slightly. In this case it seems to me that this suppurative condition was an etiological factor in the attack of peliosis rheumatica.

IS THE CENTRAL FISSURE DUPLICATED IN THE BRAIN OF CARLO GIACOMINI, ANATOMIST?

A Note on a Fissural Anomaly.

By EDWARD ANTHONY SPITZKA,

of New York.

Student of Medicine, College of Physicians and Surgeons.

In an elaborate study of the brain of Professor Giacomini, the celebrated anatomist, G. Sperino (1) records a peculiar anomaly which the former was himself the first to describe, and so rare is this anomaly that its finding in this particular instance would be a remarkable coincidence. It consists in the alleged duplication of the central fissure (or fissure of Rolando) upon the right side of Giacomini's brain, the two fissures including between them a so-called "gyrus Rolandicus."

Although a score of such instances have so far been reported, it is doubtful whether all of these would bear a close scrutiny of the conditions presented by them. For instance, in the brain of Dr. W. I. Brenizer, a suicide, a duplicity of the central fissure appeared to be present and was so described. Subsequently, Professor Wilder revised this interpretation in a paper (2) read before the American Neurological Association, in which he concludes that the second fissure in question is in reality the postcentral.

In so far as one may base a view upon the illustrations and descriptions which Sperino has given of Giacomini's brain, the explanation of the conditions as they exist appear unsatisfactory, and in this instance, as in Wilder's case, the duplication of the central fissure is only an apparent one. In Figure 1 is presented a copy of the lateral surface of the right hemisphere of Giacomini. The nomenclature employed by Sperino differs somewhat from

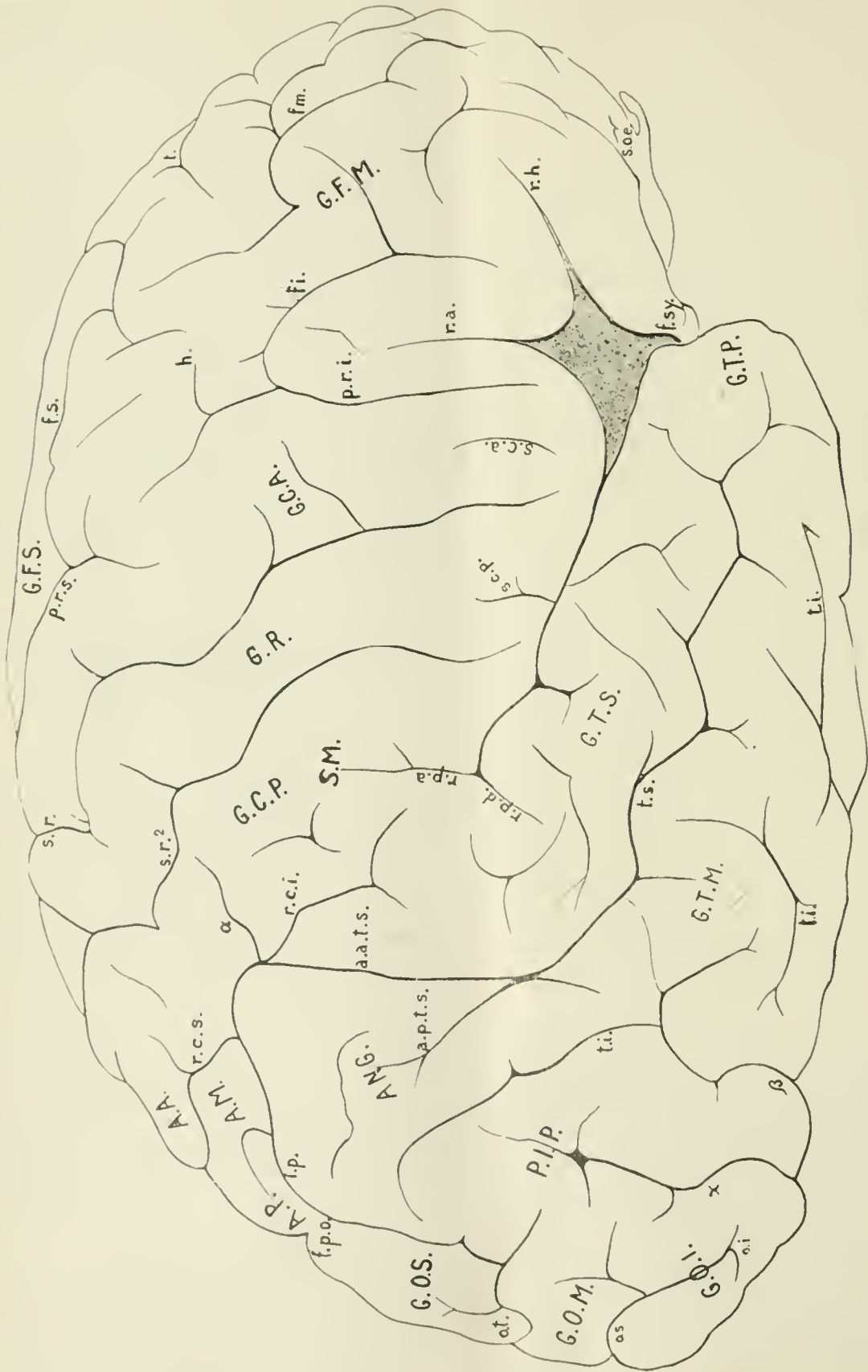


FIGURE 1.—Right hemispherium of *Giacomini* (after Specino). The exposure of the insula is said to be an artefact. For explanations see the text.

the American terminology, and I therefore introduce a list of the necessary terms for comparison:

SPERINO.	AMERICAN.
S.R. S. Rolandicus	Central F.
S.R. 2 S. Rolandicus secundus	"Second" Central F.
G.R. G. Rolandicus	G. Rolandicus
R.C.S. S. Retrocentralis sup.	Postcentral F.
R.C.I. S. Retrocentralis inf.	Subcentral F.
S.M. G. Supramarginalis	Marginal G.
G.C.P. G. Centralis post'r	Postcentral G.
S.C.P. S. Subcentralis post'r	Transpostcentral F.
S.C.A. S. Subcentralis ant'r	Transprecentral F.
I.P. S. Intraparietalis	Parietal F.
R.P.A. R. Post'r Ascend. Sylvil.	Episylvian F.
A.A.T.S. R. Ant'r ascend. del Solco temp. sup'r. (or S. Inter-medio).	Supertemporal F.

imply absence of the subcentral since this fissure normally serves to separate the two gyres from each other.

Fourth, Sperino's mode of interpretation places the entire postcentral complex too far caudad to comply with the demands of the normal mesial relations, as can be ascertained from a study of the second plate, not reproduced here. Thus the dorsal end of the "second central" (S. R. 2) is not cephalad of the upturned caudal end of the paracentral fissure, a relation which the true central fissure constantly has. Furthermore, Sperino's *sulcus retrocentralis* su-

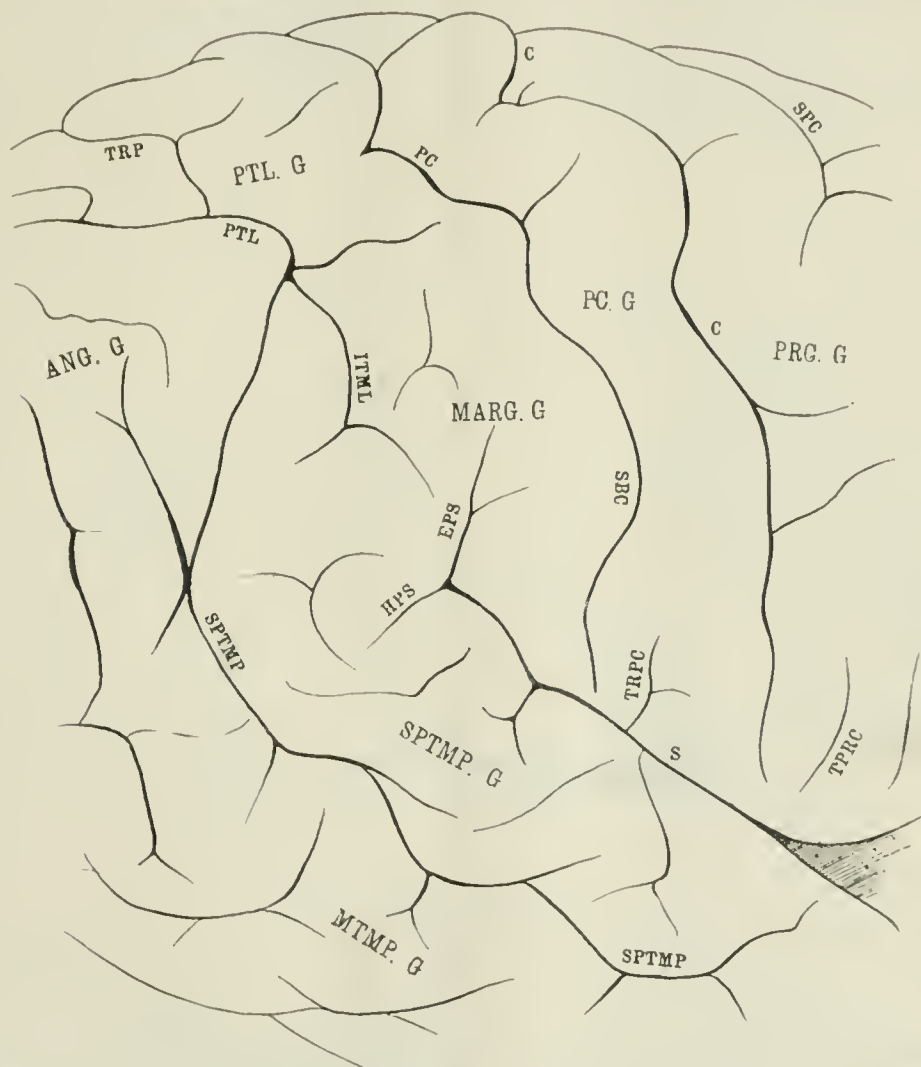


FIGURE 2.—Prouto parietal formation, same as in Fig. 1, but the designations are revised in accordance with the present writer's views.

While the configurations of the region in question are atypical and of unusual appearance, the interpretations made by Sperino appear to the writer unwarranted for the following reasons:

First, and most important, the subcentral (R. C. I.) is placed caudad of the episylvian (R. P. A.) which would be an anatomical impossibility.

Second, the marginal gyre (S. M.) is situated cephalad of the subcentral (R. C. I.) instead of caudad, which would likewise be in contraindication of anatomical facts.

Third, the immediate fusion of the postcentral gyrus (G. C. P.) with the marginal g. (S. M.) would

perior is confluent, over the dorsi-mesal margin, with an unmistakable intraprecuneal fissure (P. S.). Such an unusual mode of junction should at once call attention to the relative latitude of these fissures.

Convinced that Sperino's interpretations are erroneous and unsatisfactory, the writer has taken the liberty of naming the fissures and gyres in accordance with the demands of normal relations as nearly as can be (Fig. 2).

I. Sperino's alleged "Second central" is nothing more than an unusually long and confluent postcentral + subcentral. The dorsal terminus is bifur-

ated and embraces the caudal paracentral limb, a very common arrangement; the ventral end approaches the sylvian cephalad of the episylvian ramus.

II. The marginal gyrus thus preserves its normal bounds as it curves around the episylvian, while the alleged "gyrus rolandicus" is simply a well-defined post-central gyrus.

III. The fissure named R. C. I. (Fig. 1) is in reality the intermediate fissure (Jensen) more or less perfectly marking the boundary between the angular and marginal gyres.

IV. Sperino's R. C. S. (Fig. 1) is an insignificant junction of the parietal fissure with the transparietal (Brissand), a fissure which often appears as a dorsolateral extension of the intraprecuneal. The odd junction of the parietal, supertemporal and in-

comini (4), in 1882, there is an unquestionable duplication, with a supernumary Rolandic gyrus, as shown in Fig. 3, reproduced from the original woodcut. In stating that the dorsal terminals of both central fissures are in relation with the caudal portion of the paracentral lobule, Giacomini removes all doubt as to the identity of these fissures, especially as there exist in addition well-marked precentral and postcentral fissures in their normal relations.

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- (2). B. G. Wilker, Revised Interpretation of the central fissures of the educated suicide's brain exhibited to the American Neurological Association in 1891. *Journal of Nervous and Mental Disease*, October, 1900.
- (3). G. Leggiardi-Laura, *Giornale della R. Accademia di Torino*, September, 1900.
- (4). C. Giacomini, *Varietes des circonvolutions cerebrales*

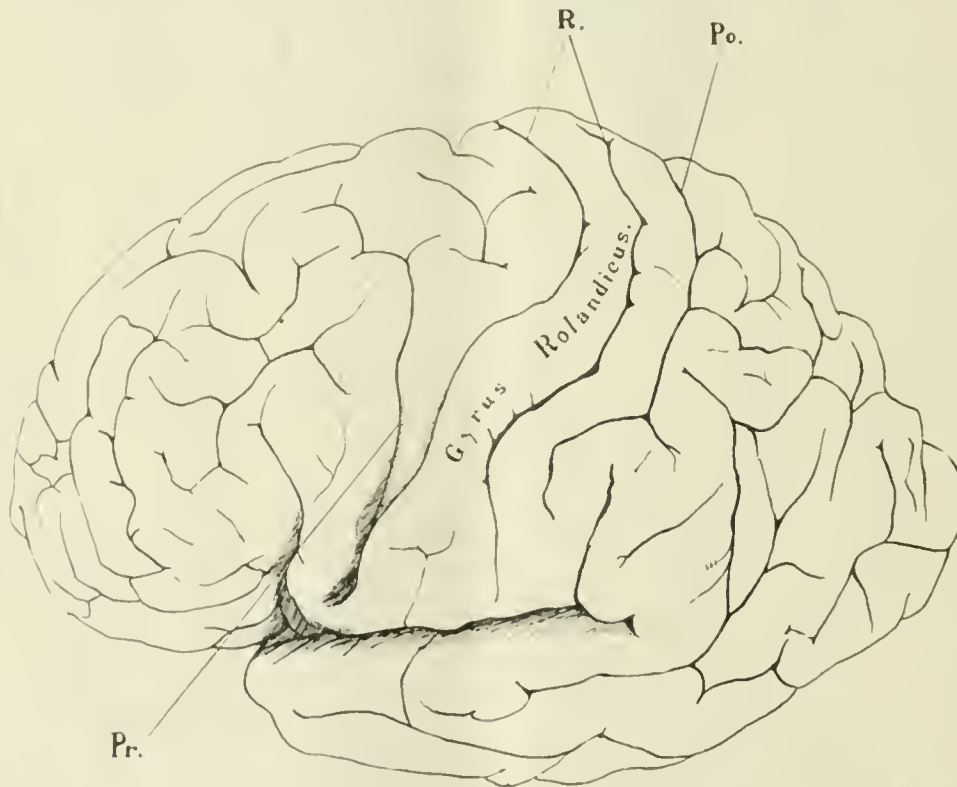


FIGURE 3.—Left hemisphere of the imbecile Alb. Battista (after Giacomini) R marks the two central fissures. Pr. is the precentral, Po. is the postcentral.

termedial at a common point is, it must be admitted, quite confusing. The separation of the parietal from the postcentral, though quite unusual, occurred, for instance, on the left side of the elder Seguin's brain, and has also been observed by others.

Subsequent to the appearance of Sperino's account, a paper was read by G. Leggiardi-Laura (3) in which the alleged duplicity of the central fissure is discussed in its morphological bearing.

Leggiardi concludes that a true duplicity of the central fissure has not yet been demonstrated, and that its alleged existence in the twenty-three cases so far recorded depends upon a multiplicity of fissures in the parietal lobe, commonly found in brachycephalic crania. Such conclusions hardly seem justified to the present writer, for in the case of the imbecile, Alb. Battista, described by Gia-

comini (4), in 1882, there is an unquestionable duplication, with a supernumary Rolandic gyrus, as shown in Fig. 3, reproduced from the original woodcut.

FIGURES.

Figure 1. Right hemisphere of Giacomini (after Sperino). The exposure of the insula is said to be an artefact. For explanations see the text.

Figure 2. Fronto-parietal formation, same as in Figure 1, but the designations are revised in accordance with the writer's views.

Figure 3. Left hemisphere of the imbecile Alb. Battista (after Giacomini). R. Marks the two central fissures; Pr. is the precentral; Po. is the postcentral.

Abbreviations used in Figure 2.

FISSURES.

C	Central f.
E P S	Episylvian f.
H P S	Hyposylvian f.
I T M L	Intermedial f.
P C	Postcentral f.
P T L	Parietal f.
S	Sylvian f.
S E C	Subcentral f.
S P C	Supercentral f.
S P T M P	Supertemporal f.
T P R C	Transprecentral f.
T R P	Transparietal f.
T R P C	Transpostcentral f.

ANG. G.
MARG. G.
MTMP. G.
P.C. G.
PFC. G.
PTL. G.
SPTMP. G.

GYRES.

Angular g.
Marginal g.
Meditemporal g.
Postcentral g.
Precentral g.
Parietal g.
Supratemporal g.

THE FOUNDATIONS OF FAITH IN MEDICINE.*

By A. W. CRANE, M. D.,

of Kalamazoo, Mich.

Faith in the internal administration of drugs has divided the public and is far from uniting the medical profession. Among the laity we find all degrees and varieties of anti-medicine fanaticism, from the belief that the use of medicine is a denial of the power and wisdom of God, to the loudly reiterated statement that medicine is powerless to affect the body, and that mind is alone accountable for disease and cure. Another extreme is the patent-medicine devotee, whose faith in labels is matched only by the savage before his fetish. Unnumbered tons of patent medicines are yearly consumed, and medical superstitions are daily stimulated by countless pages of advertising. A sober majority, however, still have a faith in drugs plus doctors, preferring to mix their medicines with a certain amount of brains.

On the professional side we must recognize the influence of the elderly physician, whose favorite saying is that he began practice with a hundred remedies, and now uses three or four; and the influence of the surgeon whose lifted eyebrows and shrugging shoulders stimulate public distrust in medical science. We find, also, the young practitioner who panders to a certain class of the public by explaining on occasion that *he* depends mostly for treatment on diet, hygiene, electricity, massage, etc., thus insinuating that drugs are "out of date."

I will not catalogue the numerous medical quackeries and creeds. Let it suffice that the solid majority of the medical profession like the sober mass of the laity, have an abiding faith in the intelligent use of medicines. It is this class which should now and then reconsider the foundations of this faith and help to preserve the mental equilibrium of society.

I offer no new contributions to our knowledge of drug-action, but would briefly review the reasons for the faith that is in us.

Medical knowledge became science when it was considered in the same way that geology, botany and astronomy are considered. The susceptibility of living tissues and organs to chemical substances is a fundamental fact as irrefutable as any fact in mathematics. The world knows that sufficient quantities of chloroform, strychnine or morphine will produce such extreme alterations in bodily processes that death is the result. That lesser quantities will also produce alterations in tissue chemistry and organic functions is no less certain. Similar statements may be made of most other drugs. It does not follow, because a drug in large doses will cause death, that therefore in smaller quantities it will produce deleterious effects. It is well known that there is no line between poisons and non-poisons.

It is a question of dosage. Ordinary table salt may be taken in quantities large enough to produce death. Hydrochloric acid, a natural secretion of the human stomach and necessary in the normal digestion of food, is nevertheless labeled poison by every druggist. The secretion of the thyroid gland is absolutely essential to the development of the individual and the maintenance of health, and yet if it be secreted or administered in too large quantities its action is poisonous.

Exactly what alterations may be produced in the body by various substances has been partially answered by the record of the experience of many thousands of trained intellects from the time of Hippocrates to the present day. More precise and increasingly valuable answers are being given by patient experimentation upon animals. It is only by animal experiments that much further advance can now be made into this vast field.

The practical question affecting medical faith is whether or not the effects producible by various drugs can be used in combating disease processes and their results. For answer we may call to mind the extraordinary control of bodily processes which may be exercised by the humblest practitioner, by means of well-known drugs. This control, although for the most part temporary, enables the physician to secure some extremely valuable effects. He can regulate elimination of effete matters. For example, he can produce or he can stop sweating; he can increase or decrease the expectoration; he can cause and often relieve vomiting; he can alter the quantity, constitution, reaction and antiseptic properties of the urine; he can excite or check the movements of the bowels. The circulation is likewise obedient to his touch. He can produce at will a rise or fall in arterial pressure; he can steady or strengthen or slow or quicken the action of the heart. He can stimulate or depress the respiration, and increase or decrease the power to cough. Digestive processes, particularly those of the stomach, may be profoundly influenced. The constitution of the blood may be altered; the quantity of hemoglobin, the volume of red corpuscles, and the number of leukocytes are in most cases subject to the will of the physician. He can reduce the temperature in fever to any desired degree. He can quiet the nervous, and relax spasms. He may exercise a marvelous dominion over pain. There is no physical suffering which lies beyond the temporary control of the physician. He may cause a local anesthesia or he may impose a general insensibility to any surgical procedure, however severe. Further than this, he may supply lacking secretions and body substances, and produce results which are sometimes little short of marvelous. Iron, supra-renal extract, pepsin, hydrochloric acid, and thyroid substance are examples of this enlarging class. What can be more convincing as to the value of animal experimentation than the ability it has given the physician to transform the cretin idiot, that squat, hideous monstrosity of the museum, into the normal shape and mind of a human being. Such is the power of the thyroid extract over the secret metabolism of the flesh.

More brilliant, however, than the treatment of the patient, is the modern treatment of the disease itself. This department of medicine has saved and

*Read before the Michigan State Medical Society, Battle Creek, Mich., May 15, 1901.

will continue to save the human race untold and incalculable suffering and death. Such is the power which the physician can wield through the possession of the antitoxin of diphtheria, the anti-tetanus and anti-streptococcus serums, anti-syphilitic and anti-malarial drugs, prophylactic inoculations, and the great range of antiseptics. These classes of agents, although yet small, have wrought such a change over the face of medical science that our expectations of future developments are almost without bounds.

This control of body and disease processes by drugs is by no means the limit of the physician's resources in the battle with disease. He has a well-equipped armamentarium of agents other than internal medicines. But the fashion of the day is to exalt these other methods at the expense of medicine, until the physician in some quarters is made to feel almost apologetic for prescribing any more drug. As a profession we must remember that therapeutics is the highest and most difficult art in the whole range of medicine and surgery. The matchless science of diagnosis is but the handmaid of therapeutics. In the final analysis, the diagnostician finds the purpose and aim of his work to be the accurate application of agents to combat the processes and results of disease, and to restore the largest possible measure of health, whatever may have been the departure from the normal.

The failures of therapeutics are very often referable to failures in diagnosis. It is not enough to name the disease or defect. We must know with some degree of exactness what organic and tissue processes are being enacted. Then and then only can the resources of medicine be brought to bear. No matter how perfect may be our control of bodily functions, unless by a minute diagnosis, we know what should be done, we cannot accomplish the aim and end of all therapeutic effort. Diagnosis is the key to medicine. Nothing short of the daily use of the microscope, the test tube, and the many other accessories to modern clinical diagnosis will answer the exactions of the present day therapeutics.

It is true that the medical profession is not and should not be satisfied with the present status of therapeutics. There is an infinity of things hoped for, but the emphasis should not be so laid upon the shortcomings and imperfections of our art as to obscure the public view of the splendid resources and powers of medicine in this very day and generation.

NEUROLOGISCHES CENTRALBLATT.

1. Myoclonic Twitchings in Progressive Paralysis. J. HERMANN.
2. The Scapular-Periosteal Reflex. STEINHAUSEN.
3. The Connection Between Dreams and Hallucinations. (Conclusion). A. KAZOWSKY.

1.—The patient, a man of 26, was admitted to the asylum with fully developed symptoms of general paralysis. In addition he had Romberg's symptom, loss of the patellar reflexes and an ataxic gait. Later he developed symptoms of distinct spasticity, that is to say, there were tonic contractions of the muscles, resembling those occurring in tetany. The condition lasted for about 6 weeks, and was then replaced in part by clonic contractions of the right arm, which then extended to the left arm, sometimes involving one, and sometimes a group of muscles. Later, groups of muscles were involved at once, and the lower extremities developed the same symptoms. The patient did not show any marked exacerbation of the mental

symptoms. The convulsions, however, became more and more severe the patient emaciated, and finally died. Numerous cysts were found in the subarachnoid spaces over both motor regions, and the ventricles of the brain were somewhat dilated. The left kidney was completely converted into a huge cyst. The condition resembled that of paramyoclonus multiplex. It does not appear reasonable to suppose that the conclusions were due to anything excepting the cerebral condition, and it is possible that they were the result of the cysts found over the motor regions. [J. S.]

2.—Steinhausen has studied the scapular-periosteal reflex in 300 healthy men of the garrison at Hanover. He concludes that it can only be elicited by striking upon the median border of the spine of the scapula in the position already designated by Haenel. The typical contraction involves the posterior fibres of the deltoid muscle, rarely the central portion, and still more rarely the biceps. Only when the contraction is very pronounced is there slight adduction and external rotation of the upper arm. The reflex invariably occurs in health. In about 76% of all cases it occurred easily, and in 11% it was somewhat exaggerated. It is not a muscular contraction because striking upon the body of the muscle does not produce it. It occasionally occurs with unequal force on the 2 sides. It is probably constant, because relaxation of the muscles of the shoulder is usual. [J. S.]

3.—Kazowsky regards the occurrence of a dream before a delusion as really a proof that the delusion is already present in latent form. He does not think that delusions can be produced directly as a result of suggestion by a dream occurring during sleep. In discussing his case he calls attention to the very marked disproportion between the cause—a reproof in the class-room—and the result—the murder, in the most brutal manner, of the teacher. He excludes, however, the idea that the case is one of moral imbecility. The boy had always been good-natured and had never injured anybody. On the other hand, he had been predisposed during his whole previous life, to explosions of temper, and particularly his reading had been of a nature to fill his mind with ideas of deeds of violence. The subsequent conduct of the patient, who went quietly to his home after the murder, and partook of the mid-day meal with his family, was sufficient proof that a period of relaxation, in which he was incapable of judging of his conduct, followed the outbreak. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

June 17, 1901.

1. The Enterogenous Origin of Severe Anemia. E. GRAWITZ.
2. A Case of Pulsation of a Tympanic Membrane Cicatrix. F. GROSSMANN.
3. The Value of a Vegetable Diet. ALBU.
4. The Symptomatology and Therapy of Appendicitis. KAREWSKI.
5. Concerning a New Electro-Therapeutic Procedure. P. RODARI.

1.—The author opposes the theory which assumes that pernicious anemia is a chronic infectious disease and he does not believe it justified to draw conclusions regarding the enterogenous origin of pernicious anemia from experiments performed on metabolism. The latter experiments above all are not tenable because we do not always know under what form of diet the disease occurs. Individual dispositions must be taken into consideration in discussing the enterogenous origin of pernicious anemia. Atrophy of the intestinal glands may be considered simply as a local toxic manifestation or as the consequence of the progressive anemia. He believes that many theories are exaggerated as many of the symptoms present in pernicious anemia frequently exist without grave changes in the blood. [M. R. D.]

2.—The author reports a case of pulsation of a tympanic membrane cicatrix occurring in a woman 33 years of age who had suffered from bilateral middle-ear disease since early childhood. Examination proved that the right tympanic membrane showed in addition to the normal cone of light, a second streak of light reflex which was pulsating synchronously with the cardiac systole and receded with the diastole. It was found that there was a compression of the right carotid artery from a goitre, a mitral insufficiency and a hypertrophy and dilatation of the left heart. [M.R.D.]

3.—To be concluded.

4.—To be concluded.

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Infection with *Strongyloides Intestinalis*.—*Strongyloides intestinalis* is a small nematode which was first described, in 1876, by Normand, who discovered it in the stools of soldiers suffering from Cochin China diarrhea. Bevac, working at Normand's suggestion, named the parasite *Anguillula stercoralis*. Others workers subsequently found similar parasites in the stools of man and mammals, and a variety of names have, from time to time, been suggested for it. It seems to be conclusively shown, however, that *Anguillula stercoralis* and *Strongyloides intestinalis* are synonyms for the same parasite. On the other hand, there is no relation whatever between this worm and *Filaria sanguinis hominis*, as has been erroneously supposed. In the free-living generation the *Strongyloides* measures from 1 to 1.4 mm. in length and from .05 to .075 mm. in breadth. The cephalic extremity is rounded and pierced by the mouth, about which there are three or four papillae. Next to the mouth there is a vestibule, then comes the esophagus, which contains three chitinous teeth. Beyond the esophagus, the intestine extends to the anus, which is situated at the base of the tail. The female is larger than the male and usually more numerous than the latter sex. The vulva is situated on the right side of the body, a little below the middle, and leads into a double uterus, each horn of which ends in an ovary. The male parasite presents two cone-shaped and curved spicules at the base of the tail, which serve as the copulatory organ. The eggs are small, elliptical, and are usually segmented when laid. There are some slight anatomical differences between the free-living generation, the parasitic form and the larvae. While this parasite is frequently seen in France, Germany, Italy and Austria, the first case of the infection in North America was seen by Strong (Johns Hopkins Hospital Reports, Vol. X, Nos. 1-2, 1901), in 1896. The patient was a Bavarian, who had always lived in a small town until he came to the United States, eight years before. In this country he was a farmer for two years and worked as a tailor in Baltimore for six years. He complained of pain and swelling at the margin of the right ribs, and said that he had had from two to five stools daily

for three years. During the last portion of this period the stools contained blood. The swelling at the costal margin increased in size and a second tumor appeared in the back. These tumors were found to be abscesses that had reached the surface from the liver. The pus of these abscesses contained numerous actively motile specimens of amoeba dysenteriae, but was in other respects sterile. Microscopic examination of the stools showed a fair number of *Trichomonas intestinalis* and embryos of *Strongyloides intestinalis* in addition to the amoeba dysenteriae. The blood examination was not conclusive. The patient died of exhaustion, and at autopsy the parasitic form of the adult female *Strongyloides intestinalis* was found in the duodenum and jejunum; but not in the stomach, the bile ducts or the pancreatic duct. Strong is, at present, the Director of the Army Pathological Laboratory, at Manila, and since his residence in the Philippines he has seen four other cases of infection with this worm, one of which ended fatally. All of the patients suffered from an intermittent diarrhea often accompanied by gastro-intestinal disturbances. The stools contained many of the embryos, but no eggs and no adult parasites. The parasites have never been found in the blood. Cultivation of the embryos found in the stools has resulted in the development of both male and female adults of the free-living generation. The parasite is not harmless, because, in the Baltimore case, the eggs, the embryos and the worms themselves were found in the glands of Lieberkühn, in which situation they produced atrophy of the epithelium and round-celled infiltration from mechanical causes. At the same time, the worm is not regarded as particularly dangerous to man. We may expect to meet with more cases of this affection in North America, after the present free communication between this country and the tropics has continued several years.

The Surgical Treatment of Renal Tension.—This new invasion by the surgeon of a field that was, until quite recently, thought to be the exclusive property of the medical practitioner, marks another advance of surgical art. Like many other discoveries in medicine and surgery, the advantage to be

derived from renal incision in certain cases of congestion of this organ, was discovered, we might say, by accident. It was in 1896 that Sir Reginald Harrison first called attention to the fact that many cases of albuminuria supposed to be due to stone or some other removable cause, had been entirely cured by a simple exploratory incision made into the kidney substance. This fact caused Harrison to suggest tension as a cause of kidney disease and to recommend incision for its relief. We have before us this writer's latest communication on this interesting subject, being his address before the recent meeting of the Surgical Section of the British Medical Association, and we can commend most heartily its perusal to both medical men and surgeons. The author shows that increased renal tension is capable of producing those pathological conditions which we term Bright's disease. This condition is usually relieved by proper medical treatment, but there are cases in which it is held that an incision will relieve an acute nephritis which is so persistent in its progress as to be beyond the reach of drugs. The objection that an acute nephritis seldom goes on to suppuration and gangrene is met by the statement that these changes are anticipated by the death of the patient. Harrison refers to our treatment of other conditions where great tension is present, such as glaucoma and acute orchitis. He enumerates and illustrates with reports of cases, the various forms of renal inflammation which he thinks may be relieved by surgical intervention. These are: (1) Progressive signs of kidney deterioration, as shown by the persistence or increase of albumin when it should be diminishing or disappearing from the urine, as in the natural course of inflammatory disorders ending in resolution; (2) Suppression of urine or approaching this state; (3) Where a marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders.

One can hardly read this valuable paper without being impressed with its sound logic and the hope which the author holds out to many cases which are liable to result fatally.

The Advance in Renal Surgery.—The most important paper read before the German Surgical Congress in Berlin last April was Casper's "Progress of Renal Surgery." Before operating upon one kidney, Leopold Casper and Paul Friedrich Richter have devised a routine method of discovering, not only whether the other kidney is healthy or not, since man can live with a diseased kidney, but whether it is sufficiently healthy to be left to act alone. It is their practice to examine the urine withdrawn by simultaneous catheterization of both ureters, not

only for pus, albumen, casts, erythrocytes, micro-organisms, etc., but also for the total nitrogen, the height of the freezing point, and the amount of sugar excreted after an injection of phloridzin. A high freezing-point shows the functional ability of the kidney, while the appearance of sugar, approximately equal in quantity to the phloridzin injected, shows the chemical capability of the kidney. When both kidneys are normal, or both equally diseased, the results of the examinations of the urine will be similar. When all the results from the urine of one kidney are low or negative, there remains no doubt that the kidney on that side is seriously affected; when the results from the urine of the other kidney are approximately normal, the diseased kidney should at once be removed. Ten such case-histories are reported by Casper in the *Archiv für klinische Chirurgie* (1901, Volume 64, No. 2). Operation in these cases (seven nephrectomies, two nephrotomies, and one pyelotomy) was successfully performed. Casper adds the details of four more cases, in two of which both kidneys were found diseased. Operation was, therefore, not performed. Autopsy, held later, confirmed the diagnoses. In the other two cases, the other kidney was found to be temporarily insufficient and operation again was not done. With the aid of these excellent new methods, in addition to those already in use, we may look forward to a more exact diagnosis of renal disease and a more certain prognosis from renal operations.

The Utility of Cryoscopy.—In our issue of June 1, of the current year, there appeared an editorial upon this subject which was partly an historical résumé and dealt also with some of the results which cryoscopy promises. In our issue of June 29, 1901, we printed an original contribution: "Upon the Freezing-Point of Urine; Its Determination and the Inferences Which May be Drawn from It" by Dr. J. H. Huddleston, of New York. There are a number of points of practical value in Dr. Huddleston's paper which deserve mention. He has carefully studied the subject of cryoscopy and in addition to that he has done a considerable amount of clinical work in this field and furnishes us with his method in detail. Of especial interest are the conclusions which he draws as to the uses of urinary cryoscopy. He calls attention to its pre-eminence as a test of function quite independent of structure. In cases of uncomplicated diseases of the heart the new method has won high esteem. Koranyi places especial value upon the findings of cryoscopy alone and from the results obtained he is able to direct treatment of the cardiac condition from the indications as to whether the circulation in the kidney is hindered in the slightest degree, and from the state

of arterial tension which is also revealed. It is interesting to learn that certain ratios obtained in uncomplicated diseases of the kidney may show the existence of a glomerular nephritis as distinguished from the tubular, a distinction, as Huddleston remarks, which has hitherto been hardly possible. In cases of combined heart and kidney disease the value of certain ratios points to the organ chiefly at fault, and in cases of effusion into a serous cavity, we are enabled by cryoscopy to learn whether absorption or exudation is going on. This deduction is comparable to that one long ago made known as to the increase or decrease of chlorine in the urine. It is evident that while this method is distinctly to be followed out in the laboratory and requires time and skill, as our facts are accumulated, much will be learned. It especially represents a notable advance in the application of quantitative physico-chemical methods to clinical work.

Havana's Best Record.—Major W. C. Gorgas, Chief Sanitary Officer for Havana, states in his report for July that the best record ever made for that month in the matter of yellow fever was made this year. Five hundred and thirty-seven deaths from all causes occurred in the city during last July, which was the smallest number recorded since 1889 with the single exception of the year 1900. As Havana has a population of 257,777, the death rate for July was at the rate of 24.99 per 1,000. This compares favorably with many more northern cities. In fact, for the week ending July 6 New York had a death rate of 41.86 and Pittsburg had one of 34.03; but these and other northern cities were suffering at that time from the effect of the abnormal heat.

Only four cases of yellow fever, with one death, occurred in Havana in July. Two of these cases occurred in children, and were of a type of the disease which is known locally as "Borras," and which is not recognized by the physicians in Havana as being yellow fever. Of the identity of the disease, however, Dr. Gorgas says there is no doubt.

In 1897 there were 168 deaths from yellow fever in Havana in July; in 1899 there were only two deaths; in 1901 there was one but one death. This change is coincident with the occupation and cleaning of Havana by the United States Government. Major Gorgas says that the chief warfare now in Cuba is against the infected mosquitoes. He evidently accepts it as settled that the mosquito is the agent of infection.

Medical Education in China.—It is difficult for us in the midst of our great Western civilization to appreciate the fact that an immense empire like China, with an ancient and in some respects highly developed civilization of its own, is practically with-

out hospitals, medical colleges or any system of practice approaching a true science of medicine. In a recent number of the *China Medical Missionary Journal*, Dr. H. T. Whitney describes briefly the situation in China and its needs. He says that there are no Chinese hospitals, no Chinese medical colleges, no Chinese physicians proper, and no Chinese medical science. It evidently remains for the pioneers of Western civilization to introduce this science with all its necessary appurtenances into the Celestial Empire. This is a vast but most interesting problem. Dr. Whitney thinks there has never been a more opportune time than the present for extending the medical work already done. The Boxer movement of last year was but a temporary hindrance. Thus far the pioneers of Western medicine have been largely the missionaries. They have seized the opportunity to make medicine the handmaiden of religion, and it is doubtless true that they have done some good in this way. But what Dr. Whitney, with wise forethought, perceives and emphasizes, is that China must have her own medical colleges and schools as well as her own scientific medicine. The Japanese have already taken great strides in this direction, and some of their medical scientists have contributed substantially to medical knowledge. In China, on the contrary, everything remains to be done. The few missionary schools and hospitals are thus far mere nuclei. They are in every sense exotic, and while doubtless they are and will continue to be the centres of medical science, they cannot be said to have taken root until they have interested the Chinese people and government in this problem of medical education. In other words, the natives themselves must be trained and educated as physicians; the hospitals and medical schools must be essentially Chinese, although doubtless they will require to be under Western tutelage for some years to come.

We are glad to note that there is a plan for the establishment of a native medical college in Nanking or Hankow. We consider this whole subject of transcendent interest and importance. When we consider the vast population of China and its needs, no words are wanted to paint the extent of the field and its importance for future cultivation. We extend to this movement our hearty congratulations.

In this connection we might say that we believe that while much is owing to the missionaries for the introduction of medicine into China, it is nevertheless better that medical science should take such a root in that country that in a sense it will propagate itself. In other words, we believe it should be secularized, as it is in all civilized countries. While the conditions in China have evidently been such as to require the propaganda of the missionaries in order

to introduce medical science into that country, it will nevertheless be better in the end, and more wholesome, for the more advanced and educated Chinese to see for themselves that medicine is to be cultivated for itself.

Women as Scientists.—The problem whether women are fitted to succeed in scientific pursuits seems to have been solved satisfactorily by the late Eleanor Omerod. As a scientist Miss Omerod gained distinction in entomology. For years past she had been an authority in that department especially of entomology which relates to agriculture. She studied insects from the economic standpoint—that is, for their injurious effects upon agriculture, just as now we are beginning to study them more closely for their injurious effects upon human health. Hence Miss Omerod was a pioneer in a field which lies contiguous to that of human pathology. Her career was most interesting and instructive. From *Harper's Weekly* we learn that in early life she began to study insects on her father's country place in Gloucestershire. She studied their ravages in the fields and orchards, and the work became a life work. She contributed to the Royal Horticultural Society, and became entomologist to the Royal Agricultural Society. For twenty-four years she sent out an annual report of her work. Her fame spread abroad, and she was consulted by suffering agriculturists in all parts of the world. In recognition of her researches she received many medals, and last year she received (a rare thing in Britain) the degree of Doctor of Laws from the University of Edinburgh. Her work was untiring and unselfish, for it seems to have been done for the love of it and not for gain. At the age of seventy-three she died, having bequeathed to science the record of a great work, and to her sex the distinction of a fine career.

No Quarrel with the Medical Profession.—Mr. James M. Brown announces in our columns to-day that the American Humane Association has no quarrel with the medical profession. As Mr. Brown is President of that Association he ought to be familiar with the objects of its animosity. We thank him for helping us to that expression. A quarrel with the medical profession for its work in the amelioration of human suffering would not redound to the credit of Mr. James M. Brown's Association in the eyes of the public, and he evidently knows it. There is in the expression the suggestion of a fear that Mr. James M. Brown's Association may cut a sorry figure in its senseless and mendacious tirade against medical science. As for the medical profession, it is amply able to account for itself and its work. It does not hide its light under a bushel of mock hu-

mility or of ambiguous phraseology. It indulges in no spurious benevolence. It has a mission to perform in this world, and it will perform it. It does not sacrifice women and children in any hospital in the land (as millions of mothers and children will testify), and the man who utters that libel against it is condemned out of the mouths of babes and of sucklings. In the meantime Mr. James M. Brown would have done better to answer Dr. Keen's arguments rather than merely to wish that distinguished surgeon God-speed on his distant journey—a wish which no doubt came straight from Mr. Brown's heart. In the opinion of the President of Mr. James M. Brown's Association it is probable that Dr. Keen can not go too far away.

To Fly or Not to Fly.—We learn from the daily press that Monsieur Santos-Dumont has solved the problem of aerial navigation, and the statement is reiterated with more confidence than ever before. Now we do not wish to detract in the least from the great service that Monsieur Dumont has rendered the human race, but we might, in passing, call attention to the fact that the solution of the problem of aerial navigation was very nearly reached some years ago by an American, Professor Langley, and that he was able to construct a machine that flew very well without the aid of balloons or other artificial support; the only difficulty being to obtain an engine that, with the requisite lightness, would continue working for a sufficiently long time, and this, of course, is only a question of time.

In the early days of aeronautics, an effort was made to imitate the flight of birds. In our later days we have abandoned this entirely, and the modern plan is either a modification of the kite, pulled along by a propeller instead of a string, or a balloon pushed along by the same means. It might be urged that an effort should be made to imitate nature, but when we think how slightly our modern steam-ships imitate the mechanism by which fishes move through the water, we can readily believe that our flying-machines will not necessarily closely resemble birds. And there is a good reason for this; because persistent rotation never occurs among living creatures, and it is the most common and easily produced mechanical motion.

There is one feature of the bird's flight that will perhaps be very closely imitated in our future machinery; that is, soaring. This, of course, is practically only an application of the kite idea, with gravity instead of a string. The only question is whether it will pay. Whether, that is, it is more desirable to imitate the condor with its huge wings spread and occasionally flapping, or the loon, with its large body and small wings working persist-

ently; or, if we choose to find another illustration, we might compare the honey-bee and the dragon-fly.

Of course, the question for us is, what effect this new sport or occupation will have upon health. Naturally, the ordinary injuries will not differ from those produced in other ways, but is it not possible that mountain sickness will become a common complaint, and that as vigorous and perhaps as unsuccessful efforts will be made to combat it, as have been made to combat sea-sickness? Physicians may also be called upon to devise methods of overcoming some of the other unpleasant results of high altitudes, and it may be that a new class of maladies may arise as a result of some particular strain or effort analogous in their ways to railway spine, and other manifestations of hysteria.

Even as it is an "ill wind that blows nobody any good," so it is a very good wind that profits many people, and perhaps the breeze caused by Monsieur Dumont's propeller will redound to the advantage of many trades, not excepting our own.

The Role of the Lymph-glands in the Infectious Diseases.—In a thorough review of this subject in the (*Bulletin Medical*, 1901, No. 39) Dr. Courtois-Suffit states that the lymph-glands physically, chemically, and anatomically represents differentiated organs for the protection of the organism against microbes and their toxins. According to the malignancy of the invading infection, the microbe may disappear before reaching the nearest lymph-gland; it may reach the nearest gland only; it may reach a far off gland; or it may quickly reach the blood *via* the thoracic duct. It is most common, however, for the invading micro-organism to remain in the nearest lymph-gland, which enlarges. Polynuclear leucocytes arrive, by the blood channels, and the lymph cells become detached. Far off glands enlarge when the toxin or the microbe reaches them. These processes are most frequent in childhood, and may persist. The reaction may be so marked as to cause a general disturbance, glandular fever, or bronchial adenopathy. In adults the lymph-glands become sclerosed, and with old age they atrophy. These glands are then much less able to protect the organism. [M. O.]

Tuberculous Meningitis.—(*Le Bulletin Medical*, 1901, No. 38) publishes an article by Professor Raymond upon tuberculous meningitis, localized in plates. This is generally found in adults, the plates lying near the Rolandic region. The ordinary symptoms of basal meningitis are absent, while those due to irritation of the cortical motor centers predominate. Yet some cases are only found post-mortem. It may be over the paracentral lobule, causing ascending symptoms; over Broca's convolution or the island of Reil, causing descending symptoms; or over the ascending frontal convolution, causing radiating symptoms. Motor aphasia, paralysis, convulsions, epileptic or tetanic, with or without pain, contractures, etc. are the main symptoms. The paralysis is generally well limited, and occurs first in one extremity. Sensation is affected before or with the appearance of the motor symptoms. The tache cérébrale is always absent, as are vomiting, constipation, scaphoid abdomen, etc. It occurs suddenly, one paralysis succeeding another; or an epileptic attack with aphasia is first noted. These rapidly grow worse, and death occurs. It is seen in people with phthisis, and is easily differentiated from diffuse basal meningitis, syphilis, or tumors. In children it may be mistaken for acute anterior poliomyelitis. Raymond suggests removal of the plate just as soon as a diagnosis of localized tuberculous meningitis in plates has been made. [M. O.]

Reviews.

Proceedings of the Association of Military Surgeons of the United States. Vol. IX. 1900. Chicago. R. R. Donnelly & Sons Co. 1901.

The Association of Military Surgeons of the United States is made up of medical men of the regular army and of the National Guard. It is interesting to note that for 1900-1, nearly all the officers and members of the executive committee belonged to the National Guard. This speaks highly for the courtesy of the regular army, since the subject matter of this volume has been contributed in the main by the men of the established service.

Standish contributes a paper upon the standard of vision required of the enlisted men, and places this at 20-XX in the right eye and 20-XL in the left eye, as more than sufficient for practical service. Even if the standard of vision were placed lower the service would not suffer, and many otherwise eligible men would not be rejected. It certainly strikes the practical observer that since the time of hand-to-hand conflicts has passed by, a defective vision which can be corrected by glasses should prove no impediment to military service.

Huddleston weighs the value of the Schumberg method of purification of water for military purposes. It will be remembered that Schumberg's method is based on the disinfecting power of bromine. He prepared tablets of this, one of which was sufficient to sterilize one litre of water. Huddleston found that the method is sufficiently rapid and practicable.

There is an interesting contribution from Kemp upon field work in the Philippines. Newgarden describes an emergency litter or cot. Shoemaker describes the treatment of sick and wounded soldiers in Philadelphia after the Spanish-American War. Borden's paper upon military surgery is an admirable résumé of the experience gained in recent wars and of the modifications in treatments suggested by such experience. Lagarde reports a number of wounds by jacketed projectiles, and particularly calls attention to the absence of remote effects except such as relate to the anatomical structures involved. Borden, as a result of a study of the mortality of war-wounds, notes that of every one hundred men struck by the new bullet, as many will be killed outright as with the old, but that many more of the wounded will recover. He also notes that recovery will be rapid in a great majority of cases, and it may be assumed that two-thirds of the wounded will be back in the fighting line in three weeks. Godfrey describes a new method of controlling hemorrhage in the arm and axilla. It consists in raising the arm upward and inward as far as possible. When the limit of the motion is reached no pulse can be felt in the axilla or below it. Kean suggests a tropical ration. The requirements of such a dietary as opposed to one suited to colder climates are: (a) less fats and more carbohydrates, (b) less stimulating proteid in the form of meat, and (c) a greater variety of diet, both of meats and carbohydrates in the form of fresh vegetables and fruits. From this general formula he deduces what seems to be a very admirable working one. Munson contributes an admirable paper on the same subject. Pope suggests a very complete plan for the organization of a medical department for war service. Hoff writes briefly and very clearly concerning the ambulance company of the first Division, Third Corps. Kulp makes some excellent suggestions with regard to identification and routine correspondence. Bradley writes entertainingly upon the ski and its use for military purposes in the Yellowstone National Park. An improved closet for camp latrines is described by Godfrey. Munson suggests a new method of waterproofing military cloth. There are also other contributions upon very practical matters connected with military service well worth reading.

It will be seen that this volume is one of great value not only to the army surgeon, but to every physician who wishes to be well informed upon the advances in his profession. [E. M.]

International Clinics, a Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Philadelphia. J. P. Lippincott Company. Edited by Henry W. Cattell M. D. Philadelphia.

It is with general satisfaction that we review this number of the *International Clinics*, for the volume reaches a degree of excellence rarely attained in works of similar nature. We call particular attention to the beauty of the illustrations, which reach a high degree of perfection, as well as to the excellent typography which always characterizes the works of these publishers. It is somewhat difficult within the scope of this review to attempt to detail as we would wish, the separate articles, all from the pens of well-known writers and very many from conceded authorities upon their respective subjects. Three valuable contributions are devoted to the subject of locomotor ataxia and of especial interest are the Lectures upon Movement Therapy for Locomotor Ataxia, by H. S. Frenkel, of Melden, Switzerland. Despite the myriad methods of treatment which are advocated in this malady, a description of movement therapy, while its range of applicability is confined strictly to lessening the inco-ordination, will be read with interest and profit. Another neurological contribution, Some Suggestions as to the Mechanism of Mental Operations, by Prof. Santiago Ramon Y. Cajal, of Madrid, furnishes us with the opinion of a famous neurologist upon a subject of rare interest, yet of extremely difficult exposition. Prof. James Tyson has treated the subject of Croupous Pneumonia with his usual fulness and clearness. We mention especially the valuable paper by Prof. T. H. Tuffier, of Paris, on Surgical Analgesia by Injections of Cocaine into the Spinal Column, as well as that by A. Doleris, of the same city, upon the Oxytocic Effect of the Lumbar Injection of Cocaine. Particularly to Induce Labor. A. Broca has discussed the Conservative Treatment of Appendicitis, and gives us a judicious exposition of what medical treatment will do for this condition. J. B. Deaver, of this city, has also contributed a lecture, Litholapaxy, Osteomyelitis, Incision of the Upper Maxilla, Complete Rectal Fistula, and other cases treated at a clinic in the German Hospital. J. F. Schamberg treats of smallpox with particular reference to the prevalent epidemic. This article is one of practical value, and is accompanied by a number of graphic illustrations of the condition. J. D. Fowler, of London, has discussed the Diagnosis and Prognosis of Some Forms of Blood Disease in Infancy, a subject of decided importance and bearing. Indeed, a careful reading of this volume fills us with admiration for its decided excellence and breadth of subject matter. We observe that two other Philadelphians are among its contributors, W. T. Shoemaker who has studied the External Ocular Signs Found in States of Unconsciousness, and Dr. W. A. N. Dorland, who furnishes the pronunciation and definition of a number of the newer medical words, a subject which the breadth of our vocabulary demands must be expanded constantly in order to meet the growing needs of medical science. [T. L. C.]

What Should be Considered a Tuberculin-reaction in cattle.—N. F. Mischkin, in a paper read before the Section of Bacteriology of the Imperial Society of Natural Science, Anthropology and Ethnography (*Russki Archiv Patologii, Klinicheskoi Meditsiny i Bakteriologii*, March, 1901), gave the results of the application of the tuberculin test in 300 heads of cattle. All the animals, showing a maximum temperature of 40°C. proved tuberculous. Out of 9 showing a maximum temperature of 39.9°C., 8 proved tuberculous, out of 6 with a maximum temperature of 39.8°C. 5 proved tuberculous, out of 3 with a temperature of 39.7°C. only 1 proved tuberculous. Five animals with a maximum temperature of 39.6°C. proved to be perfectly healthy. In two cases of undoubted tuberculosis the reaction was altogether absent. The author, therefore, considers those animals free from tuberculosis in which the maximum temperature elevation following the injection does not exceed 39.6°C. [A. R.]

Correspondence.

FOUR CASES OF ACUTE HEMORRHAGIC MENINGOMYELITIS IN COCKER SPANIELS.

By PHILIP KING BROWN, M. D., San Francisco.

From the Pathological Laboratory of the Cooper Medical College.

To the Editor of the *Philadelphia Medical Journal*:

In the fall of 1898 there occurred in San Francisco within a few weeks a number of cases of an acute flaccid paralysis in dogs, four of which cases, through the favor of Dr. K. O. Steers, of the Veterinary Department of the University of California, I saw during life at his hospital, and after close observation clinically, I was permitted to kill the animals and examine them immediately.

All of my cases were in unrelated Cocker spaniels from different parts of town, or from neighboring towns. Paralysis of the hind legs was the first symptom noted in each case, and there were loss of appetite, incontinence of urine, constipation, tenderness along the spine, and fever. The paralysis soon became complete in the affected parts and appeared to be progressively ascending. No convulsions were noted in any case.

The onset of the trouble was sudden in all but the last case, and the actual paralysis was acute there, too. As nearly as could be ascertained, all had fever, two had marked fever (ascertained per rectum), before they were destroyed—in the last case, due probably to the complicating pneumonia. No etiological factors were common to any two cases. It has been said that there has been a great deal of inbreeding here among high-class dogs, but none of these dogs were closely related. In all, the trouble began in the lumbar cord and extended upward, and in two the cervical cord was extensively involved, particularly in regard to the hemorrhage. In all cases the softening was far more extensive than indicated by the hemorrhage.

At post mortems, cultures and smears were made in all but one case, and no bacteria were found, nor were they found in sections.

There were no lesions of any other organs except a pneumonia in one case, and that was clinically secondary to the involvement of the cervical cord. The lesions found anatomically were the same in all four dogs, differing only in duration and extent, and consisted largely of hemorrhages into the grey and white substance of the cord, the pia mater, and the loose connective tissue outside the dura mater. In the latter position some of the clots formed after the hemorrhage showed signs of beginning organization. In addition to the hemorrhages, there were extensive necroses and degenerations in the spinal cord which did not show any relation in size and distribution to the hemorrhagic process.

In a few spots it was possible to see some cellular infiltration. The degenerative processes affected the white and gray matter indiscriminately, and in many places extended over the whole cross section of the cord. There was no relation apparent between them and the distribution of the blood vessels. No thrombi or arterial changes were found in any case.

No evidence of an injury to any of the dogs either in the vertebral canal or externally was discovered. No bone changes were present in the vertebra which could have caused compression, such as was found by Dexter in dogs in the cases reported by him in Lubarsch and Ostertag's *Ergebnisse*, 1898.

The cases are held by us to be hemorrhagic meningomyelitis, and not hematomyelia or primary hemorrhage with secondary myelitis, because inflammatory lesions are present, although not extensive, and in all cases, of acute hematomyelia described, authors refer to the lack of microscopic evidences of such inflammatory changes. More than this, the hemorrhages cannot explain the entire process because the degenerative changes and necroses do not follow the hemorrhages, nor are there any vascular lesions to explain the necrosis and degeneration.

The peripheral nerves were not examined in any case, but the fact that the spinal roots were either not involved or only secondarily involved in the process, tends to prove

that the spinal changes did not follow ascending neuritis, a sequence to which Leyden and Marinesco have called special attention, and which Homen has produced experimentally in animals by injection of streptococci into the peripheral nerves.

HUMAN VIVISECTION.

By JAMES M. BROWN, President of the American Humane Association.

To the Editor of the *Philadelphia Medical Journal*:

I have read the communication of Dr. Keen, published in your issue of August 10th, and already applications have been made by members of the medical profession for literature concerning the subject of the controversy—Human Vivisection.

As The American Humane Association considers this matter one of vital importance, its Executive Committee has, after amendment and revision, just printed that review of Dr. Keen's letter upon which he, in his last communication, comments; and in order to do him justice the Association has added his first letter, which he has called "The Misstatements of Anti-Vivisectionists." These two (2) documents in one pamphlet can be secured gratis by any physician in the United States who will send his professional card to "The Special Committee," Post-office Box 215, Providence, Rhode Island.

For those medical men who carefully read this pamphlet, it would seem to me that Dr. Keen's latest letter will need no reply.

If your space would permit, there could be pointed out in this document some very serious misquotations, leading him to misstatements and comments which ordinarily would be without excuse.

I prefer, however, to join with his many friends in speeding Dr. Keen in his journey around the world, and wishing him a pleasant voyage and a safe return; to leave his misconceptions and mistakes to his own sober judgment, and the rectification that time will surely bring.

This association can have no quarrel with the medical profession. It believes, rather, that in condemning and opposing the use of human beings, chiefly women and children for experiments, dangerous to life and health, it has the sympathy of the great majority of the physicians of the United States.

Nothing can so surely and utterly destroy all confidence in the personele of the medical profession, and in the security of our hospitals and asylums, as a well-founded impression that every patient, young or old, strong or feeble, high or low, rich or poor, is not absolutely secure in all of his personal rights.

He who, in the pretended interests of science, consciously aids in the destruction of this confidence or security, is, in my judgment, little less than an enemy of his race.

Myxedema.—(*Le Presse Medicale*, 1901, No. 39) publishes a clinical lecture at the Beaujon Hospital by Professor Debove, upon myxedema. He presented two cases after reviewing the whole subject of the thyroid gland, defining myxedema as the condition observed when the action of the thyroid is either suppressed or diminished, a condition found with absence, atrophy, or alteration of the gland. The first case was one of congenital myxedema in a man of 20, both of whose parents were chronic alcoholics. His mother showed some signs of myxedema, also, and syphilis was suspected. At the age of 14, his development stopped. Myxedema generally develops at puberty, and is most frequent in women. He drinks excessively, also, now. His expression, infantilism, slowness of movement and intellect make the diagnosis. He is taking thyroid extract. Debove also presented a case of latent myxedema, a young man with mitral insufficiency and emphysema following rheumatism. He is small, with the face of an old woman, and abundant hair. His skin is smooth and glossy. He has never developed sexually, and his voice is distinctly feminine. No thyroid gland is palpable. His intellect is quite deficient. He is also tuberculous. Debove closed by stating that if one sought for latent or abortive cases of myxedema, the affection would be found much more frequent than one should imagine. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Vital Statistics of Philadelphia.—Dr. Henry Leffman, at one time Port Officer of the Bureau of Health, as well as microscopist and food inspector for the Pennsylvania State Board of Agriculture, and now Pathological Chemist at the Jefferson Medical College Hospital, and Professor of Chemistry at the Women's Medical College, at Philadelphia, has always made a careful study of the sanitary conditions of cities. In a recent interview he is quoted as having made the following statement relative to the vital statistics of Philadelphia: "In many ways vital statistics are misleading, not so much in what they say as in what they do not say. They merely report so many deaths per annum to each one hundred or one hundred thousand of population. It must be clear to any one at first glance that this cannot be a proper basis from which to reach conclusions in regard to the health of a city. To be absolutely correct the statistics should show the cause of death in every case. Death from accident or natural causes must not count against the hygienic condition of a city. With our vast system of electric and steam surface roads it is possible that the deaths in Philadelphia by accident from this source exceed those of any other city, and especially the city of New York, with its general elevated systems. Again, in most of the cities, the machinery for swelling population is very active, while the reporting of deaths is careless and inaccurate. In some cities the laws requiring the report of every death and of its cause are not at all rigidly enforced. Possibly there is a tendency to overestimate the population and undercount the deaths. As to Philadelphia, I believe the population has never been exaggerated, and that the reports of mortality are probably more nearly correct than in any other large city. For several reasons it is not surprising that Chicago shows a much lower apparent death rate than Philadelphia. A large portion of the population is composed of young adults attracted there because it is the great metropolis of Western activity, and among this element the death rate is low. Again, Chicago has a way of estimating its population which is almost peculiar to itself. It is largely speculative, and it is safe to say the speculation is affected by Chicago's vaulting ambition. Doubtless the deaths are also largely reported. That would be natural in such conditions. Therefore, it will be realized that statistics, such as those furnished by Chicago and some other cities to the census people, must be taken with many grains of salt. The only intelligent method by which we can make a comparison of the hygienic condition of our great cities is to take the reports, not of the total number of deaths, but of the deaths from diseases, and especially those diseases which are due to unsanitary conditions or to ineffective machinery for the prevention of the spread of contagious diseases. But even with such a comparison the result must be misleading so long as populations are overestimated and deaths not fully reported. If a faithful report of illness could be made it would be vastly more valuable than reports of mortality. The latter are often almost no true indication of the number who are ill from a specified disease. I have known a whole region of Philadelphia to be afflicted with typhoid of a mild type with but few deaths compared to the large number of sufferers. A full, faithful, honest weekly report of every case of illness which requires the attention of a doctor would be of incalculable value in connection with efforts to stamp out and prevent disease.

Dr. Robert J. Black, the mayor of McKeesport, who has been considerably quoted in connection with the strike, is a practicing physician, and a graduate of the Baltimore College of Physicians and Surgeons.

Vital Statistics of Philadelphia for the week ending August 24, 1901:

Total mortality	491	Cases.	Deaths.
Inflammation of the appendix	4		
bladder 1, brain 20, bronchi 3,			
heart 3, kidneys 18, lungs 31, per-			
icardium 1, peritoneum 4, pleura			
2, stomach and bowels 45	132		
Marasmus 37, inanition 29, debil-			
ity 6	72		

	Cases.	Deaths
Tuberculosis of the lungs		47
Apoplexy 8, paralysis 1		19
Heart-disease of 21, fatty degenera- tion of 2		23
Uremia 15, Bright's disease 7, dia- betes 4		26
Carcinoma of the breast 1, jaw 1, stomach 4, uterus 2		8
Convulsions		11
Diphtheria	35	6
Brain-softening of		1
Typhoid fever	126	10
Old age		7
Scarlet fever	40	3
Abcess, liver 1, lungs 1, alcoholism 2, asthma 2, atheroma 1, burns and scalds 4, carbuncle 1, casual- ties 11, cerebro-spinal meningitis 1, child birth 2, cholera infantum 34, cholera morbus 1, cirrhosis of the liver 4, consumption of the bowels 1, croup, membranous 1, cyanosis 1, diarrhea 3, drowned 7, dysentery 7, epilepsy 1, fever, malarial 1, gangrene, senile 1, homicide 1, jaundice 1, locomotor ataxia 1, measles 1, obstruction of the bowels 2, septicemia 6, smallpox 1, sore mouth 2, suffo- cation 2, suicide 1, sunstroke 3, syphilis 1, teething 2, tumor, stomach 1, uterus 2, unknown cor- oner case 1, whooping cough 10..		126

NEW JERSEY.

The Charges at the Trenton Insane Asylum.—The investigation into the management of the Trenton Insane Asylum seems to have assumed a sensational aspect since Dr. William F. Jones has preferred charges that an inmate had been ill-treated by an attendant about a year ago, resulting in his death. As the matter is still under investigation, it is as yet difficult to say how far these charges will be substantiated. In addition there is also an inquiry regarding the food, and a committee which recently investigated this subject agreed that no fault could be found with the edibles.

United States Laboratory for Sandy Hook.—A Government laboratory is to be built at Sandy Hook. It will cost \$10,000, and will be used by ordnance officers and experts in experimenting with explosives.

Tuberculosis Declared Contagious.—The Jersey City Board of Health has notified all physicians to report every case of tuberculosis as a contagious disease.

NEW YORK.

North Hudson Hospital.—Dr. John T. Luck and Dr. Benson have been added to the medical staff of the North Hudson Hospital.

Brooklyn Eye and Ear Hospital.—The recent annual report of this institution shows that during the past year there were treated 14,883 cases. Of these 9,199 were diseases of the eye; of the ear, 3,110; of the throat, nose and skin, 2,227; of the nervous system, 247. The total year's income was \$16,000. The erection of a new building is under contemplation.

A Physician Seriously Injured.—Dr. J. C. Kennedy, of Brooklyn, surgeon-in-chief of the consulting staff of St. Catharine's Hospital, was seriously injured on August 17th in attempting to save the life of his carriage boy, while the latter was being run away with in the doctor's carriage.

A Life Insurance Precedent.—It is stated that in a city in the northern part of the State of New York a woman, having been compulsorily secluded for about six weeks on account of smallpox, notified the Board of Health that her policy of life insurance was likely to lapse, inasmuch as her detention was preventing her from getting the money necessary for the payment of a premium, and that the board paid the premium, holding that if the policy lapsed and the woman died there would be a case against the city.

WESTERN STATES.

Appointment.—Dr. Eliza H. Root has been appointed Dean of the Northwestern University Women's Medical School.

Dr. H. Ehrenfest, formerly Assistant in Professor Schauta's Clinic in Vienna, has been appointed Consulting Gynecologist to the City Hospital, St. Louis, Missouri.

Dr. Reuben Peterson succeeds Dr. J. N. Martin as Professor of Obstetrics and Gynecology at the University of Michigan.

Northwestern University Medical School.—Dr. A. P. Ohlmacher has been appointed Professor of Pathology in the Northwestern University Medical School (Chicago Medical College.) Dr. Ohlmacher has been connected with the Pathological Laboratory of the Ohio Hospital for Epileptics at Gallipolis, Ohio, and will for the time continue the direction of the Laboratory.

The Mississippi Valley Medical Association.—The twenty-seventh annual meeting will be held in Put-In-Bay, Ohio, on Thursday, Friday, and Saturday, September 12th, 13th, and 14th, under the presidency of Dr. Albert H. Cordier, of Kansas City, Missouri. In addition to the president's address, the preliminary programme contains the following titles: Address in Medicine, by Dr. Frank Billings, of Chicago; Address in Surgery, by Reginald H. Sayre, of New York.

Increased Mortality in Indiana.—The Bulletin of the State Board of Health for the month of July, just issued, shows that there were 3,162 deaths in the State during the month, an increase of 919 over the number for the corresponding month last year. The rate for the month was 14.8 against 13.1 for July last year. Of children under five years, 1,005 died, including 698 deaths of children under one year. Of the total number of deaths, 1,259 took place in cities.

Scarlet Fever in Chicago.—The spread of scarlet fever in Rogers Park continues. Twenty-eight cases have been reported up to the present time.

The Medical Society of the Missouri Valley will hold its fourteenth annual meeting in St. Joseph on Thursday, September 19, and Eureka Springs, September 20 and 21.

SOUTHERN STATES.

Death of Dr. Robert Barnwell Rhett.—Dr. Robert Barnwell Rhett died at St. Francis Xavier Hospital, Charleston, August 7, from typhoid fever, aged 47 years. He was Dean of the Charleston Medical School, and a member of the American Medical Association. He was graduated from the Medical College of the State of South Carolina, Charleston, 1879.

Texas State Association of Health Officers.—At the meeting of the Texas State Association held in Dallas, August 8, the following officers were elected for the ensuing year: President, Dr. Isaac J. Jones, Austin; vice-president, Dr. William H. Blythe, Mt. Pleasant, and secretary and treasurer, Dr. James E. Wilson, Dallas. The next meeting will be held in Austin.

Condition of Brain May be Shown by Photograph.—We are indebted to the *Journal of the American Medical Association* for the announcement that the testimony of the experts in the homicide case of Monson vs. State of Texas, showed that there was a blow on the left side of the head of the deceased which fractured the skull for an inch or so, and that on the opposite side of the head and on the brain was clotted blood. In connection with the expert testimony, the state was permitted to introduce before the jury a photograph of the head of the deceased, showing the condition of the brain after the removal of the skull at the autopsy, which photograph, the expert witnesses stated, correctly represented the condition which they purported to show. This was objected to. But the Court of Criminal Appeals of Texas does not consider that it was error. It says that it does not believe that it was calculated to unjustly prejudice the rights of the accused before the jury, while, under the authorities, it believes this character of evidence is admissible.

Charges of Discourtesy Investigated.—The Board of the Western State Hospital for the Insane, at Staunton, Va., have been investigating charges of discourtesy to Dr. Chertsey Hopkins, the woman physician in the hospital. It was found on careful examination that the charges were

really due to a lack of harmony and social and personal good feeling among the officials.

Polluted Water at Lewes, Del.—Physicians have discovered that the drinking water used in the fish oil factories at Lewes, Del., is full of typhoid fever germs, and it has caused illness among fishermen.

Physicians of Virginia.—More than a hundred new doctors have recently been licensed to practice medicine in Virginia.

CANADA.

A Death Through Christian Science Negligence occurred in Toronto within the past two weeks; and as an evidence of the healthy state of the public mind towards the peculiar doctrines of these people, the coroner's jury returned a verdict worthy of more than an ordinary notice: "That the said—boy—came to his death on Tuesday, August 13th, from diphtheria, and we find that . . . the father of the deceased showed culpable criminal negligence in not providing medical assistance, medicine, nursing and comforts, and that . . . the Christian Science demonstrator, was an accessory after the fact, inasmuch as he undertook to advise and treat a dangerous contagious disease, which he admitted he was totally ignorant of. The teaching of the sect known as the Christian Scientists, as brought out in the evidence, is a danger to the community, and the jury would recommend that the law should make it a criminal offence for a demonstrator of this peculiar sect to attend or treat a case which is not being attended by a duly qualified practitioner."

The McGill Medical Faculty owing to the alterations which are now going on has decided to postpone the sessional opening until the 1st of October, instead of the 13th of September, as ordinarily, as the buildings cannot be got ready for the reception of students before that date. Great efforts are now being put forth to have the faculty rooms, the library and the several laboratories finished in time for the approaching visit of the Duke of York, on which occasion McGill will certainly give a good account of herself. It is hoped that the honored Chancellor of the University, Lord Strathcona, will be present to read the address of welcome. It is expected that the Duke will unveil the tablet which is to be placed in the medical students' room in memory of Major Harold Borden, of the Canadian Mounted Rifles and Gunner O'Reilly, of the Royal Canadian Artillery, both of whom were medical students at McGill, and both of whom lost their lives in South Africa during the course of the present war.

One Cause of Disease which has been traced to the use of canned or tinned goods has recently been the subject of investigation on the part of the Department of Inland Revenue at Ottawa. About a year ago letters were sent out from the Department addressed to some 4,348 medical men in the Dominion of Canada, asking whether any cases of illness from the use of tinned goods, had come under their notice within recent years. Out of this number some 1,313 replied, of whom 1,059 replied in the negative and the balance, some 254 replied affirmatively. On this account the Department deems it expedient in the public interest to issue instructions and precautions to safeguard the public health. If one is to judge from the replies received from physicians, the number of cases of disease apparently attributable to the use of tinned goods would average 138 per annum in Canada in an average period of about seven years. There was a total of fifteen cases reported which terminated fatally.

How to Save the Lives of Small Infants, or how to decrease the large mortality rate amongst infants in Montreal is a problem which local physicians have been trying to solve for some time past. In the Grey Nunnery Institution hundreds of infants are received yearly; and according to the books 96 per cent. of them die within a few weeks of their admission. Dr. Rottot, who has been house doctor for the past thirty years, states that for a number of years the percentage was even greater than this. Incubators have been frequently tried, but without any success. Abandoned children are on the increase; and for the last couple of years the number of children brought to the city institutions has increased to an astonishing degree, and as a result the question of trying to save the little lives has become more and more important. A decided effort is being now put forward and a new incubator sys-

tem, that which has been on exhibition at the Pan-American, has been introduced into the Grey Nunnery Maternity Hospital, and gradually into other homes in the city; and it is thought that along with an improved milk supply that much good will in the future be accomplished where in former times, all, or nearly all was a failure.

The Report of the Criminal Statistics for the year ending 30th of June, 1900, is being issued by the Dominion statistician. The number of charges in 1900 for indictable offences in Canada was 249 more than in 1899, there being 8,419 in 1900 and 8,170 in 1899. The convictions number 55 more than in 1899. In the Yukon there were 95 cases of convictions in 1900. The total convictions of males were 5,430, and of females 328, against 5,384 males and 329 females in 1899. By provinces the numbers for 1900 were: Territories and Yukon, 3,296; British Columbia, 2,994; Ontario, 18,419; New Brunswick, 2,311; Manitoba, 1,692; Quebec, 9,917; Nova Scotia, 2,595; P. E. I., 429.

The Executive Committee of the National Sanitarium Association met August 7th, at the Muskoka Cottage Sanitarium, Gravenhurst. The committee expressed great satisfaction with the condition of the buildings and the beauty of the grounds and the situation. The physicians reported an ever increasing number of applicants in whom the disease was too far advanced for successful treatment. The Gravenhurst Free Hospital for Consumptives is being got well under way. This new institution is to be supported by voluntary contributions, and is intended for consumptives in the early stage of the disease. The plans of the Toronto Home for Consumptives were also inspected and discussed. When completed, it is intended that this institution, situated near the city of Toronto, will be utilized for clinical instruction in tuberculosis.

The Governors of the Western Hospital, Montreal, are discussing plans for the erection of a new modern building at a cost of \$100,000. For quite a few years past the Western Hospital has been running on a good financial basis, and it is thought that the time is now opportune for the erection of a new building.

MISCELLANY.

Obituary.—Dr. Stephen Foss, at Brooklyn, N. Y., August 2, aged 75 years—Dr. Henry Armgardt, in Germany, on August 1, aged 52 years—Dr. Henry Buckingham Horbeek, at Charleston, S. C., August 3—Dr. J. Walter Downer, at Baltimore, Md., August 10, aged 46 years—Dr. Arthur B. Marshall, at Wytheville, N. Y., August 5—Dr. B. H. Kettrel, at Fourth Lake, N. Y., August 18—Dr. Alfred A. Dana, at Bronxville, N. Y., August 21.

Bacteria and Animal Food.—To the researches of bacteriology an interesting contribution is made by some experiments which have just been completed by Dr. Ford, of Montreal, states the *Sanitary Record and Journal*. Dr. Ford has examined the domestic animals with a view to classifying their characteristic bacteria. He found that, for instance, the bacteria in dogs and cats were similar, but differed from those in rabbits and guinea-pigs. This is in part what would have been expected, seeing that the carnivora eat different food from herbivorous animals. Bacteria being largely vegetable, each animal would become the receptacle for an intestinal fauna which was recruited from the food the animal ate. But the research has another point of interest, because it may help to make clear the reasons which lead to a change of form in the same bacillus when it has its environment in different hosts.

Discoloration of Milk.—Cows' milk is colored blue by the bacillus pyocyaneus; blue, slimy, and bitter by tyrotoxicum; yellow by the bacillus synxanthus; violet by the micrococcus prodigiosus; and reddish-yellow in rinderpest, owing to the presence of blood.

Egyptian Medical Congress.—An Egyptian Medical Congress, states the *British Medical Journal* is to be held under the patronage of the Khedive at Cairo from December 10th to 14th, 1902, under the presidency of Dr. Abbate Pacha. The Honorary Presidents are Dr. Ibrahim Pacha Hassan, Dr. Pinching, and Dr. Ruffer. The General Secretary is Dr. Voronoff. The work of the Congress will be divided among three sections, as follows: (1) Medical Sciences, presided over by Dr. Comanos Pacha; (2) Surgical Sciences, presided over by Dr. H. Milton, and (3) Ophthalmology, presided over by Dr. Mohammed Bey Eloui. The programme of the Congress will include discussions on affections especially rife in Egypt, such as bilharzia, ankylo-

stomatitis, bilious fever, abscess of the liver, etc. Special attention will be given to questions relative to the epidemics which for some years past have regularly visited Egypt, and the prophylactic measures to be taken against them. The following papers among others have been promised: Alcoholism and Its Increase in Egypt, by Dr. De Becker; The Frequency of Hydrocele in Egypt and Its Treatment, by Dr. Colloridi; Myxedema in Egypt, by Dr. Brossard; Plague, by Dr. Gotschlich; and Tuberculosis in Egypt, by Drs. Ibrahim Pacha Hassan, Eld, and Sandwith.

Smallpox in the United States.—Washington.—The public health report issued by the Marine Hospital Service shows the existence of 8,258 cases of small-pox in the United States, against 3,432 at the same time last year.

A Peculiar Consultation.—It is a rather novel idea for an author to call in his family physician in consultation regarding the symptoms of one of his characters. But this, it seems, is just what Mr. Harold McGrath did while writing "The Puppet Crown." He had just finished the chapter describing the "fight on horseback," and feeling that the situation had got rather beyond his own powers, detailed the facts to the doctor, and asked what could be done to save the hero. "Save him, my boy?" replied the old gentleman, gravely; "he is beyond the power of human aid. Science can do nothing for him. Art can only put him out of his misery." Mr. McGrath adds that after the publication of the book he received a bill from his physician for professional services.

Changes in the Medical Corps of the Navy. For week ending August 24th, 1901.

ASSISTANT SURGEON C. R. BURR, detached from the "Monongahela," ordered home, granted leave of one month, and resignation accepted to take effect at the expiration of that period.—Aug. 20.

MEDICAL DIRECTOR T. J. TURNER, retired, died at Mackinac Island, Mich., August 20, 1901.—Aug. 23.

P. A. SURGEON D. H. MORGAN, detached from Norfolk Hospital, and ordered to the Monongahela, August 26.—Aug. 23.

P. A. SURGEON D. A. CARPENTER, detached from the "Franklin" and ordered to the Norfolk Hospital.—Aug. 23.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 days ended August 22, 1901.

H. R. CARTER, surgeon, granted leave of absence for 14 days from August 20, 1901—August 16, 1901.

Leave of absence granted Surgeon Carter by Bureau letter of August 16th revoked—August 21, 1901.

J. C. COBB, passed assistant surgeon, granted ten days' extension of leave of absence—August 21, 1901.

J. B. STONER, passed assistant surgeon, granted leave of absence for 17 days from September 2—August 22, 1901.

G. B. YOUNG, passed assistant surgeon, granted 8 days' extension of leave of absence from August 22—August 16, 1901.

L. D. FRICKS, assistant surgeon, relieved from duty in the Philippine Islands, and directed to proceed to San Francisco, Cal., and await orders—August 20, 1901.

M. K. GWYN, assistant surgeon, relieved from duty at Louisville, Ky., and directed to proceed to San Francisco Quarantine and report to the medical officer in command for temporary duty; thence to proceed to Manila, P. I., and report to the chief quarantine officer for duty—August 20, 1901.

T. D. BERRY, assistant surgeon, relieved from duty at Cienfuegos, Cuba, and directed to proceed to Louisville, Kentucky and report to the medical officer in command for duty and assignment to quarters—August 22, 1901.

EDWARD FRANCIS, assistant surgeon, relieved from duty at the Immigration Depot, New York, N. Y., and directed to proceed to Washington, D. C., and report to the Director of the Hygienic Laboratory for duty—August 22, 1901.

R. C. CRAIG, acting assistant surgeon, granted leave of absence for 30 days from August 31—August 21, 1901.

W. R. HICKS, acting assistant surgeon, granted leave of absence for 16 days from August 15—August 16, 1901.

M. WALTERS, hospital steward, granted leave of absence for 7 days from August 1 under paragraph 181 of the regulations.

R. F. TROXLER, hospital steward, granted leave of absence for 1 month from August 20—August 16, 1901.

J. E. BECK, hospital steward, granted leave of absence for 3 days from August 15, under paragraph 181 of the regulations.

M. H. WATERS, hospital steward, granted leave of absence for 17 days from September 3—August 20, 1901.

BOARD CONVENED

Board convened to meet in Philadelphia, Pa., August 21, 1901 for the physical examination of an applicant for appointment as Lieutenant in the Revenue Cutter Service.

Detail for the Board Surgeon H. W. Austin, chairman; Assistant Surgeon J. S. Burgess, recorder.

GREAT BRITAIN.

Appointment.—Sir Francis R. Cruise, M. D., Fellow and ex-President of the Royal College of Physicians of Ireland, has been appointed one of the honorary physicians to His Majesty the King in Ireland.

To Regulate the Sale of Cocaine.—The English authorities are seriously considering the expediency of adding cocaine to the list of poisons governed by the Poison Act of England of 1868, on account of the suicide of two young women in London which recently occurred from cocaine.

CONTINENTAL EUROPE.

Professor Luigi Mangiagalli, Director of the Obstetric and Gynecological Clinic at the University of Pavia, has been nominated a member of the Supreme Council of Public Instruction for the Faculty of Medicine.

Dr. Francis Neugebauer, Director of the Gynecological Clinic of the Evangelical Hospital at Warsaw, was recently appointed a Foreign Corresponding Member of the Academy of Medicine of Paris.

The French National Periodical Congress of Gynecology, Obstetrics and Pediatrics will assemble for their third meeting at Nantes on September 23-30, under the general presidency of Dr. Sevestra, of Paris, who will also preside over the Section of Pediatrics. Dr. Segond, of Paris, will be President of the Section of Gynecology, and Professor Queirel, of Marseilles, of that of Obstetrics. The questions to be considered in the Section of Gynecology are: (1) Congenital anteversion of the uterus as a cause of sterility, and its treatment; (2) causes favoring ectopic gestation; (3) dystocia due to fibroids. In the Section of Obstetrics the programme is: (1) Rupture of the uterus; (2) inversion of the uterus; (3) the fate of prematurely-born children; (4) the uncontrollable vomiting of pregnancy; (5) radiographic measurement of the pelvis. In the Section of Pediatrics the following questions will be discussed: (1) Arthritis in children; (2) meningitic manifestations in the course of digestive infections in childhood; (3) intermittent albuminuria in the child; (4) the defense of childhood (pueri-culture, suckling, weaning); (5) conservative methods in the treatment of local tuberculosis; (6) scoliosis, its treatment by kinesitherapy (movement cure).

Appointments at Heidelberg.—Dr. Julius Hegener has been recognized as privat-docent of Otology and Dr. Martin Jacoby as privat-docent of Pharmacology. Dr. H. Braus, of Würzburg has been appointed Extraordinary Professor of Anatomy.

A German View of American Students.—The *Deutsche medicinische Wochenschrift* states that, according to the *Vorddeutsche allgemeine Zeitung*, the Medical Senate at Heidelberg, in response to a petition from the clinicians of that city, will only permit such foreign students to enter the medical course as have successfully passed an examination equivalent to the German examination requisite for matriculation at a University. In addition the *Journal of the American Medical Association* states the following relative to this subject: The *Rhein. Westphal. Zeitung* states that American students who study at German universities are generally less educated than the students in the *tertia* of their gymnasia (high schools). It says: "Here they study superficially and then pose as German physicians in the United States. The result is that German physicians no longer enjoy the reputation in the United States they once did. There is all the difference in the world between a German physician and a physician superficially educated in Germany, because he lacks preliminary education." German newspapers urge that unless the students from the United States acquire sufficient knowledge to fit them for a university course they should be excluded from the German universities.

Statistics of the German Universities.—The *Deutsche Medicinal Zeitung* gives the number of medical students attending the Universities of Germany, Austria and Switzerland, during the winter of 1900-1901. Berlin leads the list with 1313, Munich had 1274, Vienna 1188, Leipzig 626, Würzburg 543, Berne 434, Freiburg 357, Geneva 357, Graz 352, Kiel 350, and Erlangen 333. All the others had under 300 students.

Tuberculosis and the German Workmen's Insurance.—Privy-Councillor Blefeldt, President of the Senate in the Imperial Insurance Department, stated at the British Congress on Tuberculosis that since the year 1891 all hired workmen in Germany, the number of whom was estimated at 12,660,000 in 1898, have been insured against sickness; that is to say, employer and workman contribute in equal parts, so as to provide an annuity to be given to all persons who are incapable of self-support or over seventy years old. The insurance is effected under the supervision of the Imperial Insurance Department, State Insurance Departments, thirty-one insurance institutions territorially limited, and nine special club institutions of the Invalidity Insurance. These insurance offices and club institutions, the capital of which, at the end of 1899, after the ninth year of their existence, amounted to almost 761,000,000 marks, and which will increase from year to year, take a financial interest in postponing as long as possible the invalidity of the insured with which they are charged, because the later the insured are entitled to the use of the lawful annuity the longer their contributions for invalidity insurance are paid, and consequently the time from the beginning to the end of the payment of the annuity becomes the shorter. For this reason it was of greatest importance for the officers of the Invalidity Insurance to ascertain the cause of the Invalidity Insurance made by the Imperial Insurance Department, so as to battle against such causes effectively. The statistics of the causes of Invalidity, made by the Imperial Insurance Department, embracing in all 158,462 pensioners, shows by published graphic tables the following: Of all male workers employed in mining, metallurgy, industry and building, who become invalided up to the age of thirty, more than half suffer from consumption. The proportion of the female pensioners in the same avocations is just as unfavorable at the age of 20-24, while at the age of 25-29 almost half of all invalid women of these avocations are consumptive. Persons engaged in forestry and agriculture do not become invalided in consequence of this illness to so great an extent; nevertheless out of 1,000 male pensioners employed in agricultural work, there are more than 350 consumptives of the age of 20-24. For the total of the other professions, the proportion of invalid men of the age of 20-30 is such that of 1000 cases of invalidity 450 are cases of pulmonary consumption, while about a fourth part of all invalid women of the same age and professions are consumptive. These results and the statistics of the causes of death, which are published by the Board of Health for the year 1893, prove that of every 100 persons who died at the age of 15-60 in the German Empire thirty-three were victims to consumption. The officers of the German Workmen's Insurance found that to battle successfully against consumption was one of the most important tasks.

The Evasion of the Child-labor Law in Russia.—In a certain match factory two little girls each about 7 years old and several boys and girls between the ages of 10 and 12 are made to hide themselves under the skirts of the older working girls or behind boxes, whenever the inspector comes around. We fear that this evasion of the inspector is not at all uncommon even in our own large cities in which the "sweat-shops" exist.

A New "Gastronomic" Machine.—The *Bolnitchnaia Gazeta* Botkina tells of a peculiar machine unearthed by the police in one of the Moscow restaurants. The machine is supplied with a large pipe into which all the remnants from the tables are thrown and by turning a crank converted into cutlets, pastry and other tempting dishes. There is evidently some ground for the popular notion that dogs are converted into sausages by the aid of special machines.

Leprosy in Russia.—A number of cases of leprosy are reported from several points in the government of Koursk. Several of the affected persons never left their homes and therefore could not have acquired the disease at any other place. It is noteworthy that all of the cases occurred in perfectly healthy families and amidst favorable surroundings.

An Antituberculosis Society.—A new society is being organized in Moscow for the purpose of carrying into practice the means suggested by science for the prevention of tuberculosis. The members of this society will be physicians as well as laymen.

Compulsory Tuberculin Test.—The Council of Koff proposes to ask for a law compelling the dairymen to make use of the tuberculin test.

Oxygen to be Kept at Fire Stations.—The city of Berlin requires that a supply of oxygen gas shall be kept at every fire station and shall be carried by every fire wagon to be used in cases of poisoning by morphin and carbon monoxid.

Resorcin in Hair Dye.—A case of poisoning from hair dye in Paris was found to be due to the resorcin it contained. There were symptoms of chronic dyspepsia, and during three years the patient had sixteen attacks of erythelas.

Female Students in European Universities.—According to the *Deutsche Med. Wochens.*, there are, excluding Munich, 95 female medical students in Germany, of whom 56 are foreign. They are distributed as follows: Berlin 25 (21 foreigners), Leipzig 24 (22 foreigners), Freiburg 18 (14 foreigners), Halle 12 (9 foreigners), Heidelberg 6, Bonn 5, Strassburg 2, Breslau 2, and Königsberg 1. In Switzerland, Berne University has 188 females (180 Russians), Zürich 85, and Lausanne 61.

On the Psychical Nature of Some Disturbances of the Acts of Urination and Defecation.—K. Oppenheim (*Medicinskoje Obozrenie*, June, 1901) claims that the nervous origin of some forms of the disorders of the bladder and bowels does not receive the attention it merits. He reports from his private practice the following cases: Case 1. Mrs. X. suffered from frequent desires to urinate whenever she was in society, especially at concerts and theaters. At such times she experienced a painful sensation to empty her bladder, accompanied by a feeling of fear, a flow of blood to the head and face and cold extremities. Urination was followed by relief which sometimes lasted but a few minutes, when the painful desire appeared again. The larger the room and the more people in it, the worse was the affection. At home or at the proximity of public urinals she was entirely free from the irritability of the bladder. The patient was relieved by hydrotherapy and placebos, which had the effect of suggestion. Case 2. The patient, an engineer, suffered from insuppressible desire to move his bowels whenever he happened to be in society. Like in the above case, his desire was associated with a feeling of fear, flushes of heat, and congestion of the face. As soon as he left the room the painful sensations disappeared; often he would have a free liquid evacuation of the bowels. His mother was subjected to the same affection. Case 3. A woman, 38 years old, of a nervous family and herself very nervous complained of pain and paresthesia in the left side, excitability and other nervous phenomena. She suspected heart disease and wanted to be set at ease on that point. She also suffered from irritability of the bladder similar to Case 1. She was cured by Weir-Mitchell's rest cure, hydrotherapy and electricity. Case 4. A student, 20 years old, of a neurotic family presented conditions similar to Case 2. The author also reports the case of a girl of 9 who fell from a ladder without, however, sustaining any injury. She developed a train of symptoms characteristic of tic convulsif, associated with extreme irritability of the bladder and bowels. [A. R.]

On the Treatment of Extra-Uterine Pregnancy.—Fedoroff (*Medicinskoje Obozrenie*, June, 1901) reports the results of 27 operations for extrauterine pregnancy performed at the Moscow Basman Hospital. In 3 cases colpotomy was performed, in 2 of total extirpation through the vagina and in 22 laparotomy. In 2 the pregnancy was interstitial, in the others tubal. The ages of the patients varied from 25 to 30. In 4 there was no interruption of the normal menstruation, in 9 menstruation did not occur for 5-6 weeks, in 4, 7-8 weeks, in 7, 2-3 months. In one case there was a pregnancy of 4 months with a dead fetus (lithopedion). Only in 8 was there no previous history of diseases of the uterus or adnexa. Of 19 cases carefully studied, 10 showed changes in the tubes, ovaries and pelvic peritoneum. As to the results, 22 laparotomies gave 1 death, in the case of the lithopedion; of the 2 total extirpations one ended fatally, owing to internal hemorrhage which occurred 5 hours after the operation. In all others the results were favorable. In many cases life was saved by timely operation. The author prefers laparotomy to any of the other operative routes. (A. R.)

The Latest Literature.

BRITISH MEDICAL JOURNAL.

August 10, 1901.

1. Introductory Remarks Made at the Opening of the Section of State Medicine.

SHIRLEY F. MURPHY.

2. A Discussion on the Relation Between County and District Sanitary Administrations. F. T. BOND, G. H. FOSHROKE, J. L. ROBERTS, E. C. SEATON, H. MAY, T. W. H. GARSTANG, E. J. SLADEKING, J. GROVES, H. JONES, W. SMITH, W. C. C. PAKES, A. K. CHALMERS, J. M. MARTIN, D. S. DAVIES, and SHIRLEY F. MURPHY.
3. Plague and its Prevention as a Disease Communicable from Animal to Man. D. S. DAVIES.

3.—The records of the Sydney outbreak of plague, in 1900, confirm in every particular the conviction that has surely been accumulating from the more or less complete records of other outbreaks, that plague in man is a secondary event dependent upon plague in animals, and that, therefore, success in the suppression of human plague depends upon the adoption of adequate measures for the suppression of rat plague. Davies believes that the policy to follow in order to accomplish this result is to secure rat-free merchant ships. This is a possibility if the vessels that engage in the coasting trade and that make voyages of 3 weeks or a month are fumigated at the point of departure before loading, and at the ultimate port touched on the voyage. When this routine is followed, often no rats will be found on the vessels after the second fumigation. The method is successfully carried out under inter-colonial agreement, which requires vessels to produce a certificate of fumigation, without which they are subject to detention. [J. M. S.]

LANCET.

August 10, 1901.

1. A Clinical Lecture on Mitral Disease. JOHN LINDSAY STEVEN.
2. The Comparative Virulence of the Tubercle Bacillus from Human and Bovine Sources. MAZYCK P. RAVENEL.
3. The Mortality from Phthisis, and from other Tubercular Diseases Considered in Some Aspects, Which May be Demonstrated by Means of Life Tables. T. E. HAYWARD.
4. On the Physiological Cure of the Morphia Habit. W. OSCAR JENNINGS.
5. The Pasteurization of Infected Milk. E. SYDNEY ST. B. SLADEN.
6. The Electrolytic Transmission of Sulphur from the Harrogate Sulphur Water Through a Pig's Skin, and Its Therapeutic Value on the Human Subject under Similar Circumstances in Eczema, Gout, etc. FRANCIS WM. SMITH.

1. Steven delivered a lecture in the Glasgow Royal Infirmary on "Mitral Disease." He gives a short summary of the ten cases which were under his observation when this lecture was delivered. Case 1.—This occurred in a married woman of 21 years of age who, on admission to the hospital, was suffering from acute rheumatic fever. The pulse rate varied between 80 and 90 per minute. It was regular in force and rhythm and of good tension. At the apex there was heard a soft ventricular-systolic murmur. There were no signs of cardiac hypertrophy. Case 2.—This occurred in a married woman 37 years of age. This patient complained of dull precordial pain, palpitation and occasional faintness. The illness had existed for nine weeks, and originated during her last confinement. Fifteen years ago she had suffered from rheumatic fever. On examination the apex beat was four and a half inches to the left of the midsternal line in the fifth interspace. The impulse was diffused. Auscultation revealed a loud ventricular-systolic murmur at the apex. At the base the second sound was reduplicated. In the tricuspid area and in the third left interspace, two murmurs were present, namely, a ventricular diastolic and a ventricular-systolic murmur.

The pulse rate averaged from 65 to 70 per minute. The pulse was easily compressed. Case 3.—This occurred in a married woman 27 years of age. She had complained for five months previous to admission, of increasing dyspnea and edema of the lower limbs. She had an attack of rheumatic fever 15 years ago. The apex beat was found in the fifth interspace five inches to the left of the midsternal line. At the apex, a musical ventricular-systolic murmur was heard. In the fourth left interspace, a ventricular-systolic and a ventricular-diastolic murmur existed. The pulmonary second sound was accentuated. Case 4.—This occurred in a girl 12 years of age, who had been suffering from mitral regurgitation and stenosis for 14 months. Between the ages of 5 and 7, she suffered from chorea. On admission, she was in the midst of an attack of rheumatic fever. The apex beat was found four inches to the left of the midsternal line in the sixth interspace; at this point there was heard a loud ventricular-systolic and a ventricular-diastolic murmur. The ventricular-diastolic murmur was limited to the apex region. The pulmonary second sound was accentuated. Case 5.—This occurred in a girl 11 years of age who, on admission, was suffering from chorea. At the apex there was heard a soft systolic murmur. The pulse was small, irregular, and easily compressed. Case 6.—This occurred in a female child nine years of age who had complained of shortness of breath, general weakness and slight pains in the joints. The pulse was found small and easily compressed, and a loud ventricular-systolic murmur was heard over the apex. At the base and at the apex the second sound was greatly accentuated. Case 7.—This occurred in a man 37 years of age who had been suffering from mitral regurgitation with hypertrophy and dilatation of the left ventricle. A history of rheumatic fever could not be ascertained. The apex beat was four and a half inches to the left of the midsternal line in the fifth interspace. An occasional diastolic thrill was felt over the apex, and at this point a loud systolic murmur was heard which was transmitted to the axilla. Case 8.—This occurred in a married woman 53 years of age who, on admission, was suffering from cardiac dilatation. A rheumatic history could not be obtained. The pulse was regular both in force and rhythm, and its rate was 110 per minute. The apex impulse was situated four inches to the left of the midsternal line in the fifth intercostal space. A soft ventricular-systolic murmur was heard at this point. Case 9.—This occurred in an unmarried woman 21 years of age who had been suffering from mitral regurgitation with dilatation of the left ventricle. In childhood, she suffered from scarlet fever and measles. A rheumatic history, however, could not be obtained, but the patient admitted having complained frequently of severe growing pains. There was edema of the lower extremities and the pulse was irregular in force and rhythm. The apex beat was situated four and a half inches to the left of the midsternal line in the fifth interspace, where a loud ventricular-systolic murmur was heard, accompanied by a distinct systolic thrill. Case 10.—This occurred in a child twelve years of age. This patient had previously suffered from attacks of hemoptysis. The apex beat was found two and three-quarter inches to the left of the midsternal line in the fifth interspace, where a distinct presystolic thrill was felt and a loud auriculo-systolic murmur was heard in the region of the apex. In a summary of these cases, the author points out that in general terms they represent fair clinical characteristics of mitral disease. He states that there are two murmurs which indicate fairly actual disease of the mitral curtains, namely, a direct murmur denoting stenosis of the valve, and another direct murmur occupying the long pause, which is diastolic in rhythm and limited to the region of the apex. Both are essentially produced by the same mechanism. He also calls our attention to the fact that the ventricular-systolic murmur heard at the apex and conveyed toward the axilla does not always indicate structural disease of the mitral curtains. We must depend upon other phenomena to assist us in making the diagnosis of disease of the mitral valve. He states that rheumatism, chorea, and embolism are valuable clinical aids in arriving at a diagnosis. In regard to the age in which mitral disease is most common, he reminds us that it is most frequent during the early periods of life, and that when it occurs in the later decades, its associations with the organic affections of the myocardium, should be borne in mind as the most frequent primary cause. The physiognomy of mitral disease is quite characteristic and stands in bold contrast to that of aortic

regurgitation. In the former condition there is a more or less livid hue of the features, while in the latter condition, marked pallor is striking. In this series 60% of the cases were associated with rheumatism. The typical and characteristic pulse of the mitral disease shows marked irregularity in force and rhythm, and this irregularity occurs comparatively early in the course of the disease—long before the signs of failing compensation manifest themselves. Another point worthy of note is the increased frequency of the pulse rate.

[F. J. K.]

2.—Abstract will appear when the remainder of the article is published.

3.—Hayward communicated an article to the British Congress on Tuberculosis "on the mortality from phthisis and from other tubercular diseases considered in some aspects which may be demonstrated by means of life-tables." This author has included in his article a number of life-tables. He calls our attention to the remarkable statement that if there had been no phthisis there would have been an increase of two and a half years in the life of each individual born. [F. J. K.]

4.—Jennings writes "on the physiological cure of the morphia habit." In the management of this condition, Jennings recommends the withdrawal of the drug as rapidly as possible and still as slowly as is necessary to effect a cure without causing distress to the patient. He lays particular emphasis on the fact that when giving up morphia, it is principally a question of depriving the individual of a stimulant. The vital collapse which follows its withdrawal is largely due to the lack of its stimulating action. For this reason the author administers digitalis or spartein. He lays great stress on the necessity of administering bicarbonate of soda for the hyperacidity of the stomach, which is a great factor in producing the craving. Another measure which he has found extremely valuable is the hot-air bath. The article is concluded with the report of ten cases. [F. J. K.]

5.—Sladen contributes an article on "pasteurization of infected milk." This author claims that the danger of using milk that contains pathogenic micro-organisms appears to be removed by heating the milk to 85° C. He states that clinical evidence of the transmission of tuberculosis by milk is fairly strong. Reference is made to the following instance. Three cows, of a dairy in Scotland, suffering from tubercular disease of the udder, were the source of an outbreak of tuberculosis in an institution, where the milk from these animals was used. The author also refers to a number of other instances which point to the likelihood of tuberculosis being transmitted by milk. Our attention is also directed to the interesting statement that the frequency of tubercular diseases following measles, scarlet fever, smallpox, and similar conditions, may be largely attributed to infected milk. [F. J. K.]

6.—Smith discusses the electrolytic transmission of sulphur from the Harrogate water through pig's skin. By means of an electric current, he was able to demonstrate that the sulphur which was a constituent of the Harrogate Sulphur Water, penetrated pig's skin. This author has employed a constant current of electricity in conjunction with Harrogate Sulphur Water baths in the treatment of cases of eczema, gout, rheumatism and peripheral neuritis, and he found that such patients improved more by this method than by sulphur baths without electricity. He suggests that it seems reasonable to assume that sulphur is driven through the living skin by electricity. [F. J. K.]

MEDICAL RECORD.

August 24, 1901.

1. The Prognosis of Traumatic Hysteria.
PEARCE BAILEY.
2. Infantile Typhoid Fever.
AUGUST ADRIAN STRASSER.
3. A Series of Mastoid Operations.
CHARLES H. MAY.
4. The Zoological Distribution of Tuberculosis.
WOODS HUTCHINSON.
5. Bifocal Lenses, etc. JOHN E. WEEKS.

1.—Pearce A. Bailey discusses the prognosis of traumatic hysteria, based upon the subsequent histories of a number of litigated cases. In hysteria the normally transmitting

and normally registered sensory stimuli in some subtle way fail to be transferred to the association system, hence they do not enter into the practical life of the individual, and do not attain an intellectual value. The patient consequently is in the anomalous condition of feeling, seeing, hearing, tasting or smelling, as the case may be, without being aware that he does so; or from similar or complex causes, he may lose the power of originating voluntary motor impulses, and be for all practical purposes, paralyzed. Yet the belief of the patient as to his own incapacity is absolute, and often so persistent as to deprive him of his usefulness for considerable periods of time. Since the belief is false, and since false beliefs which dominate and disorganize the life of an individual are insane delusions, hysteria, says Bailey, is to be classed with delusional insanities. Some nine cases are detailed, giving the effect upon the patient of the litigation of their cases, and from these cases it will be seen that there is the same uncertainty regarding prognosis in traumatic hysteria which characterizes all mental affections. The influence of heredity is one of the most important considerations in the prognosis. The older the patient the greater is the danger that the symptoms will be permanent. The previous condition of health is also a factor. It may be said that the chances for recovery from traumatic hysteria in a healthy person not over 35 or 40 years of age, are generally very good, but not absolutely certain. With increasing age, the prognosis becomes rapidly worse. In conclusion Bailey discusses the difficulties which the physician encounters as a medical witness in cases of this character.

[T. L. C.]

2.—A. A. Strasser reports two cases of infantile typhoid fever. One of these cases was traceable to infection from ground water, and the other from a common drinking cup in a Newark department store. Some general guides are given as to the treatment. [T. L. C.]

3.—May reports 8 cases presenting symptoms of mastoiditis. The most interesting of these are a case of chronic purulent inflammation of the middle ear with chronic mastoiditis followed by an abscess of the temporo-sphenoidal lobe, necessitating trephining, and a case of acute bilateral suppurative mastoiditis occurring in the course of diphtheria. There was no diphtheritic infection of the mastoid wound. [F. T. S.]

4.—Woods Hutchinson presents a paper on the zoological distribution of tuberculosis, his object being to make a contribution to the study of the problem of the factors which determine susceptibility to tuberculous infection. He presents a preliminary report of his observations in the post-mortem room of the Zoological Gardens in London during the winter and spring of 1898-1899. He briefly discusses the relative value of the three great predisposing factors—race, food, and housing in animals, in the light of the death records of the Gardens for the past five years. As to family or race in mammals, the highest order (primates), is by far the most liable per 100 living, while next comes the marsupials. Ungulates and carnivora, which are usually ranked as on about the same level of specialization, are widely separated, the former having six times the death-rate of the latter. Within the order of the ungulates itself, the most striking contrasts occur the odd-toed being almost completely exempt, even horses and asses under domestication, while the even-toed are extremely liable, but there are marked differences even among the families of this last sub-order. His figures appear to show a greatly increased susceptibility of the disease among vegetable feeders and a much reduced liability among meat-eaters, both mammals and birds. It appears that there is some influence connected with the food habits of both mammals and birds depending upon their liability to tuberculosis. Another factor which seems to the author a far more important element, is the resultant habits of life and the vigor and endurance entailed by them. When from any cause this higher degree of vigor has been acquired by herbivora, immunity from tuberculosis follows, and as the degree of this vigor is best indicated by the heart and bodily weight, he has arranged his orders and groups according to this character. In our own species it has been suggested that the size and vigor of the heart is an important part in the predisposition to tuberculosis. Altogether the conclusion to which this question of the distribution of tubercle points is that it is a matter of vigor, endurance and resisting power, rather than of race, food, or exposure to infection, and as those powers

are usually higher in flesh-eaters than in vegetable feeders, the former possess a marked relative immunity.

[T. L. C.]

MEDICAL NEWS.

August 24, 1901.

1. Further Notes Upon the Diagnostic Test of Tuberculin. EDWARD O. OTIS.
2. A Study of Burns, with a Plea for Their More Rational Treatment. FREDERICK GRIFFITH.
3. Carbolic Acid in Burns. OTTO L. MUENCH.
4. Inertness of Petroleum Compounds When Given Medicinally. ROBERT REYBURN.
5. Strangulated Hernia of the Bladder; Ruptured Sarcoma of the Testis Mistaken for Strangulated Hernia. THOMAS H. MANLEY.

1.—E. O. Otis collected thirty-five cases in which the tuberculin test was used in syphilis. The smallest amount of tuberculin used was two mgs., the largest ten mgs. There were six undoubted reactions and five what he called abortive reactions. Considering only the six undoubted reactions he had 17% of reactions; including the abortive cases, he had 31%. In the author's second series of twenty-six cases of suspected or proved tuberculosis eight cases in which the physical examinations showed sufficient evidence of tuberculosis or in which tubercle bacilli were found in the sputum, he had four reactions and four failures to react. In three cases in which tubercle bacilli were found in the sputum, two did not react; in one 7 mgs. were used, and in the other 5 and 10 mgs. In the three cases in which 2.5 and 8 mgs. of tuberculin were successfully used, only a local reaction was obtained. The remaining eighteen cases of suspected tuberculosis, there were six reactions and twelve failures to react. In no one of those cases which failed to react could tuberculosis be more than suspected, with greater or less probability, by the physical examinations. A case of lupus of the face, besides giving a general reaction, showed a very pretty local one. A case of chronic laryngitis in which either syphilis or tuberculosis might have been the cause, a reaction was obtained, thus leaving the origin doubtful as before. Otis advises, after going over the subject very carefully, that in using the tuberculin test for suspected tuberculosis, experience teaches that we should look carefully for syphilis. [T.M.T.]

2.—F. Griffith in his article sums up the treatment as follows: (1) Burns are the commonest of injuries and of all wounds they are treated least in accordance with now universally taught and accepted surgical principles. (2) Burns may be divided into two degrees of severity; burns of the first degree involve the skin only, those of the second degree include all others. (3) The pathology of burns, is the pathology of inflammation of the part locally affected with almost all the morbid changes possible in the complications which result. (4) Early death and internal complications after burns are due to direct action of heat, with fragmentation and vital change in the blood-corpuscles; later effects are due to infection taking place from the burned area. (5) The condition of the granulations during the healing of burns is the determining factor in the amount of contraction and subsequent deformity which takes place. The greater the friction caused by irritation from whatever source, the larger will be the granulations, the greater the amount of connective tissue and the greater will be the contraction. The local treatment of burns from the earliest times has been along the lines of prevention of irritation, but the late advances made in wound treatment have not been followed out in these. (6) The burn wound should be cleansed of as much dead, burned tissue as possible; the thoroughness with which this clearing away of the eschar is done will determine in a great measure the amount of future discharge, and the presence or absence of infecting organisms. (7) Hydrogen dioxide to wash away the debris and render aseptic the denuded parts is the best antiseptic at our command; rubber tissue in strips should be laid on the wound to prevent contact with the absorbent dressing. (8) The use of splints to secure relaxation and retention in obtaining rest for a burned part is of great importance and is as much indicated in this form of injury as in fractures of the contiguous bones. (9) The internal treatment of burns is stimulative until reaction from shock has taken place when it becomes supportive. (10) Opium fulfills the indications for pain. In-

ternal inflammations and diarrhea. (12) The bowels and kidneys must be continuously kept open, but enemata only should be employed. (13) Watchful attention must be paid to early signs of internal complications of the viscera.

[T. M. T.]

3.—O. L. Muench in his article on Carbolic Acid in Burns says that the general result in burns treated with carbolic acid is complete exclusion of air and coagulation of the serous effusions, and that the healing process takes place with much less suffering and in a shorter time than by any other method which the author has tried. It is possible that carbolic acid poisoning may be produced by absorption in severe surgical cases when employed in too dilute a form, but the author has not seen a single case during his whole practice. Many persons think the only virtue of carbolic acid is an antiseptic one, but he thinks the exclusion of air is just as important as to prevent the entrance of microbes. [T. M. T.]

4.—R. Reyburn states that on account of the disagreeable flavor of cod liver oil many substitutes have been suggested, especially the derivatives of petroleum. These have been used quite extensively and the question arises, are the compounds of petroleum, when taken internally, absorbed and made part of the tissue of the body in the same manner as, which we know from the long experience of numerous observers, is the case when our patients take cod liver oil? It has been found by experiments that pure petroleum, while unirritating to the digestive tract, is valueless as a foodstuff. The author's experience is that when given internally it passed through the intestinal canal and the only beneficial effects it exerts in the stomach and intestines are due to its lubricating and demulcent properties. Finally, therefore, if we consider (1) the entire insolubility of petroleum and its compounds in either the gastric juice or the fluid of the intestinal canal, and (2) the fact that when petroleum is given internally the whole of it can be recovered from the feces, we are warranted in stating that petroleum can in no sense be considered a substitute for cod liver oil as a nutrient and restorative, and (3) that the usefulness of petroleum as a remedy must depend upon its unirritating and demulcent properties.

[T. M. T.]

5.—T. H. Manley gives the fundamental features in the operative technique as follows: (1) A large incision involving a laparotomy; (2) Free division of the constriction from within; (3) The deliberate, methodical and complete treatment of any important complication then and there. It is advised, except in exceptional cases, to operate at the patient's home on account of the ill effects of moving and the possibility of infection. The mortality set down by Gibbons is 15% due to defective operative technique. The author places the mortality at 50%. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

August 24, 1901.

1. A Case of Actinomycosis Hominis, with Remarks Concerning the Differential Macroscopic Diagnosis between Actinomycotic and Tuberculous Peribronchitis. GUSTAV FUETTERER.
2. Remarks upon the Treatment of Hip Diseases, and Presentation of a Further Modification of the Hip Splint. JOHN DANE.
3. The Treatment of Acute Hip Disease, with the Description of a Splint. ROBERT W. LOVETT.
4. A Case of Angio-Sarcoma of the Nose. STANLEY S. CORNELL.
5. The Importance of an Early and Radical Climatic Change in the Cure of Pulmonary Tuberculosis. C. F. GARDINER.
6. Sulphuric Ether in the Removal of Ceruminous Plugs. E. L. MEIERHOF.

1.—G. Fuetterer after reviewing a case of actinomycosis hominis gives the macroscopic examination between it and tuberculous peribronchitis as follows: Actinomycotic peribronchitis appears in fresh infections on cross section of small bronchi in the form of sharply defined sulphur yellow rings, with clear, round outlines, against the unchanged parenchyma of the lung which surrounds it, and above which it is slightly prominent. The process has but little tendency to involve the lung substance, which becomes affected very little, if at all. Even microscopically it can be seen that the alveoli next to the peribronchitic

area are unchanged, while occasionally a small nodular prominence of the peribronchitic ring may press against them. The cut surface of the yellow ring is quite even, and during its further development it shows a decided tendency to grow toward the centre of the lumen of the bronchus, which at last becomes entirely occluded. It is also of the very greatest importance to note that the very youngest, as well as the oldest, peribronchitic areas have the same sulphur like color, while in tuberculous peribronchitis the color is very variable. Indeed, and so long as there is no caseation, it is not yellow at all, but gray or reddish gray. But even when there is caseation the yellow color has a more grayish tinge, and is not uniform in quality. The tuberculous peribronchitic area projects above the surrounding lung tissue; they have an uneven surface and irregular outlines. There is not the pronounced tendency to grow centrally and close up the lumina, but, on the contrary, the process is very prone to spread peripherally, and an early affection of the surrounding lung tissue is the rule. Tubercular infection generally affects the apices, but actinomycosis prefers the lower portions of the lungs.

[T. M. T.]

3.—R. W. Lovett gives his routine treatment of acute Hip Disease as follows: If a case with deformity or sensitiveness, no matter how severe, is admitted for bed treatment to the wards, the traction splint is put on and over it a plaster-of-Paris spica bandage reaching from the axilla to the calf. If the leg is adducted or flexed, the spica is made to hold the leg in the position of deformity, and no attempt at correction is made at first bandaging. At subsequent bandagings the deformity has been found to have been corrected just as it would have been found by recumbent treatment and its gradual reduction by traction. One of the later plaster spicas, when removed, is used as a mold for the leather spica. [T. M. T.]

5.—C. F. Gardiner in his article on *The Importance of an Early and Radical Climatic Change in the Cure of Pulmonary Tuberculosis* states that it is well for us to remember that there has been an evolution in the west as well as in the east, regarding the use of pure air and wholesome food in treating consumption, while, in the use of pure air we have had the advantage, as quality as well as quantity should be considered. Outdoor air is not of the same quality in all climates, and does not, therefore, exert a climatic effort to the same degree taken in the same quantity. Few will doubt the difference between the air of parts of Central America and that of New York City, or we will say within twenty miles of it, but few people, even climatologists, realize that there is as marked a difference between the air of New York and vicinity and that of Colorado and New Mexico. The air of our high dry regions, such as our altitude in Colorado, has a special quality not yet recognized in a strictly scientific way. It is not alone dry, but it is air that has a special quality, due to its having been purified by the rays of the sun over vast areas absolutely uncontaminated. It is not alone the effect of such air, when breathed by the consumptive, upon tuberculous processes in the lungs, but also its evident power of arresting the septic process, that is so marked a feature in the prognosis of every case of continual pulmonary tuberculosis that makes such climatically selected air of more value as a curative agent than that of less favored regions. In his experience, a patient will derive as much benefit from four hours spent in the dry, sunny air of Colorado as from eight hours spent in the dry and cloudy climate of some parts of the east. In a dry climate, patients can be kept out of doors day and night, summer and winter, with benefit and without risk. And it is this possibility of keeping patients out of doors day and night, summer and winter, that to his mind offers such decided advantages for the cure of tuberculosis. He has, during the past winter, had patients in tents and on piazzas, in the open air all the time; with proper precautions, with stoves or electric heaters and suitable clothing, there is no risk and much benefit.

He firmly believes that the truth regarding climate will prevail, and that the great sanatoria of the future will be built, where scientific facts show the best results can be obtained. The sanatoria now established by the government at Fort Bayard, New Mexico, and at Fort Stanton, New Mexico, will in time prove the marked advantage of sanitarium methods and the best climatic cure combined.

[T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 22, 1901.

1. Address in Surgery. SIR WILLIAM THOMSON.
2. Treatment of Delirium Tremens. J. FRANK PERRY.
3. On the Effect of Alcohol. H. G. BEYER.
4. The Management of Delirium Tremens, with the Report of a Case. V. A. ELLSWORTH.

2.—In fairly strong subjects, *delirium tremens* is a disease that ought not to be fatal if the cases are uncomplicated and properly managed. Perry is of the opinion that the liability to delirium is greatly increased by the sudden and complete withdrawal of alcohol from a patient who has been drinking to excess. This fact, however, cannot justify the popular notion that attacks can be warded off by alcohol alone. In the treatment of severe cases it is quite indispensable, and intelligently given, in proper quantities and at the right times it will often prevent threatened attacks; but medical agents are generally imperative. The steady drinker is a more frequent victim of delirium tremens than he who goes on sprees, unless the sprees are of very long duration and are accompanied by loss of sleep and the absence of proper nourishment. There are no signs that can rightly be considered absolutely indicative of approaching delirium tremens; the nearest approach to such a sign is dilation of the pupil, which can often be seen either intermittently or permanently 24 hours before the symptoms appear. There is no sovereign remedy. For the first 2 or 3 days the patient is usually allowed a small amount of liquor, depending on the amount he has been accustomed to take before the attack appeared. He is put on as nutritious a liquid diet as he can bear and the nourishment is administered every 2 hours. As substitutes for alcohol, as that substance is withdrawn, the author advises ammonia, camphor, hyoscyamus, valerian, capsicum, ginger, and the like. Since the heart usually shows signs of distress, cardiac stimulants are used, such as strychnine, nitroglycerine, digitalis, strophanthus, sparteine or *cactus grandiflorus*. Trembling of the muscles is treated with small doses of opium. Sleep is induced by the use of sulphonal, trional, chloralamid, hedonal and similar agents. On the first appearance of symptoms, the patient is to be quieted by the use, if necessary, of chloral and bromides. If the patient's heart is weak chloral is contraindicated. When chloral proves inert, as it rarely does, the other hypnotics are to be used. Musk is safer than hyoscyne hydrobromate, which may seriously obstruct the breathing. Apomorphine, intelligently used, is a valuable agent for hypodermic use, as a sedative, but it may easily be pushed too far. The caretaker for a patient suffering from delirium tremens should always be cool and calm, because, if the patient thinks that his attendant is afraid of him, he will be very much more difficult to control. Whenever possible, mechanical restraint should not be applied because as soon as the patient is strapped in bed his case becomes much more serious and his chances for recovery are greatly lessened. [J. M. S.]

3.—The immediate effect of a dose of alcohol seems to be divisible into 2 stages: (1) the stimulating stage and (2) the paralyzing stage. These effects are produced through the nervous system and not by the direct action of the alcohol on the organs and the tissues. Many experiments go to show that alcohol has no nutritive value, but that, on the contrary, it causes an abnormal destruction of the protoplasmic constituents of the body. It is, then, a protoplasmic irritant leading to its destruction, but not to its construction. On the other hand, the well-known and much talked of experiments of Atwater, show that alcohol is a food and Woodruff, of the United States Army, has put himself on record as favoring the allowance of small amounts of alcohol to the soldier in the tropics. Beyer, however, believes that the experience of the latter author was too short to warrant authoritative conclusions. He has reduced alcohol to the rank of a drug. [J. M. S.]

4.—In the treatment of a case of *delirium tremens*, Ellsworth places the patient in a strong room with unpadded walls, in which there is no furniture, and the ventilation is of the best. He allows absolutely untrammelled muscular movements of the patient in order to preserve nerve force. The diet consists of nourishing and easily digested food, the bowels are regulated, capsicum and *nux vomica* are administered internally. The author believes that alcohol and hypnotics should never be given in any form. The author has treated 500 cases with only 2 deaths. Some-

times, early in the case, an attack, may be aborted by the administration of paraldehyd as an hypnotic and if an hypnotic has to be used, the author considers paraldehyd to be the best. The report of a case is included in the article. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 24, 1901.

1. Pernicious Anemia. FRANK BILLINGS.
2. The Value of Conservative Treatment of the Uterine Appendages, Etc. A. GOLDSPOHN.
3. Puerperal Eclampsia. T. J. BEATTIE.
4. Cesarean Section as a Method of Treatment for Placenta Previa. WM. J. GILLETTE.
5. The Chemical and Microscopic Examination of Blood. W. D. KELLY.
6. Leukocyte Counts in Hemorrhage. GEO. DOUGLAS HEAD.
7. The Antenatal Treatment of Hemophilia. J. W. BALLANTYNE.
8. The Prevention of Pulmonary Tuberculosis in Predisposed Children. JOHN A. ROBINSON.
9. Tuberculosis of Animals in Some of its Relations to Human Tuberculosis. D. E. SALMON.
10. Relations of Hyperchlorhydria to "Bilious Attacks," and Some forms of Eczema, Gout and Muscular Rheumatism—Preliminary Report. GRAHAM CHAMBERS.
11. Uric Acid Inflammations of the Middle Ear, Membrana Tympana and Mastoid. CORNELIUS WILLIAMS.

1.—This abstract will appear when the article is concluded. [F. J. K.]

2.—Goldsponh says that the conservative treatment of the uterine appendages is applicable mostly to ovaries that have undergone cystic degeneration of the Graafian follicles and corpora lutea, which results in some cases as a sequel to earlier systemic infectious diseases—exanthemata, diphtheria, typhoid and the like. In other instances they partake of the nature of retention-cysts, the follicles having been prevented from rupturing and from discharging their contents normally, owing to inflammatory thickening of their walls and of the tunica albuginea. Very often the condition is that of edema in which the ova die; such a condition is called a hydrops of the follicle by some. It arises from an impeded venous circulation, i. e., a varicose condition in the ovarian circulation, such as most frequently results from descensus of the ovary, either alone or more frequently in conjunction with retroversion of the uterus. Goldsponh has made a careful study of the conditions of all patients on whom he has performed conservative surgical operations. He has succeeded in examining 97 out of 108 of the cases. He has performed the operations through a ventral celiotomy in all cases of solid or cystic tumors of the internal generative organs that do not require removal of the uterus, and are not small and uncomplicated by adhesions or septic appendages; likewise for cases in which inflammatory processes have caused extremely firm or extensive fixation of the uterus or appendages, or have left pus or its equivalent. A tube that contains pus, even if this be no longer virulent, should be removed, because its lining is too much disorganized to functionate, but in cases of some such smaller, closed pus-tubes the ovary corresponding to it or a part of it can be saved. [W. A. N. D.]

3.—Beattie remarks that the etiology of puerperal eclampsia is still a mooted question. It has been said that the disease is due to pressure upon the ureters, but if such were true one would expect to find hydronephrosis, but none has been found in cases where autopsy has been held. The bacteria which were supposed to be the germs causing eclampsia are found in all pregnant women. When the blood of the eclamptic patient is examined, micro-organisms are rarely found, and from observations one can find no positive proof that any one germ has been isolated which will cause eclampsia. The universal opinion at present is that eclampsia is due to a profound toxemia, and the origin of this toxemia is still unknown. Whatever the cause, prophylactic treatment is of the greatest importance. In addition to hygienic measures examination of the urine should be made often enough to keep one informed of its specific gravity and whether there is diminished elimination of the urea. [W. A. N. D.]

4.—Gillette remarks that during the past ten or twelve years the question of Cesarean section in the treatment of placenta previa has been from time to time brought to the

attention of the profession. Lawson Tait was one of its strong advocates. The profession, however, has been slow in accepting this doctrine and probably never will, for it is the experience of all, that, where the placenta is laterally attached and the cervix easily dilatable, delivery may easily be conducted with comparative safety. On the other hand, given a central implantation and a rigid os from any cause whatever and no more serious or fatal condition can confront the obstetrician. These are the cases which many believe demand the Porro or the classical Cesarean section. Gillette reports a case of Cesarean section done for this condition. He concludes that the cases operated upon are as yet so few in number that no accurate deductions can be drawn from it, but he believes that Cesarean section, if generally adopted for placenta previa, will reduce the fearful mortality which we now have to at most 10%.

[W. A. N. D.]

5.—Kelly describes some of the chemical and microscopic blood tests. This author gives a short outline of some of these tests, he does not, however, enter into a detailed description of any. [F. J. K.]

6.—Head performed a number of experiments upon dogs in order to demonstrate the effect of hemorrhage on the number of leukocytes. In these investigations, he first determined the number of leukocytes in the dog experimented upon. Then the animal was bled from the left femoral artery and from two to five minutes after the blood letting, a second count was made. Other counts were made 24 hours and on the seventh day after the hemorrhage. The author reached the following conclusions: (1) Immediately after the profuse hemorrhage there is a decrease in the number of leukocytes. (2) This hypoleukocytosis is soon followed by an increase in the number of white corpuscles; post-hemorrhagic leukocytosis. (3) The leukocytosis existed for a period of seven days or more. The author contends that the blood changes which are found in dogs after hemorrhage, also occur in human beings. [F. J. K.]

7.—Ballantyne writes on the antenatal treatment of hemophilia. He suggests that the field of usefulness of antenatal treatment of hereditary diseases is undoubtedly an extensive one. He reports the case in point in which hemophilia was suspected. In this instance, a good result followed the prolonged treatment of the mother during the period of pregnancy. The history of the case is as follows: Mrs. C., 34 years of age, had always menstruated profusely and had post-partum hemorrhages after two confinements. There was distinct history of hemophilia in the family. She had given birth to two sons, who were both bleeders. During the later months of her third pregnancy she was given ten grains of calcium chloride, three times daily, and also a pill containing arsenate of iron and strychnine. These pills were afterward replaced by the syrup of the phosphate of iron. At birth the child was found to be well nourished and presented no sign of hemophilia. [F. J. K.]

8.—Robinson discusses the prevention of pulmonary tuberculosis in predisposed children. We are informed that a hereditary history of tuberculosis can be obtained in about 38% of consumptives. This author discusses the method of preventive treatment which should be recommended during three periods of life, namely, infancy, childhood and puberty. During infancy great care should be exercised in the selection of the milk for the child. A healthy wet-nurse should be always selected when the mother is tuberculous. As the infant grows, more fat should be added to the food, and when the salivary glands develop, starch should constitute a part of the food. During the period of childhood, the diet must contain a large amount of nitrogenous food. The author holds the opinion that sweets, taken in the form of pure candy, are beneficial to the growing child if taken after meals. During the period of puberty, the harmonious development of the mind and body must be secured. When choosing a vocation, only such an occupation should be selected that will give the individual an out-door life the greater part of the time. He also refers to the necessity of securing the best hygienic surroundings. [F. J. K.]

9.—Salmon has contributed an article "on tuberculosis of animals in some of its relations to human tuberculosis." We are informed that in England and Wales, tuberculosis reached its maximum in 1838, when there were 17 deaths from phthisis out of every 100 total deaths. In order to demonstrate the importance of the study of the diseases of animals and the relation which some of these bear to

man, he makes reference to smallpox. This disease was at its height in England in 1796, when 18.5% deaths were due to smallpox out of every hundred total deaths. A hundred years later, in England and Wales, the death rate was as low as 1.8% per million living. Reference is made also to a number of very important statistics of tuberculosis in animals, only a few of which, we will mention in this abstract. In Prussia, 14.6% of the cattle and 2.14% of the swine were found tuberculous. In the city of Leipzig, 36.1% of the cattle, and 2.17% of the swine were tuberculous. In the State of Pennsylvania, over 2% of the cattle are tuberculous. Breeding animals and dairy stock are, as a rule, most frequently affected, while beef cattle are singularly free from tuberculosis. This disease appears to be more common amongst the better class of cattle than in the neglected, underfed-herd cattle. With swine, tuberculosis is a more acute disease, and shows a tendency to generalization, therefore there is more danger of transmitting the disease. He is of the opinion that there is little doubt that during the recent years, tuberculosis has been increasing in cattle and swine in most countries. The author is inclined to accept the view that animal tuberculosis may be communicated to man, and that the presence of tuberculous animals in a country must be regarded as a great source of danger. Our duty as sanitarians and citizens, is to use every possible effort to abolish this scourge. [F. J. K.]

10.—Chambers read a preliminary report before the Ontario Medical Society "on the relation of hyperchlorhydria to bilious attacks, some forms of gout, eczema, and muscular rheumatism." This author maintains that hyperchlorhydria may be responsible for diseases in other organs of the body. In his experience, he has found a close association between bilious attacks and hyperchlorhydria, he also examined the gastric contents of six cases of eczema, and in five of these there was an excess of HCl in the gastric contents. In the other cases the acidity was normal. He also records an examination made in a case of regular gout which revealed marked hyperchlorhydria. In conclusion, he states that he regards muscular rheumatism and hyperchlorhydria as frequently associated.

[F. J. K.]

11.—Williams believes that the gouty and rheumatic nature plays an important part in the etiology of many of the cases of acute and even chronic inflammation of the ear, and suggests that they receive proper constitutional treatment. [F. J. K.]

AMERICAN MEDICINE.

August 24, 1901.

1. An Ideal Colony for Epileptics, and the Necessity for the Broader Treatment of Epilepsy. WM. P. SPATLING.
2. Cerebral Concussion with Retinal Changes. L. A. W. ALLEMAN.
3. Indications for and Against Total Removal of the Human Stomach. GEORGE CHILDS-MACDONALD.
4. The Outlook for the Medical Man To-day. JOHN MILTON DODSON.
5. Statistical Note Concerning the Contagiousness of Tuberculosis Pulmonalis.
6. Carcinoma of the Breast. CARL V. VISCHER.
7. Peculiar Nervous and Urinary Manifestations Following La Grippe in the Aged. O. P. KERNODLE.

1.—William P. Spratling describes an ideal colony for epileptics and the necessity for the broader treatment of epilepsy. He groups the essential features of an ideal colony under: First, location, which will induce climate, water, soil, drainage, accessibility. Second, landscape improvements. Third, construction—general and special. Fourth, organization, administrative, medical and scientific. A diagram is presented showing a group of cottages at the Craig College for Epileptics, at Sonyea, N. Y.

[T. L. C.]

2.—L. A. W. Alleman reports a case of cerebral concussion, with retinal changes. The patient was a college athlete who went to his physician complaining of discomfort in reading, and blurring before the left eye. His corrected vision, which had been 20/15, was now reduced to 20/20 in the right, and 20/100 in the left eye. A change in glasses produced no improvement. The low vision of the left eye seemed to be due to a fault at the fixation point,

but a definite scotoma was not discovered. The ophthalmoscope showed, scattered about the fundus of both eyes, pigment spots which suggested old hemorrhages. The nerve margins were indistinct, and the retinal vessels tortuous. In the right eye, midway between the macula and disc, there was an area which showed pigment absorption and indefinite retinal changes; in the left there was a slight haze over the entire fundus. As there was no cause for this obstruction in the media, he considered it due to retinal edema. On the following day there could be seen a small fluffy spot just above the fovea which had evidently come on since the last examination. The case was finally found to be one of *commotio retinae*. At an examination made but a few days after the first, vision was normal and the patient's condition excellent. The etiology of this case revealed the fact that the boy had been struck in the head the day previous to his first visit, while playing a game of football, and had been temporarily "knocked out" for a few minutes. [T. L. C.]

3.—MacDonald discusses the advisability of total gastrectomy under the following heads: The diagnosis and age of the patient; the state of the blood; the heart; pre-existing conditions; metastasis; and preparation of the patient. He would limit the operation to 55 in men and 60 in women, excepting patients possessing extreme vitality. He says a stomach cancer may always be suspected in a person over 40 who exhibits progressive emaciation, lassitude, anorexia, with an absence of normal digestive leukocytosis, and the presence of the Boas bacillus. Leukocytosis tends to show that a metastasis or other complication exists, and therefore will indicate an unfavorable prognosis. The division of such important nervous structures as both pneumogastrics necessitates their inhibition and the heart gallops until the vagi have sufficiently recovered from the shock. The heart should therefore be in the best possible condition or life may terminate from cardiac shock. Workingmen and women offer a more favorable prognosis, while habitués of alcohol, tobacco, and other drugs, are decidedly unfavorable subjects. Syphilis, gout, diabetes, Bright's disease, and other debilitating and exhausting processes militate against success. The most favorable indications are a moderately dilated viscus with a freely movable tumor situated to the right of the median line. If the disease has existed for twelve or fourteen months it will hardly be suitable for operation. Metastasis is an absolute bar. To prepare a patient for gastrectomy MacDonald advises at least 4 to 6 days' rest in bed with most careful attention to the bowels, liver, kidneys, and skin. The stomach is washed out once in 24 hours with a mild antiseptic solution. Food should be given every two hours during the day and at least twice during the night; no solids are to be taken. The mental condition of the patient is also looked after. [F. T. S.]

5.—E. L. Shurly represents a statistical note concerning the contagiousness of tuberculosis pulmonalis. Of 130 cases reported, 16 have been immediately preceded by acute pneumonia, 22 by influenza, 12 by hemoptysis, with little or no antecedent cough, 1 by appendicitis. Several of the patients, it is noted, have had occupations which exposed them to metal, flour or other dust. Twenty-five have been preceded by acute or chronic laryngitis, or bronchitis, 11 by pleuritis, 9 by parturition, 2 by chronic uterine disease, 2 by measles, 1 by diabetes, 7 by syphilis and 3 by rheumatism, 3 by typhoid fever, 1 by empyema of antrum, one by suppurative otitis; 7 are recorded as having had large lymphatic glands, 3 were preceded by severe dyspepsia and diarrhea, 1 by psoas abscess, 1 by remittent fever, 4 by anemia, 1 by physical exhaustion. In 10 cases marked intemperance in the use of alcoholic liquors was noted. Sixty-five cases are recorded as having good family history and of the other 65 cases the parents were affected. In 12 cases brothers and sisters were affected, and in 58 cases some distant relatives had been affected also. With regard to the previous condition of these patients long before the development of the disease, it is reported that 76 were well and healthy, while 54 were delicate. Tubercle bacilli were recognized in 65 and absent in 52 of the series, and in 13 the result of the examination was considered doubtful. In 121 of the cases (eliminating the nine doubtful ones) there is a possibility of nine only having originated through ordinary natural communicability; while upon further analysis there is a possibility that 5 only so originated and further that of the whole number of

130, at least 112 were immediately preceded by acute or subacute disease. [T. L. C.]

6.—This paper emphasizes the already well-known facts concerning carcinoma of the breast, in order to draw attention to the early recognition of a tumor. It is suggested that every breast that has ever been the seat of inflammation be occasionally carefully examined. Of 56 cases operated upon by the author 36 1-3% died. Of those recovering 52% have passed the three years' limit. Over 81% were married. 3% occurred in women between the ages of 20 and 30, 10% between 30 and 40, 60% between 40 and 50, 13% between 50 and 60, 10% between 60 and 70, and 4% between 70 and 80. [P. T. S.]

This paper is by a homeopathic physician of Philadelphia. The author, however, gives little evidence in it of a homeopathic bias. His statements are clear and concise, and the subject matter is interesting. [T. L. C.]

7.—O. P. Kernodle reports three cases of peculiar nervous and urinary manifestations following la grippe in the aged. The nervous manifestations range from complete prostration to decided maniacal symptoms; the patient's condition counting for little or nothing. Independent attacks of grave urinary symptoms, appearing or reappearing with decided persistency, frequently leave a weakened system which is always sensitive to every change. He does not consider that post-influenzal insanity is a necessary complication of nervous debility attacking only those predisposed. Aged persons suffer more from la grippe than those in youth and vigor, and never entirely recover. Nephritis and urinary disturbances occur, and the death-rate is much higher than in persons not over 50 years.

[T. L. C.]

VRATCH.

May 19, 1901 (Vol. XXII, No. 20).

1. On the Diagnosis of Tubercular Peritonitis in Children. Based on 51 Personal Observations.

A. A. KISEL.

2. Brandt's Method of Treating Diseases of Women and Some of Its Peculiarities.

D. D. SANDBERG-DEBELE.

3. Röntgen-Photography in Court. L. P. PASSOVER.

4. On the Influence of Subaquatic Work on Man.

B. A. LIBOFF.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

3.—Passover relates the case of a recruit who presented a swelling of the ankle and, on the evidence of experts, was accused of simulating an injury to the joint in order that he may escape military service. After repeated examinations the man was adjudged guilty and sentenced to imprisonment in the military prison. The case was appealed, and the author called in as expert witness. He succeeded in demonstrating by means of the Roentgen rays the existence of an old fracture of the os calcis. The sentence was revoked. The author claims that by means of the Röntgen rays lesions may be discovered which are inaccessible to any other methods of examination.

[A. R.]

4.—Will be abstracted when concluded.

May 26, 1901 (Vol. XXII, No. 21).

1. On the Diagnosis of Tubercular Peritonitis in Children. Based on 51 Personal Observations.

A. A. KISEL.

2. On the Question of the Early Stages of Tuberculosis of the Synovial Membranes.

M. M. DITERICH.

3. Brandt's Method of Treating Diseases of Women, and Some of Its Peculiarities.

D. D. SANDBERG-DEBELE.

4. On the Influence of Subaquatic Work on Man.

B. A. LIBOFF.

5. On the Relation of the Last Ministerial Decree to the School Authorities Regarding the Question of School Sanitation in the Zemstvo. D. P. NIKOLSKI.

6. A Case of Fibromyoma of the Walls of an Ovarian Cyst. V. E. ODINTSOFF.

1.—Kisel draws the following conclusions from an experience with 54 cases of tubercular peritonitis: 1. Tuberculous inflammation of the peritoneum in children is much more frequent than is generally supposed. 2. It may

be asserted that almost all cases of so-called idiopathic ascites are nothing else than tuberculous inflammation of the peritoneum. 3. The exudate in this affection is frequently absorbed under a general tonic treatment, and complete recovery ensues. 4. In the majority of cases it develops stealthily; the family, at first, notices only that the child is becoming emaciated and anemic without any apparent cause. 5. The diagnosis is considerably facilitated if a concurrent exudative pleuritis is found. 6. The thickening of the peritoneum (detected by grasping a fold of the abdominal wall) is one of the most valuable signs of tuberculous inflammation of the peritoneum. 7. In tubercular peritonitis, the fluid in the abdominal cavity is rich in albumin and of high specific gravity. Frequently the entire peritoneum may be found covered with recent tubercular masses, and yet the subjective symptoms may be insignificant. 8. The greatest difficulties in diagnosis are encountered in cases of chronic ascites dependent on tubercular pericarditis (a very rare affection). 10. In rare cases the onset of the disease is accompanied by acute symptoms. A number of illustrative cases are described.

[A. R.]

2.—Diterichs calls attention to certain peculiarities observed by him in the joints of persons who died of tubercular diseases. These consist in abnormal dilatation of the blood vessels of the synovial membranes and thinness of their walls. In these changes of the circulatory apparatus he is inclined to see an etiologic relation to infection with the tubercle bacillus. [A. R.]

3.—Will be abstracted when concluded.

4.—Liboff presents the views and observations of various authors on the influence of subaquatic occupations on the health of the workmen, such as bridge-builders, divers, etc. The conditions under which these men work are mainly those of increased atmospheric pressure, from 3 to 7 atmospheres being the usual limits. The effect of air under pressure depends on the degree of the concentration and the rapid changes from one atmosphere into another. The first effect of increased atmospheric pressure is on the ear. The person experiences pain in the ear, at first slight and then very severe; this pain may be communicated to the nose, jaws and forehead, and is brought about by the unequal pressure on the tympanic membrane. Sometimes the latter ruptures from undue stretching. The hearing becomes defective. The voice assumes a metallic resonance and is in some cases lost. The touch becomes benumbed. The mouth becomes dry, the cutaneous and mucous surfaces pale and the pupils dilated. The feeling of hunger supervenes, but thirst is never felt, owing to the increased moisture in the atmosphere. The intra-abdominal pressure is greatly lowered so that the abdominal wall falls in; on the other hand, the capacity of the lungs is considerably increased. The muscular strength is increased and with it the endurance. This, however, takes place only in the beginning of the work. The number of red blood corpuscles and the amount of hemoglobin are diminished, while the white blood cells are increased. This polkilocytosis may persist for a number of days. Generally, the effect of increased atmospheric pressure on man may be divided into two periods: (1) A period of exhilaration, lasting for about a month, and (2) a period of depression during which the appetite is lost and anemia, emaciation, indisposition to work and other evidences of depression supervene. The most important changes take place in the respiratory and circulatory apparatus. The number of respirations is lessened and the expiration is prolonged. Increased oxygenation of the blood takes place, so that the venous blood becomes red. The amount of CO₂ expired is increased. The pulse becomes slow and the heart's action is increased, leading in time to hypertrophy of that organ. The blood pressure is increased. The body temperature, if the pressure does not exceed 3 atmospheres, is at first increased. The morbid changes observed depend largely on the sudden ascent from a high into ordinary pressure. Under these conditions, hemorrhages from the ear and nose, hemoptysis, loss of sensibility, paralysis of the legs, bladder, large intestine, affections of the brain, unconsciousness and even sudden death have been observed. The paralysis may persist for a long time and finally terminate fatally. Excruciating pains in the joints and muscles are quite common, but do not persist, as a rule.

6.—Odinsoff reports a case of fibromyoma which was intimately connected with the walls of the cystic ovary, having been furnished by the blood vessels of the latter.

[A. R.]

BERLINER KLINISCHE WOCHENSCHRIFT.

June 24, 1901. (No. 25).

1. The Treatments of Obesity. E. STADELMANN.
2. The Decomposition of Albumin in Pernicious Anemia, Especially that Caused by the Bothriocephalus Latus. E. ROSENQVIST.
3. Vegetable Diet. ALBU.
4. The Symptomatology and Therapy of Appendicitis. KAREWSKI.

1.—The author discusses the methods of Banting, Ebstein, Oertel and Schwenninger for the treatment of obesity. He warns the profession regarding the dangers of the first method, which consists in the use of large quantities of meat and a slight amount of carbohydrates, on account of its injurious influence in cases of gout and renal disorders. Ebstein permits the ingestion of albuminous and fatty foods, but lessens the amount of carbohydrates, which the author believes is adaptable for milder cases of obesity. The method of Oertel, which has previously been advocated by Felix Hirschfeld, consists in cutting down the consumption of fluids. The latter observer's views are based upon his experience among the beer drinkers of Munich. The method of Schwenninger is practically the same as that of Oertel. [M. R. D.]

2.—Experiments on metabolism in eighteen cases of bothriocephalus latus anemia and three cases of pernicious anemia without a known etiology, showed that before the removal of the worm, an increased decomposition of albumin was present, while after the removal of the parasite albuminous metabolism was not as greatly affected. He regards this decomposition of albumin as due to some toxin produced by the worm. Even if the anemic processes are inhibited it cannot be said that the poison has been removed from the body, and in spite of the presence of the worm, there may be nitrogen retention. Rosenqvist dwells upon and urges the toxic nature of cryptogenic pernicious anemia. [M. R. D.]

3.—Albu opposes the older view that a vegetable diet is insufficient on account of its scarcity in albumin. For the healthy individual an exclusively vegetable diet is a very inconvenient way of ingesting food, not only on account of the large quantity that must be consumed, but on account of the undigested residue. But what is superfluous to the healthy individual may be of value to the sick one. Among the conditions that are benefited by a vegetable diet, are neurasthenia, neuroses of the stomach and especially hyperacidity of the stomach; also mucous colitis, chronic constipation, obesity, exophthalmic goitre, renal disease, and affections of the skin which are associated with disturbance of metabolism, diseases affecting the blood, or diseases of the gastrointestinal tract, such as pruritis, furunculosis, urticaria, erythema exudativum multiforme, and nodosum, as well as various forms of chronic eczema. The contraindications are gastric atony, gastrointestinal diseases due to anatomical lesions, and all conditions associated with malnutrition. It is to be added that many persons tolerate a vegetable diet very poorly, an idiosyncrasy, however, which is rare, and also occasionally occurs in other dietetic regimes. [M. R. D.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 63, No. 4).

29. Investigations in Autointoxication with Intestinal Occlusion. KUKULA.
30. The Radical Treatment of Malignant Tumors of the Rectum. HANS LORENZ.
31. The Formation of the Stump in Amputation and Excarticulation of the Upper Extremity. BEELY.
32. Tumors of the Capsule of the Kidney. LEO BORK.
33. Forceful Reduction of Old Hip-Joint Dislocations in Adults. ERWIN PAYR.
34. Suture of the Patella. ARTHUR E. BARKER.
35. The Relation of Hyperemesis Lactentium to Congenital Stenosis of the Pylorus and Pylorospasm, with Dilatation of the Pylorus as Treatment. MEINHARD SCHMIDT.

36. Conservative Operations upon the Testicle and Epididymis. ERWIN PAYR.

37. The Final Results of Castration for Tuberculosis of the Testicle. VON MUUNS.

38. Experimental Urogenital Tuberculosis.

BAUMGARTEN.

29.—Kukula reviews the literature of intestinal autointoxication, with a detailed list of the chemical substances which have been found as the cause. The experiments of many different authors and their results are quoted. Kukula, who has worked upon this subject for three years, divides his experiments into three series. In the first group he injected filtered intestinal contents from operated cases of intestinal occlusion into dogs, rabbits, apes, mice, guinea-pigs. Of these 39 animals, the great majority showed no reaction at all, probably because the material had been too much diluted. Of 14 other animals in whom artificial intestinal occlusion was performed, only one died of autointoxication. In the second series were 14 more experiments, in 7 of which Kukula succeeded in causing acute intestinal occlusion. Four of them died with typical signs of intoxication following occlusion. Injection of the intestinal contents were made in cats and dogs, and gave distinct symptoms of intoxication. The toxic substances found in the intestine are soluble in alcohol; this injected into animals will cause the symptoms of intoxication; and intraperitoneal will produce more serious results than subcutaneous injections. There are always fewer toxic substances in the small intestine than in the large. Pentamethylendiamin seems to play an important role in causing autointoxication. The third series of experiments consists of 30 animals in which the intestinal contents from five operated cases of intestinal occlusion were injected. Inoculations with the gases from the intestine did not always produce symptoms of intoxication. Mercaptan and sulphuretted hydrogen do not seem of much importance in causing intoxication. The same symptoms of poisoning reappeared in all the animals inoculated. These symptoms closely resembled those of autointoxication in man, from intestinal occlusion. Kukula believes that the vomiting is due to the intestinal intoxication. For when occlusion occurs, these toxic substances are formed, and as the epithelium is soon affected, they are easily absorbed. Then the symptoms of autointoxication soon follow. These substances are either dissolved in water, or they are absorbed as gases. Probably both processes occur. Kukula did not discover which substances were the exact cause of the autointoxication. [M. O.]

30.—Lorenz reports 158 cases of malignant tumors of the rectum which were operated upon in Albert's clinic in the past 14 years. In 105 others colostomy was performed; and 63 were not deemed operable. Thus 331 cases were observed in all, during 14 years. Colostomy was performed whenever radical operation was contraindicated, because the sacrum, bladder, or urethra was involved, or the cachexia was too great, etc. It was performed in three times as many men as women. Primary colostomy was only done in four cases. Kraske's dorsal method of operating was performed in 133 cases, the perineal method in 16 cases, and the vaginal method in two cases. 128 of the dorsal operations were for primary cancer of the rectum. The great majority of the operations were upon people from 40 to 50 years old. The coccyx was enucleated 42 times; the sacrum, or parts of it, removed 91 times. Of the former, three died; of the latter, 13; in all 17 deaths, only 12 of them from infection. The other five died from failure of the respiration, the heart, etc. Douglas' pouch was opened 79 times. The posterior wall of the vagina was resected 12 times, and divided once. The urethra and prostate were injured 8 times, four of them fatally. Twice the bladder was injured, both patients recovering. In 60 cases the rectum was amputated, with 13 deaths; in 25 it was resected, with 3 deaths; and it was drawn through in 17 cases, with one death. Of each of the latter groups, 8 regained control of their anal sphincters; 12 cases had absolutely no control. Kukula has heard recently from 100 of these patients. Of these 11 died soon after the operation, from the effects of the operation; 7 now have recurrence; 59 have died with recurrence; and 16 are perfectly well, an excellent result. [M. O.]

31.—Beely reports the case of a man of 17, who was born without a right hand. His hand had been amputated in utero. He could do anything with the stump, yet had an artificial hand made. He had marvelously well developed the muscles of the stump. The round end of the

radius lay just beneath the stump, as can be seen from the photographs and Roentgen photographs. The excellent use of the stump shows what may be accomplished in amputating or exarticulating a hand by operation. [M. O.]

32.—Bork has collected 24 cases of **tumor of the capsule of the kidney**, and gives their histories in detail. 20 were in women; 5 were in people over 50 years of age. In 15 cases the healthy kidney was excised with the tumor. Bork concludes that the tumors of the capsule of the kidney are **fibrolipomata**, **myxolipomata**, and rarely **sarcomata**. The former are benign, the latter malignant, while the myxolipomata are between the two. The kidney is always healthy. The operation for removal of the tumor is not considered dangerous nowadays. A table of the 24 cases collected follows. [M. O.]

33.—Payr describes in full two more cases of **old dislocation of the hip-joint**, in both of which **forcible, bloody, reposition was performed**. This makes five such cases reported by him. Kocher's incision for resection of the hip is made, that the muscles about the hip-joint may be protected as much as is possible. Care must be taken, when the force is applied, not to injure the soft parts about the hip. The different bandages and instruments employed in this procedure are given in detail. Extreme care of the wound is necessary, to prevent infection. Drainage should be left, after all hemorrhage is stopped and all injured tissue removed. In children the wound should be closed. Plaster casts and permanent extension apparatus are only needed when there is danger of the luxation recurring. One case out of the five died with infection. With passive movements and massage begun early, a good functional result is secured. In six weeks the patient can walk with the aid of a supporting splint. Photographs are given to explain the mechanism of the forcible reduction. [M. O.]

34.—For the past 10 years Barker has treated **fresh horizontal fractures of the patella by subcutaneous suture** with silver or aluminum-bronze wire. He makes but two tiny incisions. Very little anesthetic is necessary, as the operation only lasts from five to ten minutes, or local anesthesia may be employed. 21 cases are tabulated, with one death from delirium tremens. In three cases the sutures were removed two or three years later, because pain and an inability to kneel persisted. [M. O.]

35.—**Hyperemesis lactentium** is the name given by Schmidt to the uncontrollable vomiting in infancy, whether due to congenital stenosis of the pylorus or pylorospasm. Kehr and Loebker have done gastroenterostomy. Nicoll has lately dilated the pylorus successfully, a much less severe operation. An incision was made into the stomach, and the dilatation carried out from this. Schmidt reviews the literature of the subject in full, giving in detail the anatomical and clinical symptoms observed. He reports a case, a boy of nine weeks, upon whom dilatation of the pylorus was performed. The incision in the stomach was lengthwise, about 3 cm. from the pylorus. The pylorus was dilated at once with sounds, and the incisions closed. The child recovered rapidly, with no more vomiting. Schmidt believes that **pylorospasm is commonly the cause of this condition**, rarely a true hypertrophy of the pylorus. A table of statistics shows the normal diameter of an infant's pylorus, up to 10 years of age. Schmidt concludes that when medical treatment fails in these cases, the **pylorus should first be dilated**, up to the normal size according to the age of the child. Only if this fails should gastroenterostomy be performed. [M. O.]

36.—Payr reports a case of **acute suppurative orchitis**, probably due to mixed infection, as staphylococci were found, while there was a history of gonorrhea. The remaining testicle, in a man whose other testicle has been removed for abscess, was in turn full of abscesses. He recovered, after simple excision of the abscesses. The sexual function was in no way affected. His one testicle seems now to be in good condition, two years after the orchitis. In place of castration, the radical operation, Payr recommends **incision, with excision of the abscesses of the testicle and epididymis**. In this conservative manner, the sexual function is unaffected, and no severe operative shock is administered. [M. O.]

37.—In **tuberculosis of the testicle**, castration may rarely be necessary, as removal of the tuberculous mass, or excision of the epididymis alone will be enough. Besides, the process may have involved other parts, when castration will do no good. In 34 years at the Surgical Clinic in Tübingen 111 castrations were done, unilateral in 78

cases, in 33, bilateral. Of the 78 cases, 12% died of urogenital tuberculosis; 15% of phthisis; and 25% developed tuberculosis in the other testicle. Thus 46 were cured with unilateral castration. Of the 33 cases, 15% died of urogenital tuberculosis; 25% of phthisis; and 50% were cured with bilateral castration. When any other tuberculous focus exists, castration will be useless. The results of castration in tuberculosis of the testicle are far better than is commonly supposed. [M. O.]

38.—Baumgarten succeeded in causing tuberculosis to spread from the testicle to the vas deferens and prostate, but not in the opposite way, in his experiments upon animals never affected. The infection never traveled in a direction opposite to the excretory or secretory current. **Tuberculosis may appear primarily in the testicle**, as it does in the suprarenal capsule. Anatomical and clinical investigations bear out these experiments. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

June 13, 1904.

1. Contribution to the Question of Immunity.
V. E. MERTENS.
2. A Case of Intestinal Necrosis of Uncertain Origin.
LEO BORNHAUPT.
3. Some Remarks Concerning Appendicitis.
W. POLJAKOFF.
4. Further Investigations Concerning Dysentery and the Dysentery Bacilli.
KRUSE.
5. The Relation Between Sclerosis of the Coronary Arteries and Diseases of the Heart Muscle.
TH. NEUBUERGER.
6. The Collateral Unpleasant Effects of Orthoform.
G. GRAUL.

1.—Pfeiffer had noticed previously that typhoid serum lost its agglutinating properties when kept for a long time while the lysins were still well preserved. At Pfeiffer's desire Mertens investigated the condition of specimens of cholera serum which had been kept by Pfeiffer at room temperature for over five years. One which had been kept in a bottle which was completely filled, well stopped and sealed with paraffine, had lost some of its agglutinating property but protected animals still against cholera injections. Another which had been kept in a bottle which was only 1/3 filled and was not well stopped or sealed, did not agglutinate so well as the first and had no protecting power. A third bottle well filled and stopped and kept on ice, had lost none of its agglutinating or protective power. The serum in the different bottles was originally exactly the same and from the same source. This shows that the agglutinative and the immune bodies are affected differently by the same influence and Mertens shows that Pfeiffer is right in stating that they are different bodies. Mertens also reports some experiments which show that dead cholera cultures when injected intravenously produce a different degree of immunity from that produced when injected subcutaneously. [D. L. E.]

2.—The case was that of a 22 year old man who was taken suddenly ill with abdominal pain, vomiting and constipation. 24 hours afterward he was very comfortable but the vomiting continued later; he became cyanotic and very dyspnoic. The vomit became feculent though the abdomen presented no notable changes. The patient soon died in collapse. Since the right inguinal canal was wide open and a portion of the ileum about 10 cm. in length was bluish red and necrotic, the pathologist reported that the cause of the intestinal lesion was incarcerated hernia which had replaced itself. Bornhaupt admits that this may be a correct explanation, but inclines to the belief that the real condition was **probably embolism of the mesenteric artery** since the mesentery was suffused with blood in the region opposite the necrosed bowel. The mesenteric vessels were not carefully examined and it was not definitely known whether they were diseased or not, but Bornhaupt thinks that a large pleural hematoma which was found after death, and which had undoubtedly caused death might readily have been the source of an embolus which had produced the necrosis. [D. L. E.]

4.—In experimenting concerning the treatment of dysentery, Kruse found that small animals were so susceptible to fatal infection that it was impossible to produce an anti-serum with them, while large animals, probably because their susceptibility to infection was so very slight probably produced only an inactive and useless anti-serum. He injected

himself and his assistants with dead cultures, however, and obtained a very lively reaction in each case and the agglutinating power of their blood went as high as a dilution of 1 to 200, while it had previously been below 1 to 20. There is a possibility, therefore, of a specific treatment of dysentery but this possibility is not great and the older methods of treatment must be adhered to. Kruse is convinced from experimenting with the effects of various temperatures that the bacilli can live throughout the winter and that therefore there should be every effort to use careful disinfection and isolation and it should particularly be seen to that the sewers are good and are well flushed and that all houses have good sewer connections. Dysentery depends much more upon bad sewage than upon bad drinking water. Kruse has also investigated specimens of stools, as well as blood serum from a number of patients in insane asylums where dysentery was occurring in the epidemic form not uncommon in such institutions. He found a number of organisms which apparently caused the disease in different cases and none of these corresponded with his dysentery bacillus. The symptomatology is also different in this form of dysentery and Kruse consequently decides that it is not the same infection as epidemic dysentery, and is probably due to a variety of organisms.

[D. L. E.]

5.—Neubürger insists that angina pectoris is not the only result of coronary sclerosis. The symptoms develop gradually and angina pectoris is only one symptom. He divides the symptoms into three stages: (1) That of disturbance of sensation; (2) That of disturbance of motion; (3) Disturbance of nutrition. The first stage is usually evidenced by uncomfortable feelings, actual distress or severe pain about the heart and radiating to the left or sometimes to the right shoulder. These feelings usually decrease when the stomach is empty and increase after eating freely. The pain is present at first only after effort, but becomes spontaneous, the breathing becomes affected, and as the patient begins to show the second stage, the pulse becomes smaller, empty, frequent or perhaps infrequent and perhaps arrhythmic. The heart may show no changes upon physical examination. In the stage of depressed cardiac nutrition he emphasizes as very important attacks of asthma in persons not previously subject to it, and slight evening rises of temperature, or irregularities in temperature which he attributes to imperfect elimination of metabolic products as a result of imperfect circulation.

[D. L. E.]

6.—Other observers have reported attacks of eczema and various general disturbances as a result of the use of orthoform. Graul adds a case of eczema to the list. This was caused by applying an ointment of orthoform to a skin ulcer not more than a half inch in diameter for two days. The skin was however, unusually sensitive as the result of a previous severe irritation resulting from the use of hot applications. [D. L. E.]

June 20, 1901.

1. The Treatment of Pulmonary Tuberculosis with Tuberculin. GOETSCH, with a postscript by R. KOCH.
2. Physician, Apothecary and Patient. L. LEWIN.
3. Clinical and Therapeutic Investigations Concerning Pulmonary Phthisis. E. STADELMANN.
4. On the Treatment of Laryngeal Tuberculosis.

G. BESOLD.

1.—Goetsch reports his experience with tuberculin in the past ten years. This includes 224 cases, 12 died almost at once and 37 are still under treatment, hence he discusses 175 cases. 125 of these (71%) were discharged cured, the other 50 stopped treatment so soon that no results could be anticipated. 88 of the 224 had tubercle bacilli in their sputum. The average duration of treatment in the 125 cured cases was 198 days. The remarkably favorable results reported are to some extent explained by the absolute rule which Goetsch makes that only fever-free ("uncomplicated") cases are ever treated by him with tuberculin. He begins with a dose of 0.0001 mg. or if this causes reaction, 0.00001 mg. is used. If the latter also causes reaction he uses 0.001 mg. T. R. and after a dose of 0.1 mg. T. R. is reached he goes back to the old tuberculin and gradually increases the dose until if possible 1.0 g. is used at a dose. Reaction should never be produced, and the patient should always remain at rest for

24 to 48 hours after an injection. Koch adds a few complimentary remarks. [D. L. E.]

2.—Lewin begs the apothecaries to reduce their prices, particularly in dealing with the poor. [D. L. E.]

3.—There have been many contradictions in the reports concerning bacteriological investigations of the blood in phthisis. Stadelmann believes that those who have reported the frequent discovery of microorganisms in the blood in cases of phthisis with evidences of sepsis, have done so either because they have investigated the cases in the agonal period when a general invasion takes place, or because their methods were imperfect. Lasker, Stadelmann's assistant, found bacteria (staphylococci) in only one of 68 cases examined and that patient was in the agonal period. As to the diazo-reaction, he believes that it is of prognostic importance only when positive over a considerable period; it then indicates a bad prognosis even when the other signs apparently do not. Lasker examined 152 cases, only 38 of 69 cases of severe grade gave the reaction constantly. Hence a negative result does not mean a good prognosis, for of the 31 negative cases 15 died in the hospital. It also was often positive from time to time in mild cases. (To be concluded). [D. L. E.]

4.—Besold thinks that laryngeal tuberculosis should be actively treated but that if cases are well under observation and carefully watched, treatment may be postponed until general improvement of health or other factors are most favorable. If then the disease is advancing or there are tubercular tumors or ulcers with callous edges, he thinks active measures should be instituted even if the patient's condition in general is bad, though this does not hold if he is in extremes or has very advanced pulmonary disease. The most important point is to deal energetically with the disease and not stop half way. Partial measures do more harm than good. If lactic acid is used as an astringent the strength should be 20% to 30% and it should be applied well over the mucous membrane; if it is used as a disinfectant 50% to 75% strength should be used at first and often pure afterward, and the application should be distinctly a local one at the diseased area. The curette should be used to remove old granulations, etc. but the curette is often difficult to use for removing granulations on the vocal cords particularly, and Besold has devised a special pair of scissors for this purpose. He also discusses the use of the cautery, the occasional wisdom of laryngectomy and similar procedures, and particularly insists upon the necessity for rest of the larynx in any treatment of this organ. [D. L. E.]

DEUTSCHE ARCHIVE FUER KLINISCHE MEDICIN.

(Vol. 69. Heft 3 u. 4.)

11. The Behavior of the Leukocytes of the Blood in Local Irritation of the Skin. ZOLLIKOFER.
12. The Varying Amount of Rhodan in the Sputum and Its Cause in Healthy and Diseased Human Beings. J. GROBER.
13. Perforation in Effusions in the Peritoneal Cavity. A. BERLINGER.
14. Clinical Investigations of the Circulatory Organs in the Early Stages of Syphilis. K. GRASSMANN.
15. The Infection in Gonorrhea. H. ULLMANN.
16. Hematological Condition in Leube's Case of Severe Anemia of Rapid Course with Simultaneous Leukemic Condition of the Blood. J. ARNETH.
17. The Treatment of Chronic Pulmonary and Laryngeal Tuberculosis with Injections of Hetolin. H. GIDIONSEN.
18. The Treatment of Tuberculosis with Cinnamic Acid. Experiments Upon Rabbits. F. FRAENKEL.
19. A Case of Senile Chorea. BISCHOFF.

11.—Zollikofer has performed a number of experiments with the object of determining what effect irritation of the skin with tincture of iodine, mustard plaster, cantharidal plaster and croton oil has upon the number and relative proportion of the leukocytes of the blood, with the following results. When large portions of the body were irritated and blood taken from the finger, it was found that the number of leukocytes varied irregularly, and showed no relation to the irritation. Careful studies of the hemoglobin showed that it also was not affected, although it is possible that a slight diminution in the percentage was more frequent than any other change. Differential counts showed a slight increase in the mononuclear leukocytes.

and the same was true of the eosinophil cells. The blisters seemed to produce a more distinct effect. There was moderate increase in the number of leukocytes, with a slight increase in the polymuclear cells. Even Braunscheidt's method of local irritation with croton oil had no distinct effect. Finally Zolliker irritated a finger and then drew blood from it, and found that even under these conditions no distinct alteration occurred. In conclusion he calls attention to the very great variation in successive counts, and has found that these are not uncommon in perfectly healthy subjects. He does not believe that we are justified in concluding that the effect of local irritation of the skin is due to the modification of the blood. [J. S.]

12.—Grober has made careful studies of the amount of hydrogen sulphocyanide and particularly of potassium sulphocyanide in the sputum. He makes a quantitative estimation according to the following methods. Two ceca, of altered, fresh saliva are placed in a clean glass, a drop of acetic acid is added, and 3 drops of a .01 normal solution of chloride of iron. The mixture is then shaken, and if potassium sulphocyanide is present a red color appears. In order to determine approximately the quantity present he compares the resulting color with 3 standard solutions containing 2 mm., 1 mm., and 0.02 mm. The color in this solution is not altered in the course of 3 months. Quantitative estimations were made upon 100 cases. The substance was present in 82, but in 24 of these only the faintest trace could be discovered. He concludes that in nervous diseases it varies very considerably in quantity, in diseases of the blood-forming organs it is usually diminished; it is lost in malignant tumors, and diminished in cases of tuberculosis. He does not regard it as the product of the decomposition of the saliva, and his further investigations have shown that the quantity diminishes proportionately to the duration of secretion. It does not seem to be effected by nutrition, nor by the use of nicotine, even in persons not habituated. Small quantities of cuprous sulphite increase the secretion. [J. S.]

13.—Berlinger reports an interesting case. A man of 59, with an alcoholic history had had some swelling of the abdomen 2 weeks before admission to the hospital. The umbilicus became greatly distended. Three days before admission to the hospital there was sudden **puncture of the skin**, and several litres of yellow liquid were evacuated. When admitted he was prostrated, and upon physical examination a cirrhotic liver was readily felt. A small perforation was found in the under surface of the distended navel. The patient vomited blood several times, and finally died, apparently as a result of rupture of an esophageal varix. At the autopsy cirrhosis of the liver and tuberculosis of the peritoneum were found. The fluid contained erythrocytes and leukocytes. Sections through the skin of the navel showed it was involved in the tuberculous process, although no tubercle bacilli were actually found. [J. S.]

14.—Grassmann concludes his study of the **circulation in syphilis**, reporting in detail cases 81 to 96 inclusive. He also reports the results of a number of studies upon the hemoglobin, the blood pressure, etc. He concludes as follows. That as a result of investigations upon 288 persons in the early stages of syphilis, the normal function of the heart shows during the secondary periods of at least 23 of all the cases, disturbances that indicated either slight anomalies or distinct insufficiency. Arrhythmia occurs in about 85% of the cases, and subjective symptoms in nearly all. In the early stages of syphilis some impairment of the nutrition and functional activity of the heart muscle occurs, giving rise to weakness and dilatation, especially of the right ventricle. Exacerbation of a pre-existing chronic endocarditis may also take place. In nearly all cases the blood pressure is diminished, and it is increased by the administration of mercury. In the majority of cases of secondary syphilis the quantity of hemoglobin in the blood is diminished, rarely very considerably, and it improves very rapidly after the administration of mercury. Curiously enough in many of Grassmann's cases the percentage of hemoglobin increased after the first injection of mercury, which appears to be contrary to the doctrine upon which Just's sign is based. Grassmann does not believe that this change in the circulation can be ascribed to the sclerotic changes in the blood, nor to the action of the mercury. And he therefore ascribes them primarily to the action of the syphilitic infection. [J. S.]

15.—Ullmann, after a brief review of the literature, reports 5 cases that may be briefly given as follows. The first a man of 57 developed symptoms of general **septicemia**. The urine contained a considerable quantity of pus, and the patient finally died. At the autopsy an **abscess of the prostate** was found, due to infection with staphylococci and diplococci, secondary to an old specific urethritis. From this abscess thrombosis in the prostatic veins had occurred, followed by pyemia. The second patient, a man of 34, also had an abscess of the prostate due to infection with staphylococci. There were no symptoms of specific infection in the urethra, but Ullmann regards it as a case of prostatic infection. The symptoms resembled those of typhoid fever. The 3d patient, a man of 52, had suppurative prostatitis secondary to chronic specific urethritis which was the source of a pyemia. The 4th patient, a man of 55, had a phlegmonous inflammation of the prostatic tissue and plexuses, which was the source of the pyemia. There were no signs of gonorrhea. The 5th case, a man of 26, had severe chills 3 weeks after infection. There were pains in the limbs and joints, symptoms of acute endocarditis, and finally death. The nature of the general infection was not determined. [J. S.]

16.—Arnoth reports his studies of the blood and organs in a case of rapid, severe anemia, already reported by von Leube. The studies were made with exceeding care, and the different varieties of blood corpuscles described very accurately. The details cannot be given in a brief abstract. It may be mentioned that there were signs of an exceedingly active vegetative process in the red blood cells, chiefly evident in the normoblasts which were exceedingly numerous. In fact, all stages of blood from the first embryonal steps, to the finished corpuscle could be distinguished. The polymorphonuclear leukocytes were considerably diminished in number, and many failed to show granulations in smears stained with a tri-acid preparation. This accords with some of Ehrlich's observations. Transitional formations between the non-granular and the granular forms of leukocytes were occasionally found. Myelocytes were present to the proportion of 13.6%. A small proportion of them contained eosinophilic granules, the others, neutrophilic granules. The lymphocytes were considerably increased. Of the large mononuclear cells the large types of Ehrlich were present in about normal number. Studies were also made of the marrow and lymph glands. They showed considerable changes which, however, were not entirely identical with those of leukemia. An intravenous injection of the splenic pulp was made into a rabbit, but the animal died shortly afterward of pulmonary tuberculosis. [J. S.]

17.—Gildionsen has treated 12 cases of **pulmonary tuberculosis** by ordinary sanitary methods, of which 7 were greatly improved; 4 moderately improved, and one grew worse. Twelve cases were also treated by injecting **hetol**. Of these one was improved; 4 moderately improved; 3 not improved, and 4 grew worse. In only one of these cases increase in weight occurred. The author concludes that intravenous injections of hetol have no better effect upon the lung than the open air treatment, and on the other hand, may produce a distinct deterioration. The injections do not affect the fever; there is no improvement in the general condition; there is loss of body weight. The general results of the treatment are slight dulness or loss of sleep. There is no injurious local reaction, and laryngeal tuberculosis is entirely unaffected. [J. S.]

18.—Fraenkel has performed a number of experiments in order to determine what effect **cinnamic acid** has upon rabbits inoculated with tuberculosis. All the animals were inoculated into the eye, and then those selected for treatment regularly injected with the acid. No essential changes were found between those treated and those not treated, either in the amount of round cell infiltration, the size or extent of the tuberculous process, or in the general condition of the animal. None of the changes described by Landerer and Wüster as characteristic of the acid treatment, occurred. The lesion proceeded to caseation, tubercle bacilli were still found, and the process was steadily extending. [J. S.]

No. 19.—Bischoff reports the case of a woman 73 years of age, who had a left sided hemichorea of 5 years duration. The movements could not be controlled by the will; they ceased in sleep; there was considerable disturbance of speech, but neither paralysis nor disturbance of intelligence. The patient had apparently never suffered from

rheumatism, and the heart was normal. The characteristic features of the case were the peculiar movements of the head, from one side to the other, forward or backward in an irregular manner. The tongue was sometimes thrust forward, and then retracted, or rolled around in the mouth. The movements of the left arm and left leg were not nearly so frequent as those of the head and tongue; they occurred at intervals, and were rather sudden in character. The autopsy failed to reveal any essential lesion. There was some tuberculous degeneration of the spinal column at the junction of the dorsal and lumbar regions. Microscopically no essential changes could be discovered. The author has collected 68 cases from the literature, and concludes that senile chorea occurs with equal frequency in men and women. Rheumatism and heart disease are rare complications, and in about 60% of all cases intelligence is not disturbed. Usually both sides are involved. If it is unilateral there is apparently no essential difference. About 20% of the cases improve under treatment. [J. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

June 25, 1901. (No. 26).

1. Twenty-seven Intra-Cranial Resections of the Trigemini, Among Them 25 Typical Extirpations of the Gasserian Ganglion. F. KRAUSE.
2. Fat Embolism of a Tuberculous Lung, as a Result of Rupture of the Liver. H. ENGEL.
3. The Influence of Alcohol and Fruit Upon the Formation of Uric Acid. J. WEISS.
4. A New Vaporization Apparatus for Inhalation. A. BELLING.
5. Comparative Investigations Upon the Deficiencies of Various Inhalation Systems. R. EMMERICH.
6. Is there an Isolated Paralysis of the Cricothyroid Muscle? W. LUBLINSKI.
7. The Treatment of Leg Ulcers. WALBAUM.

1.—Krause discusses the operation for the removal of the Gasserian ganglion. The technique is as follows: A flap is formed consisting of skin, muscle, periosteum and bone, somewhat C-shaped, with the base just above the zygomatic arch. The initial incision is made through the skin and muscle down to the bone. A small perforation is then made in the upper portion of the flap piercing the skull, and another one anteriorly. A Gigli saw is then passed from one to the other, and the two incisions united. The two descending limbs of the U are then cut through in the same manner and the bone broken by means of an elevator. The fracture always takes place through the thinnest part of the bone in the temporal region. Resection of the arch of the zygoma is entirely unnecessary. It is very important that the vertical incisions should be carried down as far as possible in order to render it unnecessary to lift the brain from the floor of the skull for any considerable distance. The flap is then wrapped in sterile gauze and laid over the cheek, the middle meningeal artery tied in two places and cut. The brain is then elevated in the dura. Just to the inner side of the artery the three branches of the trigemini can be seen. The ganglion is then grasped in a pair of Thiersch forceps, the second and first branches cut at their respective foramina, and then the ganglion pulled out. In rupturing the first branch a very long piece is sometimes pulled out. The dangers of the operation are of course rupture of some of the large blood vessels around the carotid foramen. Krause has twice injured the cavernous sinus, and both times he was able to control the bleeding by packing. The duration of the operation depends largely upon the amount of hemorrhage and the time required to stop it. Usually it lasts about one and a half hours, but sometimes can be done in very much less time. When no effort is made to save the bone flap the operation can be performed much more rapidly, at least a quarter of an hour, and considerable blood are saved. One of the most important dangers is compression of the brain, although as a rule no characteristic disturbances are produced if tarboard spatula is used to lift it. Occasionally the dura is excessively thin and friable, and this renders the operation more serious and difficult. [J. S.]

2.—Engel reports the case of a man suffering from pulmonary tuberculosis, who, during a morning walk, in an

attempt to save himself from a fall, fell on his body sharply backward and to the right. He felt severe pain and was obliged to sink to the ground. In about 10 minutes, however, he was able to go on with his walk. The following morning he had difficulty in breathing and was very restless. In the afternoon he died. The right lung showed excessive edema, and the left partial collapse as a result of pleural adhesions. A rupture was found in the liver, and an examination of the liver substance showed considerable fatty infiltration, with the exception of the cells in the immediate neighborhood of the rupture. Sections through the right lung showed that nearly all the capillaries were filled with fat droplets, and Engel regards these as coming from the liver cells in the neighborhood of the rupture. This fat he believes was liberated by pressure, and he regards it as the immediate cause of death, although the extensive tuberculosis of both lungs probably contributed to the fatal result. [J. S.]

3.—Weiss has made some studies upon the influence of alcohol and fruit upon the excretion of uric acid in the urine. He found in one case that the administration of 5 of a litre of cognac produced no effect upon the quantity of uric acid, although the quantity of urine was considerably increased. The administration of 8 lemons appeared to produce a very slight diminution. The administration of 860 grms. of apples with the peels caused a sharp diminution in the quantity of uric acid that lasted for 2 days. He regards this as due to the slight amount of citric acid in the apple peels, and considers that this acid is more efficient than the various other remedies hitherto used in the treatment of uric acid diathesis. [J. S.]

4.—Bulling describes an ingenious apparatus which consists essentially of a large tank into which 2 sets of tubes are passed. One contains a small apparatus for vaporizing liquids, and the other consists of a number of long tubes with openings in their ends, whose size can be determined. Through the latter compressed air escapes into the room. This when dry has a tendency to become saturated with the moisture of the vaporized liquids, probably by preventing the formation of large drops. It can be warmed or cooled according to wish. [J. S.]

5.—Emmerich has performed a number of experiments for the purpose of determining the size of the drops and their number after the vaporization of liquids, and the depth to which they pass into the respiratory apparatus. The work was performed chiefly with the apparatus of Bulling. He finds that this apparatus provides for the saturation of the atmosphere with moisture more rapidly than any other hitherto constructed; 3 to 4 minutes sufficing to reach 100%. The drops remain minimal in size. Their diameter varies from .006 to .012 mm. The smallest were the most common. Comparison of various other instruments results greatly in favor of Bulling's apparatus. He found that in one minute 11,000 drops fell upon the space of 1 sq. cm., whereas by other forms not more than 3000 drops were deposited in the same space in the same time. The apparatus was constructed of 2 open bottles connected by a system of tubes, and it was found that with Bulling's apparatus the liquid penetrated more deeply than with any other. The author is, however, sure that they never penetrate as far as the alveoli, because experiments upon the lungs of men that had been executed showed them practically free from germs. [J. S.]

5.—Lublinski discusses the symptoms that can be produced by isolated paralysis of the cricothyroid muscle. He found that in all probability the voice would be deep; that the high notes would be imperfect and that all tones would be rough and impure. The vocal cord on the affected side would probably be slightly wavy in outline, and it is possible that the opening between the 2 cords would be slightly oblique, although this symptom has not yet been observed. He has, however, observed conditions in 1 case that lead him to believe that the anterior cricothyroid muscle was paralyzed, the case in each instance being preceding attacks of diphtheria. [J. S.]

6.—Walbaum upholds the use of camphor for the treatment of leg ulcers. His method is as follows: He first uses a mixture of clay and acetic acid for a dressing, until the discharge becomes slight and odorless. Gauze soaked in spirits of camphor is then applied; over this a layer of dry gauze, and finally some rubber or silk protective, and the whole enclosed in cotton wool and a bandage.

Every second day the dressing is changed, and on these occasions the edges of the ulcer are well rubbed, and the surface cleared of any adhering membrane until the granulations stand out clearly. [J. S.]

ZEITSCHRIFT FUER ORTHOPAEDISCHE CHIRURGIE.
1901. (Volume 9, No. 1).

1. Dr. Felix Schenk. WILHELM SCHULTHEISS.
2. Description of Scoliosis in a Young Pig.
WILHELM SCHULTHEISS.
3. Three Cases of Congenital High Position of the Scapula. WILHELM RAGER.
4. The Treatment of Severe Scoliosis.
CARL DEUTSCHLAENDER.
5. Ikonometry, a New Method of Measuring Scoliosis.
ROBERT GRUENBAUM.

1.—A eulogy of the late Dr. Felix Schenk.
2.—Schultheiss describes in full a specimen of scoliosis in a young pig. The preparation shows the occurrence, in the pig, of a scoliosis resembling that seen in man. The scoliosis is dorsal, convex to the right, with a twisting of the anterior and posterior parts of the vertebrae. There is also some torsion and lateral deviation of the spine and of the separate vertebrae, showing that the epiphyses of the bodies of the vertebrae have grown together. The bodies of the vertebrae are broader on the concave side, even where there is no scoliosis. These peculiarities are well illustrated by a series of photographs. [M. O.]

3.—Rager describes three children with congenital high position of one scapula. The first case was a girl of 8, whose right arm was injured at birth. She uses her right arm somewhat, but does almost everything with her left. The right shoulder is much higher than the left. Measurements showed that the right scapula was smaller in all dimensions than the left; the right side of the thorax was less well developed than the left; and the right arm was shorter and smaller than the left. A Röntgen photograph showed a difference of 3 cm. between the positions of the two shoulder-blades. Active movement of the right shoulder is almost impossible, but passive movements can be freely made. Electrical reactions were normal, and the pressure of one hand equalled that of the other. Special exercises of the right arm and hand have improved the condition. The other two cases, boys of 6 and 8, are very much alike. The difference between the position of the scapulae was 6 cm. and 8 cm.; both had inguinal herniae, adenoids, deformity of the upper edge of the smaller scapula, etc. In all three cases the condition was congenital, in the first case associated with injury at birth. The deformity of the scapula in the second case may have been due to fetal rickets, in the last case, where an echondrosis existed, to disturbed position. The intellect of the last two patients was markedly below normal. Exercises were begun, and the parents told to wait several years, when the children could themselves decide for or against operation. Movement was possible in both cases. Rager found in the literature 30 cases of unilateral high position of the scapula, and two bilateral cases. The majority were on the left side. He divides the cases into four groups: (1) those with torsion of the axis of the scapula; (2) those without change of axis, yet with exostosis-like lengthening of the upper inner corner; (3) those with true bony connection from the atlas to the inner edge of the scapula; and (4) simple high position of the normal scapula, the great majority of the cases. Rager concludes that a high position of the scapula was the primitive condition; and that its descent, in these cases, seems to have been hindered by some abnormal connection with the vertebral column. [M. O.]

4.—All but the most severe forms of scoliosis can be benefited by time, apparatus, energy; yet only in the few, especially favorable cases will the deformity disappear. The position of the spinous processes of the vertebrae in scoliosis is now plainly to be seen upon Röntgen photographs. Nowadays the diagnosis of the grade of the scoliosis is not difficult. Operation, immobilization, gymnastics, redression, and fixation of the spine, with apparatus, have all been advanced as treatment. The plaster jacket applied in extension is the best apparatus. It should be worn at least two or three months, changed two or three times, and followed by gymnastics. Besides, the treatment should extend over two years, the after treat-

ment, for years longer. Those cases which come under treatment early, will benefit most. If growth has stopped, or is very slow, the prognosis will be poor. It is especially favorable from 5 to 7 years, and again at puberty, the time the bones grow. Both patient and physician must have patience, as the whole procedure takes time. The correct treatment must be ordered, depending upon the pathological anatomy. Then the case must be carefully watched for years. For changes in the internal organs will result from high-grade scoliosis. [M. O.]

5.—Grünbaum describes his new method of measuring scoliosis. For this he uses the ordinary photographers reflex-camera. The mechanism of the camera-lucida is used, so that the outline of the body, the position of the scoliosis, and the curves can be drawn on paper, one quarter the natural size. It is simple, inexpensive, and can be used by the general practitioner. The child has only to stand up for a few seconds. [M. O.]

ARCHIV. FUER EXPER. PATHOLOGIE UND PHARMACOLOGIE.

Band 45, Heft 5 and 6.

1. Contribution Concerning the Action of Antiarin.
HEBDOM.
2. The Effect of Antiarin on the Isolated, Suspended Frog's Heart. STRAUB.
3. The Effect of Carbonic Acid on the Isolated, Suspended Frog's Heart. STRAUB.
4. Investigations Concerning Acidosis in Diabetes Mellitus and Acid Intoxication in Diabetic Coma.
MAGNUS-LEVY.
5. Concerning the Preparation of the Digitalis Glucosides and their Composition. CLOETTA.
6. The Manner in Which Poisons which Excite Convulsions Cause Reduction of Temperature.
HARNACK AND STARKE.

1, 2, 3.—The first three articles, all from the Pharmacological Institute of Leipzig, refer to the action of antiarin and its relation to the action of carbonic acid. Hebdom gives an unusually elaborate series of references to the literature concerning the "Hydra-Tree of Death" and the action of its active principle, antiarin. This is an exceedingly active cardiac poison, less than 0.00023 per kilo of body weight causing death in frogs, a little more killing cats, and 1 mg. proving fatal in rabbits. Pigeons were less susceptible to its action. It increases the energy of cardiac systole, produces marked cardiac action and in fatal doses the heart ceases beating in firm systole. The substance was recovered from the hearts of poisoned animals. Neufeld has already stated that when the heart's action had been stopped by antiarin hydrocyanic acid would cause it to beat again and to continue its contractions. This Hebdom has confirmed, the hydrocyanic acid causing the heart which had ceased beating in complete systole to relax and slowly to begin beating again and to continue thus and vice versa, hearts stopped in diastole by hydrocyanic acid began beating again after the use of antiarin; the susceptibility to antiarin was much reduced by the previous use of hydrocyanic acid. The latter acts upon the nerves and muscles while antiarin influences the muscles directly, producing by direct action severe fibrillary tremor and rapid decrease of the muscular irritability and final loss of the latter. Its action was not closely similar to that of veratrum-antiarigenin, a product of antiarin, is like the digitalis group in its action, but its action is weaker than that of antiarin. Straub, as a résumé of his paper states that the action of antiarin is different upon different portions of the heart, decreasing from the ventricle toward the sinus. It causes continued decrease of the irritability of the heart cells, the contractions becoming prolonged and slow, the time between auricular and ventricular contraction becoming prolonged and leading finally to permanent systole. As a result of his second work, Straub decides that carbonic acid causes weakening of the cardiac conditions and their final cessation, and he believes that this action of carbonic acid should be considered in all cases in which one would investigate the effects of any substance which can paralyze respiration. It differed completely from antiarin in effect, in that the latter did not influence the energy of cardiac contraction while carbonic acid largely reduces it. [D. L. E.]

4.—Magnus-Levy begins his article by describing a num-

ber of interesting chemical methods, the most striking of which was one by means of which he isolated oxybutyric acid from the urine of diabetic patients. His most important chemical statement, to the chemists at least, is that after precipitating diabetic urine containing oxybutyric acid with lead, the reading of the polariscope was much lessened. This may be true of urines that contain no oxybutyric acid also and at any rate it shows that the usual method of reckoning the amount of oxybutyric acid by determining the difference between the results obtained by polariscope and titration is very subject to error (and thereby, the determination by polariscope of the amount of sugar is more subject to error than is commonly thought.) He reports a new case of diabetic coma (in a child of 12) which was successfully treated with alkalies (by the mouth) 219 grammes having been used in two days. The coma was typical and lasted from one morning into the next day, and then slowly vanished completely and there had been no suspicion of coma for two months at the time of the report. The free use of alkalies caused marked increase in the acid output. Magnus-Levy has previously insisted that excessive destruction of body albumin is not a necessary accompaniment or predecessor of diabetic coma—contrary to most writers, particularly the older ones, he states that such albumin destruction cannot usually be demonstrated. In this case, as well as in others which he has seen, there was absence of pathological albumin destruction. He also reports three other cases of diabetic coma treated with alkalies, all of them ending fatally. He considers the presence of oxybutyric acid an absolutely constant accompaniment of severe diabetes, basing this statement upon the experience of Naunyn and others and upon his personal discovery of the acid in every one of 29 cases. Some authors have claimed that there was great disturbance of intestinal digestion and absorption in diabetic coma, but though the patient who recovered from coma had colicky attacks, there was nothing abnormal about the stools, and of the large doses of soda given by mouth about 99.5% was absorbed. The study of the nitrogen in the feces also showed good absorption. The use of large doses of alkalies during coma or in acid intoxication without coma, causes a very marked increase in the excretion of acids, as shown by the fact that the urine remains acid unless enormous doses of alkali are used: Magnus-Levy shows this even more convincingly by the figures which he obtained in estimating the acid output (oxybutyric and diacetic) under these circumstances. He puts the question whether the coma is really an acid intoxication primarily, or whether the acid intoxication is largely a secondary matter and the urinary evidences of it to a considerable degree, at any rate, the result of therapeutic measures (use of alkalies.) He answers this by stating that in coma there is not only a much larger production of acids, there is also a marked reduction in the capacity of the organism to oxidize these acids, as strongly evidenced by the marked reduction in the alkalinity of the blood (Kruse and Magnus-Levy). The coma is, therefore, an acid intoxication and must now be generally admitted to be such. The occurrence of coma depends upon the relative acids. Magnus-Levy then refers to Sternberg's theory that diabetic coma is due to B-amidobutyric acid. In the first place this theory is an improbable one because the amido acids so far found in the human organisms are of the *alpha*, not the *beta* series, and further, analysing the figures in the case here, reported as terminating successfully. Magnus-Levy concludes that there was not sufficient break down of nitrogenous tissue to explain the production of the amount of oxybutyric acid which he found, and which according to Sternberg, would be obtained from amidobutyric acid. This shows it is impossible that this theory is correct and it also shows the impossibility of the direct production of action from albumen; the latter may possibly occur indirectly through partial decomposition and subsequent synthesis, but certainly not by direct decomposition and oxidation. There are only two further possibilities—production of the acids from fats or through synthesis. The former is already quite thoroughly demonstrated to occur; the latter Magnus-Levy considers also a probable method. [D. L. E.]

6.—Harrock's experiments lead him to conclude that picrotoxin had much less marked influence in reducing the temperature of older rabbits than of the young. The effect is due to peripheral vascular dilatation and probably also to some extent to reduction of heat production. [D. L. E.]

CENTRALBLATT FUER INNERE MEDEZIN.

July 20, 1901.

On the Relation Between the Bile and the Production of Hippuric Acid in the Animal Organism.

S. ROSENBERG.

Rosenberg has investigated the validity of the conclusions recently reached by Zimmermann (abstracted from *Centralbl. f. Innere Med.*, 1901, No. 22). The latter decided that his work showed that when bile was absent from the intestine that benzoic acid no longer produced hippuric acid in the organism through synthesis with glycocholi, and that the latter substance is produced from glycocholic acid after its absorption from the intestine. As was to be expected, Rosenberg offers strong proof that these conclusions were at least too far-reaching and probably essentially incorrect. He made a gall-bladder fistula in a dog and allowed the bile to discharge through this, preventing the dog from lapping up any of the discharged bile. Probably no bile reached the intestine, and at any rate dog's bile contains but traces of glycocholic acid, if any. Yet the urine of the dog contained hippuric acid in considerable quantity after administering benzoic acid, while none was found when benzoic acid was not given. There was not the faintest evidence of absorption of bile into the circulation, so Rosenberg decides that Zimmermann's conclusions were not justified; and since he finds that Kühne and Hallwachs had performed his experiment with the same result nearly fifty years ago, and that Bunge and Schmiedeberg showed that the injection of benzoic acid is followed by hippuric acid synthesis in frogs, even after extirpation of the liver, he believes that the bile cannot be the only source of glycocholi. [D. D. E.]

CENTRALBLATT FUER CHIRURGIE.

July 6, 1901. (28 Jahrgang, No. 27)

1. The Topography of the Vermiform Appendix.

P. MUELLER.

1.—While ordinarily the appendix is easily found, it is sometimes very hard to discover. From experiments in operations and upon cadavers, Müller has found that the appendix always rises from that point upon the cecum where the three descending mesenteric bands join one another. Thus by following the anterior broad band, down the cecum, through adhesions, exudates, etc., the appendix is invariably discovered. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

June 6, 1901. (XIV Jahrgang, No. 23).

1. The Diseases of the Bronchial Lymph-Glands.

FRIEDRICH SCHLAGENHAUFER.

2. The Physiology and Pathology of the Gastrointestinal Action. JULIUS WEISS.

3. The Static Relation of the Human Skeleton.

CESARE GHILLINI and SILVIO CANEVAZZI.

1.—Schlagenhauser, who has found two cases already reported, of suppurative of the bronchial lymph-glands in pyemia, reports three cases observed by him. All three cases occurred in young girls, and ended fatally in a few days, with the symptoms of a purulent meningitis. Autopsy revealed multiple cranial abscesses in all three patients with perforation and subsequent meningitis in two of the cases. In each case the infection started from a suppurative bronchial gland, under the bifurcation of the trachea, opposite the right bronchus. The infection entered from the esophagus. All three cases were probably tuberculous, also. Schlagenhauser suggests that these suppurative bronchial lymph-glands may explain many of the cases of so-called brain abscess. [M. O.]

2.—After reviewing Pawlow's experiments upon the digestive tract, Weiss reports his own experiments in dogs. Incision into the stomach and small intestine a half hour after eating shows the meal as yet absolutely undigested, but the lymph-vessels, which are ordinarily too small to show, are found enlarged and dilated, ready for absorbing food. He has found that small quantities of albumen, given before meals, has a good effect when the gastrointestinal function is disturbed. Somatose for instance, causes lymphofluxion and lymphostasis. This also explains the post-digestive leukocytosis which is observed. Weiss concludes that the lymphoid tissue has an exceptional influence upon gastrointestinal action. This begins just as soon as

the food reaches the stomach even while the intestine is at rest empty. This action will explain some of the gastrointestinal disturbances which are relieved by the administration of astringent and the bitter tonics. [M. O.]

3.—In this article, full of quotations from the works of the late Professor Albert Gaillini and Canevazzi discuss the effect upon the rest of the bony skeleton of deformity, especially due to pressure. To support the weight of the body, a compensatory deformity of other bones often can be found. Thus with genu valgum, the tibia often changes in form. The authors claim to have established this in their works, already published. [M. O.]

June 13, 1901. (XIV Jahrgang, No. 24).

1. Suppuration in Human Beings Without Bacteria. KARL KREIBICH.
2. Atresia With Double Vagina. J. HOFBAUER.
3. A Case of Reflex Cough From a Foreign Body in the Ear. MAX BREITUNG.

1.—From recent experiments by many investigators, it is plainly established that chemicals will cause suppuration in animals without the presence of bacteria. In man it seems that the use of catgut sutures, or that superficial injuries, caused aseptically, may be followed by suppuration. Kreibich experimented upon men affected with eczema, using sterile croton oil injections. Abscesses followed, without bacteria in 61 cases, with cocci in only six cases. This showed that suppuration could occur in man without the presence of bacteria. Both in animals and in man, suppuration may be the reaction to the irritant of chemicals. Investigators have shown that suppuration is only a certain stage of inflammation, not a separate qualitative form of inflammation. The literature of the subject is reviewed and quoted, the experiments of Kreibich being given in detail. He shows that the serous effusion in blebs bullae becomes purulent without the presence of bacteria. Kreibich concludes that in normal circumstances suppuration may occur in man without bacteria. [M. O.]

2.—Though cases with double genitalia are no longer seldom in women, Hofbauer reports a case of atresia with double vagina. A woman of 33, married at 20, had been ill since marriage. During and after coitus she complained of great pain, mainly on the left side. Operation, for ante-flexion and stenosis of the cervix uteri, revealed a septum dividing the vagina, with a cavity behind it, the rest of the vagina. It was on account of this inner vaginal cavity that the outer vaginal walls seemed so small. Similar cases are quoted from the literature. [M. O.]

3.—After a brief review of the subject, Breitung reports the case of a boy who had coughed a long time in paroxysms, with a tickling sensation in the larynx. The cough was very severe; and no cause for it could be found. Finally Breitung discovered cerumen impacted in his ear, which was softened and removed by syringing. While doing this he caused severe attacks of coughing. After the ear treatment was stopped, the cough disappeared, nor has it returned in the three years which have passed since. Breitung believes that this is a frequently undiagnosed cause of reflex coughing. [M. O.]

NEUROLOGISCHES CENTRALBLATT.

June 16, 1901. (No. 12).

1. The Tract of Helweg. H. OBERSTEINER.
2. Contribution to the Knowledge of the Course of the Fibres of Taste. J. KRON.
3. Reply to the Criticd Remarks of R. Klenböck Upon My Article: "Contribution to the Symptomatology of the Triple Disturbances in Syringomyelia (Osteomalacia)." S. S. NALBANDOFF.
4. Reply to the Above Remarks. R. KLENBOECK.

1.—Obersteiner having recently had a case in which Helweg's tract was degenerated, and desiring moreover, in reply to some criticisms of von Bechterew, has prepared a brief article as an addition to his previous longer one in the publications of his laboratory. The case was one in which a tumor was found in the floor of the 4th ventricle springing from the right side. It involved the whole of the upper portion of the right half of the medulla, compressing the olive. The degenerated fibres could be traced by the Marchi's method in the peripheral portion of the lateral bundle just back of the point of admission of the anterior roots. They first appeared in the upper level of the dorsal portion of the cord, increased slightly in number in the cervical region, and were most numerous in the 2d cervical

segment forming a small triangular group in the characteristic region of the tract of Helweg. The lower end of the olive was completely surrounded by these fibres. They then separated into 2 groups, one lying dorsally and one ventrally. Their further course could not be positively determined. It seems likely that this degeneration was produced largely by the pressure of the tumor in the area dorsal to the olive. Obersteiner calls attention to the fact that the position of the fibres is not infrequently atypical. [J. S.]

2.—Kron reports the following interesting case of syphilitic meningitis. A man, 25 years of age, noticed for a year a gradual depression in the right temporal region. Subsequently pain developed, spreading from this region to a point beneath the clavicle. There was some tenderness on the left half of the head, complete atrophy of the temporal muscles. The right cheek was also atrophic, and there was complete ptosis on the right side. All the muscles supplied by the facial nerve were normal. The left eye seemed to be retracted, and there was slight commencing ptosis on the left side. Hearing was normal. The clm reflex was not affected. There was anesthesia and analgesia in the right half of the face, anterior to the ear. There was slight diminution of smell on the right side, and apparently slight diminution of taste on the right side of the tongue, with the exception of the anterior 3d of the posterior portion where taste was completely lost. Otherwise the patient presented no symptoms. Although syphilis was denied, the patient was given antisyphilitic treatment and recovered the use of the right eye, and general improvement occurred in all the other symptoms. In particular taste returned completely, and became equal on both sides. The lesion appears to involve the motor root of the 5th, and then the 3d, 4th and 6th nerves, and to a slight extent, the sensory root of the 5th. The case appears to prove that the fibres involved are largely derived from the 5th nerve. [J. S.]

3.—Nalbandoff, in his reply to Klenböck, insists that the decalcification of the pharyngeal bones, is a form of nutritive disturbance that has hitherto been unknown, and he believes that it is impossible to escape the belief that it bears some relation to chronic phlegmonous inflammation. [J. S.]

4.—Klenböck insists that partial decalcification is by no means uncommon in severe inflammatory disease of the fingers. [J. S.]

1. The Central Terminations and Unions of the 7th and 8th Cranial Nerves. N. WYRUBOW.
2. The Pathological Anatomy of Basedow's Disease. Preliminary Communications. L. KEDZIOR and J. ZANETOWSKI.
3. The Question of the Connection Between Dreams and Hallucinations. D. KAZOWSKY.

1.—In a brain of a case with complete right-sided peripheral paralysis of both facial branches, as a result of caries in the temporal bone, Wyrubow was able to determine the following points. First, degeneration of the root could be traced to the nucleus on the same side, and slight degeneration to the nucleus on the opposite side. Secondary changes were found in the ganglion cells of the nucleus on the same side, and in the cells of the contralateral nucleus. These secondary changes were also found in a hitherto undescribed nucleus which was situated at the level of the reticular nucleus of the pons, and the approximate portion of the nucleus of the same side, and from the nucleus of the abducens and the inner side of the facial nucleus. This consisted of cells of the motor type, resembling those of the facial nucleus. He names it the "accessory" or "upper nucleus of the facial." Immediately after their entrance into the brain the fibres of the cochlear nerve enter the ventral nucleus of the acoustic tubercle, and then passing around the restiform body they send fibres into Deiter's nucleus and into the descending root of the acoustic nerve. Other fibres pass into the trapezoid body and some cross the raphe and become contralateral. The degeneration fibres of the vestibular nerve pass into Deiter's and Bechterew's nuclei, and a certain number of them form a sharply circumscribed column that passes under the floor of the 4th ventricle to the opposite side and terminates in the contralateral internal nucleus, and Deiter's nucleus, the greater number, however, terminate in Bechterew's nucleus in the opposite

olive. There are more degenerated fibres on the opposite side than on the same side as the lesion. Descending degeneration can also be traced in the reticular substance in the medial nucleus of Burdach's column, and some cross the raphe and terminate in the opposite lower olive. Other fibres group themselves in Goll's column. As for the ascending degeneration, it could be traced into the lateral lower fillets. Toward the posterior corpora quadrigemina, the degeneration fibres become less numerous. Beyond this they could be followed to the accessory nucleus of Bechterew of the oculomotor. No degeneration was found in the acoustic fibres of Monakow. [J. S.]

2.—The patient, a girl of 18, had had symptoms of **exophthalmic goitre** for about 4 years. She died of croupous pneumonia. At the autopsy there was hypertrophy of the thalamus, dilatation and hypertrophy of the heart; cyst of the right ovary, and obstruction of the left Fallopian tube; numerous recent and old hemorrhages were found in the medulla. The left testiform body was smaller than the right, but otherwise the central nervous system was entirely normal, with the exception of the testiform bodies in the upper portion of the medulla, and considerable asymmetry of the middle and lower parts of the same portion of the brain. [J. S.]

3.—The patient, a boy of 16 years, had murdered his teacher, and was referred to Kazowsky for the purpose of determining his mental responsibility. There were numerous stigmata of degeneration; the reflexes were much exaggerated; there was a history of scrofulosis with suppuration from the eyes and ears. He had been capable, although with difficulty, of mastering his lessons, but was unable to advance in the gymnasium. While in one of the lower schools he had a severe attack of scarlet fever followed by nephritis, but apparently recovered completely. Three weeks after he returned to school he committed the crime. He had always been peculiar, and solitary; had never been irritable or violent; but had been fond of blood-thirsty literature. There was a distinctly neuropathic heredity. From the age of 12 he had been addicted to onanie, and from the age of 13 had been an alcoholic. He himself stated that although he was not unfriendly to the teacher, he had suddenly conceived the idea of killing him apparently as a dream in which he had had a quarrel with him. He apparently was entirely oblivious of the consequences of his act. Immediately after the murder he became partially unconscious. It appeared that the patient had physical and psychological degeneration, although his intelligence was fairly good. He was a poor mathematician, and apparently had little active perception. The paper is still unfinished. [J. S.]

BOLNITCHNAIA GAZETA BOTKINA.

(June 6, 1901. (Vol. XII, No. 23).)

1. On the Biology of the Blood. V. F. VELIAMOVITCH.
2. Contribution to the Biology of the Looferment.

V. N. OBUNEFF.

3. A Case of Acute Glanders. E. FLERINA.
4. A Case of Priapism. P. I. GUNDEGGER.

1.—Veliomovitch ridicules the theory that the alkalinity of the blood has anything to do with the predisposition to or causation of disease, or that the alkalinity can be raised or lowered at will by the administration of alkalies. The human organism, he maintains, is not a test tube in which various chemical reactions may be instituted by the chemist. The blood is a living tissue possessing a definite chemical composition which cannot be varied at liberty, nor can the blood be acted upon apart from the organism, and any benefit derived from iron or alkalies is due to the systemic effect of these drugs. Moreover, the alkalinity of the blood, as proven by Orlovsky, depends entirely on the red blood corpuscles and is subject to variations even in health. [A. R.]

2.—Will be abstracted when concluded.

3.—Flerina reports a case of **acute glanders** in a man, 37 years old, a horse dealer by trade. The affection was characterized by a generalized pustular eruption, dry pleurisy, dulness over both lungs and evidences of pyemia. Several hours before death a secretion appeared from the nose. Neither the clinical symptoms nor the pathological findings were such as to make a diagnosis positive. The latter was established by a bacteriological examination which proved the presence of the bacillus mallei. [A. R.]

4.—Gundegger observed a case of **priapism** in a man 45 years old. The patient had an obscure pneumonia at the

termination of which the erection of the penis appeared and persisted for 4 weeks despite treatment. There was no previous history of a similar affection or venereal disease. The organ was painful at the root and directed towards the left. The author ascribes this condition to **sclerotic changes in the cavernous bodies**. A number of cases are cited from the literature showing the connection of priapism with leukemia. [A. R.]

LA PRESSE MEDICALE.

June 19, 1901. (No. 15).

1. Muco-membranous Entero-colitis of Uterine Origin. HENRY REYNES.
2. Epidural Injections by Sicard's Method. M. BROCARD.

1.—After reviewing the numerous causes of **muco-membranous entero-colitis**, Reynès states that it must be regarded as a symptom of many conditions. But of these conditions he believes inflammation of the uterus and adnexa to be the main cause. In looking over the literature of the subject, he found that not only do ligaments and adhesions exist between the ovary and the intestines, but both lymphatic and blood vessels show communications also. He believes that the entero-colitis is but one of the catarrhal symptoms produced by a number of causes, generally in the female, in connection with inflammation of the uterus or adnexa. Therefore local gynecological treatment will be necessary, and warm vaginal douches, enterocolysis, also baths will prove of benefit. [M. O.]

2.—Brocard reviews the work done upon **epidural injections**, and the discussions upon this proceeding of Sicard's heard at the various society meetings since. The injections should be made in the triangle just below the spine of the last sacral vertebra, and above a line joining the two spinous processes. A large quantity of fluid can be injected: it travels high up the cerebro-spinal canal; it is absorbed by the epidural plexus; vaso-constriction occurs; and there is some direct action of the cocain. As a rule 2 cc. of a cocain solution, 1 to 100 or 1 to 200, are used. The patient may lie upon one side, in the Trendelenburg position, or in the genupectoral position. The needle is introduced 4 or 5 cm. The place to be punctured is difficult to find in stout people. Only a feeling of heaviness about the kidneys or in the buttocks follows the injection. The pain of the pricking is felt three or four hours later and persists till the next day. No fever, nausea, headache, etc., occurred. All pain disappeared five minutes after the injection, and only reappeared three or four days later. This method has been successfully employed in treating sciatica, lumbago, herpes zoster, intercostal neuralgia, and the crises of tabes. As a means of producing analgesia, it has failed signally. Medically, especially therapeutically, it seems to be of great service. [M. O.]

JOURNAL DES PRATICIENS.

June 15, 1901. (15me. Année, No. 21).

1. Picric Acid in the Treatment of Gleet. H. DE BRUN.
2. The Nature and Treatment of Buccal Leucoplasia.

PAUL COMBALAT.

1.—The desiccating action of picric acid in moist skin affections, and the rapidity with which epithelium is regenerated under its influence, caused De Brun to employ picric acid in solutions of 1 to 100 or 1 to 200, in treating anterior urethritis. Urethral injections are given one to three times a day, and usually cause a cure in 4 or 5 days. Leukocytes and gonococci rapidly diminished in number. A number of case-histories of acute and chronic anterior urethritis are given in full. The results are excellent. It does no good in posterior urethritis. De Brun also uses it in treating balanoposthitis. [M. O.]

2.—**Buccal leucoplasia** is a chronic condition in which the mucous membrane of the mouth is covered with white spots, some of which are desquamating. There is generally some ulceration. The main predisposing causes are syphilis, gout, rheumatism, etc. Leucoplasia sometimes is the point of origin of carcinoma. Caustics must not be used in treating leucoplasia; nor is any local treatment generally beneficial. Diet, hygiene, relief for constipation, alkaline waters as a mouth wash, no indulgence in smoking, or in alcohol, etc. are needed in the treatment. A salicylic or chromic acid wash may do good after the affection has become chronic. Finally curetting or the thermocautery may be used to remove the leucoplasia. [M. O.]

British Congress On Tuberculosis

Continued from Page 309.

State and Individual Prophylaxis of Tuberculosis During Childhood and the Need of Children's Sanatoria.—Dr. S. A. Knopf, New York. In the first portion of the paper the author refutes the conception of frequent hereditary transmission of the bacillus tuberculosis, and demonstrates that post-natal infection is virtually the only source of tuberculosis in infancy and childhood. He describes the manner of how the child in the home of an unclean, ignorant or unscrupulous consumptive has multiple chances of taking the disease into his system by inhalation, ingestion and inoculation. The contraction of tuberculous cows, is also briefly treated. The precautions which should be taken to avoid the infection of the child from tuberculous parents and others living in the family are described in detail, and so are the kind of instruction-leaves concerning the prevention of tuberculosis which health boards should gratuitously provide to physicians, midwives and mothers. The author's views concerning the so-called hereditary predisposition are set forth, and may be summarized here by saying that there is inherited very often from a tuberculous mother, much more rarely from a tuberculous father, a physiological poverty, which may handicap the offspring in its development, and offers, when occasion presents itself, a suitable soil for the invasion of the bacilli of tuberculosis. Dr. Knopf is, however, convinced that many of these children, born "tuberculisable," could be protected from contracting the disease by being placed from early childhood in proper sanitary surroundings and given a prophylactic, hygienic and dietetic treatment. Respiratory exercises for the development of the lungs are, in the opinion of the author, of great importance in this prophylactic treatment. The hygienic and dietetic treatment should, however, begin with the mother while the child is still *in utero*. The most healthful life, generous diet, comfortable garments, and breathing exercises in the open air, should be prescribed for the mother during the state of pregnancy. The duties of the State and municipality in the prevention of tuberculosis in children are outlined and the urgent need of children's sanatoria, to which schools should be attached, for tuberculous and scrofulous children is dwelt upon.

On the Notification of Tuberculous Diseases in Norway. By Dr. M. Holmboe, of Norway. According to the law of May 8th, 1900, which law came into force January 1st of this year compulsory notification of such cases of tuberculosis, which are accompanied by secretions, has been introduced in Norway. These are subject to notification: (a) new cases of such disease coming under medical treatment; (b) deaths of persons suffering from such disease; (c) change of residence of such persons, if so determined by the municipal council and approved by the Government. The notifications are to be sent to the local officer of health, who in Norway is always a physician; these notifications have a confidential character. Compulsory notification has been introduced in order to give the officer of health an opportunity of seeing that necessary cleanliness is observed in the homes of the sick, especially in the treatment of their secretions, and that a radical cleansing is made of their rooms and garments and bedclothes, before others make use of them. The law has been too short a time in force to allow any definite statement to be made with regard to its effects. At any rate, no complaint against inconveniences resulting from the compulsory notification has yet come to the notice of the directorate of the medical service.

Wet Winds and Phthisis. By Dr. William Gordon, of Exeter. In a paper read last November before the Royal Medical and Chirurgical Society on "Wind-Exposure and Phthisis" (published in the *British Medical Journal* of January 12, 1901), an endeavor was made to show that exposure of a district to west and southwest winds in Devonshire entailed a relatively high rate of phthisis amongst its inhabitants. To this conclusion numerous objections were raised. The object of the present paper is to meet

those objections. A single rural district (Okehampton) has been chosen—inland, elevated, of simple geological structure, having a population which may be regarded as uniform in respect of sanitation, closeness of intermarriage and race (one parish only being doubtful as regards this last), and free from occupational phthisis. Deaths amongst females only have been considered. The period of observation has been ten years. It is contended that ten years is a sufficient period and that the small figures are an argument in favor of and not against the accuracy of the conclusions. On examination of the parish death-rates from phthisis amongst females it is found:

- That the distribution of this death-rate cannot be accounted for by soil or rainfall, sunshine or purity of atmosphere; and differences of sanitation, occupation, race, or intermarriage do not exist to explain it.
- It cannot be ascribed to the influence of the north, northeast, east, or southeast winds, nor, except in slight degree, to the northwest wind.
(The south wind is the only wind which does not affect the district).
- It can be largely accounted for by the influence of exposure to the west and southwest winds.

The paper is illustrated by maps and tables of figures.

A Note Bearing on the Statistical Evidence of the Extent of Heredity in Tuberculosis. By J. Edward Squire, M. D., London. In 1894, in a paper before the Royal Medical and *American Medical Journal* (November, 1897) I gave reasons for considering that the influence of direct heredity in consumption is not so great as it was at that time believed to be. Although about 33 per cent. of consumptives present family history of tuberculosis, I showed statistical grounds for attributing the disease to occupation and surroundings in by far the greater number of these cases, and placed the possible influence of heredity at about 9 per cent. instead of at 33 per cent. Within the last few weeks I have had occasion to look through a number of life insurance claims, and incidentally I have abstracted some figures bearing upon the influence of heredity at tuberculosis. Of 469 claims in which the required information was available, I find 78 deaths from consumption and other forms of tuberculosis, of these 78, only 7 had any history of consumption in the family; 22 other cases in which death took place from causes other than tuberculosis, gave phthisical histories. We have thus 140 cases free from consumptive taint, of whom 71 died of tuberculosis, 16.13 per cent.; and 29 cases with consumptive family history, of whom 7 died of tuberculosis, 21.13 per cent. The excess in the percentage of deaths from tuberculosis in those with a consumptive family history over deaths from this disease in those without direct hereditary predisposition (viz., 8 per cent.), is curiously near to the figures (viz., 9 per cent.) which I arrived at in my *Medico-Chirurgical* paper to express the influence of heredity in tuberculosis. The number of cases dealt with in this note is too small to be of much value by itself, but is interesting as tending to confirm the opinion, now very generally accepted, that the direct influence of heredity in tuberculosis is considerably less than was formerly supposed.

Cure of Tuberculosis by Francisque Grötte's Treatment. Report by Dr. Albert Salivas. 1. Recapitulation of communications made at the International Congress held at Paris in August, 1900, on the cure of tuberculosis by Francisque Grötte's treatment. 1. Scientific basis of this method.
2. Clinical observations.
3. Conclusions.

On Time-Saving Methods of Treatment, with a Preliminary Note on the "Silver Treatment" of Phthisis by Intravenous Injections of Protargol. By Wm. Ewart, M. D., Cantab., F. R. C. P. It is now recognized that phthisis is curable by open air if sufficient time be allowed. Our next effort should be to shorten the cure, and this communication is an endeavor to promote the search for more expeditious methods, without which the complete realization of the scheme of State-aided relief cannot be carried out owing to the vast numbers to be dealt with and to the costliness of the necessary accommodation and of the treatment and

diet. Much, therefore, would have been achieved if the individual stay at State sanatoria should be shortened; and this achievement is claimed as possible if the cases of phthisis (excluding always hopeless cases) were to be provided with adequate preliminary treatment such as to fit them to secure from sanatoria the maximum good in the minimum time. Quite recently strong claims have been put forward in favor of various methods of treatment. Special notice would seem to be due to those with pretensions as "specifics," most of which probably do some appreciable good, even though not fulfilling their entire promise. A strong plea must therefore be entered in the interest of the rate-paying public as well as of the patients for an adequate inquiry into the comparative capabilities of the various "cures" now available. It is clear that we cannot rest satisfied with our present system, however great its advance upon previous conditions.

The "Thorough Treatment" or "Hospital Treatment" as a preliminary to Open Air or Sanatorium Treatment.—Early and mild cases in strong subjects are practically self-curable with an open-air life; but with the large group of pyrexial, sub-pyrexial, or more or less chronic phthisis, the open-air treatment, at any rate in this country, and also the climatic treatment, so it would seem from Alpine experience, is not the shortest way to a cure. Nay, many cases are at first ill-suited for it. In these cases progressive tuberculosis is perpetuated by the catarrh. A great deal of the latter is remediable by what may be termed the hospital treatment, or "thorough" treatment, the object of which is to rid the case as soon as possible of its dangerous complications—bronchitis, catarrh, caseation, and suppuration—whilst utilizing the period of unavoidable confinement in bed, in the ward, or in an even temperature, for the application of every therapeutical influence which in the individual case may be profitably resorted to. This idea has been recently carried out with an encouraging degree of success in a limited number of cases. The favorable results obtained have demonstrated to my satisfaction the advantage of not sending the patients to the open air prematurely, but only in a convalescent state.

The Direct Pulmonary Methods including the Intravenous.—In addition to serum therapy, which belongs to the future, these include the *intratracheal injections*, which are not sufficiently recommended by their results,—the *inhalation treatment*, well known to all in its more familiar applications, but specially elaborated into definite methods by Cervello with only partial success as the formaldehyd system, and more recently with every promise of practical usefulness by Dr. George Stoker as the *continuous nasal oxygen inhalation method*; and, lastly, the *intravenous injections*, which in some form, perhaps quite different from any at present in use, are likely to prove the most active and rapid agency. *Lauderer's sodium cinnamate treatment* has had a fair trial, and the bulky injection method which we owe to Dr. Maguire's labors is now being tried. I am not acquainted with the latest development of the *formaldehyd injection treatment*, but some of the results obtained with the original method were very favorable, although neither by this nor by any other method has a permanent clearance of the bacilli from the tissues been obtained. I was lead to substitute *protargol* for formaldehyd by the conspicuous success of the administration of nitrate of silver in pneumonia (Caccianiga) and of its subcutaneous injections in phthisis (Mays). Pending the discovery of some better remedy I have provisionally adhered to it in preference to formaldehyd because of its more decided, of its more rapid, and of its more lasting action. The clinical effects resemble those obtained by Dr. Maguire with formaldehyd—viz., a remarkable subjective feeling of improvement coinciding with manifest improvement in aspect and in strength, a rapid diminution in the cough and in the expectoration, and a more or less rapid change from the dense sputum of phthisis to simple catarrhal sputum and ultimately to hyaline mucus, etc. The ultimate effect is to lower the temperature, but meanwhile the level may be disturbed by elevations incidental to the treatment. More often than not the injection is followed after one hour by a chilliness or even a rigor and a sharp rise lasting about half an hour. After this has passed off the patient feels and continues to feel remarkably well; no untoward symptoms of any kind have followed the rigors. A short attack of nephritis occurred in one patient, but this seems to have been occasioned by a chill. Pre-existing al-

bunuria of long standing was much reduced in one of my cases; in another the first injection succeeded in stopping rebellious hemoptysis.

The Technique.—The details of the operation are given in the paper. The injection consists of 10 cubic centimetres of saline solution containing $1\frac{1}{2}$ to $2\frac{1}{2}$ grains protargol, and this is preceded and followed by an injection (through the same needle) of a few cubic centimetres of pure saline solution to obviate leakage of irritating fluid into the tissues, which is apt to lead to considerable pain and swelling. From twelve to fifteen injections generally suffice. It is best to administer them at intervals of one day, but in some cases they have been given daily.

The Systematic Treatment.—The protargol injection method has yielded by itself satisfactory results, but it does not claim to be more than the first and most important instalment in an extensive system of active treatment. My present practice is to combine with it, as soon as the case has lost all acuteness, general massage, gentle exercise, and particularly respiratory exercise for the expansion of the lung, strong diet and nutrient adjuncts, local and general treatment of the skin, and suitable internal remedies, among which I have obtained specially good results from ichthyol, originally recommended by Wertheimer. This combined treatment, a full description of which cannot be briefly given, has enabled some patients with originally unfavorable prognosis to become, after a few weeks' stay in the hospital, quite suitable for the open-air treatment, and to return, after a short period in the country, greatly improved, and with a promising forecast of ultimate recovery.

Drugs may have been too much discouraged owing to the superior virtues of "open-air." Our knowledge of the latter should not paralyze, but stimulate our therapeutical activity. A place is still to be found for the old remedies, not any longer as the sum of our treatment, but as useful or necessary adjuncts. Expectorants, antipyretics, tonics, and sedatives may all have their temporary uses. But there are new remedies from which greater help may be derived, particularly when judiciously combined. Good combinations have been sacrificed to the desire to prove any one system to be a specific cure. The *continuous inhalation of oxygen* for instance, is compatible with various hygienic helps, and with most useful forms of medication. The same is true of the *hyper-nitrogenous alimentation* advocated by Richet (raw meat treatment) and by Harper (urea treatment).

Wertheimer's Ichthyol treatment consists in the administration after meals of a few drops of ichthyol, say, in peppermint water, with a daily increase of one minim till ten minims are taken—some of my patients have taken twenty minims with advantage. A diminution in the cough and expectoration, and a change in the character of the sputum are perceptible in a few days. My own experience endorses Wertheimer's most encouraging reports, and for the present I have no hesitation in recommending ichthyol as the remedy which will most favorably and most rapidly influence the catarrhal complication, even when administered singly. But this or any other medicine found to be superior may be used in combination with intravenous injections; and it is my belief that such a combination would help us to effect a rapid change in the condition of the lung and to subdue the catarrh sometimes within two to four weeks, and thus pave the way for a rapid improvement under the "open-air" treatment.

Conclusions.—In this system of treatment there is nothing final. On the contrary, all its details are provisional and merely the best that existing opportunities afford. Its results, hitherto, seem to justify a hope that yet better things are in store, and that well-sustained efforts in the direction indicated will, at no distant date, bring about a considerable reduction in the total duration of the cure of phthisis, and in the minimum period to be spent at sanatoria. The cases treated have all been hospital cases, and therefore illustrate the possibilities open to the State for the treatment of phthisis among the poor on a considerable scale, if Poor Law Infirmarys and Sanatoria were thoroughly organized for carrying out a well-conceived systematic treatment. In all its details, and in special connection with the intra-venous injections, the general scheme which has been proposed could be more easily conducted at public institutions than in private. So long as no better remedies are forthcoming those which have been suggested may be used with safety and profit; but it is urgent, in

view of the important issues at stake, that a systematic enquiry should be undertaken into the comparative value of the various forms of treatment elaborated by individual efforts, and for some of which important claims have been advanced.

What are the Means Employed by the Different Nations of Europe to Combat Tuberculosis? What are the Means Which it is Necessary to Apply Generally upon the Basis of an International Agreement? By Dr. Samuel Bernheim. In order to study the actual state of this question the author has communicated with several colleagues in various countries of Europe, and most of them have replied. In certain countries absolutely nothing or very little has been done.

In other countries the "sanatoria" system or the anti-tuberculosis dispensaries system are or have been in vogue, with the application of sanitary laws. All these means are excellent in their way, but insufficient. In fact, intercourse between the different nations is to-day so great that international contagion is unavoidable.

To accomplish a result, successful and efficacious, which would be useful in all countries, it would be (according to Dr. Bernheim) necessary to have an international agreement or understanding, which would define the remedies to be generally applied. This has always been carried out for plague, cholera, and yellow fever. It would therefore be necessary that doctors of every country (at least, those of Europe) should agree among themselves to memorialize their respective governments to nominate a permanent anti-tuberculosis committee or commission, and to furnish it with powers to dictate prophylactic measures and to rigorously supervise their application.

Sterilization and Pasteurization vs. Tubercle Free Herds, Etc. By E. W. Hope, M. D., M. O. H. One of the dangers of the tuberculous infection of human beings arises from the consumption of raw milk taken from cows which are themselves suffering from tuberculosis—notably tuberculosis of the udder. The object of the discussion which I have been asked to open is to determine which of three methods suggested furnishes the most practicable and the best safeguard against this danger, always bearing in mind that, if we decide to rely upon one, and are in a position to apply it with certain effect, we shall not necessarily exclude the others, unless we can be assured that in doing so, we are not, whilst effecting security from one danger, discarding safeguards against others even more serious.

It is obvious that numerous points are involved in the subject, some of which are difficult to dissociate from questions other than those which concern tuberculosis only. For example, measures taken with the sole object of checking an even more destructive form of disease, viz., diphtheria, have proved incidentally a safeguard against tuberculosis, whilst, on the other hand, measures directed against tuberculosis have afforded a valuable protection from other forms of disease.

We must look at the subject from the wide view of general sanitation, remembering for the moment that there are other evils to be conquered as well as tuberculosis, and also bearing in mind that communities, like individuals, in their efforts to free themselves from mischief may be doing harm to those of their neighbors who are less able to take care of themselves. In the remarks that I am about to make and for the purposes of this paper, I shall take it for granted that the phrase "properly cooled between the time of milking and the time of reaching the consumers" implies also cleanliness, and all other sanitary requirements except those specifically directed against tuberculosis, and furthermore my observations will be restricted to those aspects of the subject which most concern the large centres of population.

The term "Sterilization" and "Pasteurization," so far as the subject under consideration is concerned, have practically the same significance, viz., raising the temperature of the milk to a degree which is capable of destroying the tubercle bacillus; exposure to a temperature of 170° to 180° Fahr. for about twenty minutes to half an hour is sufficient to destroy most pathogenic organisms. However, sterilization and pasteurization of milk possess one conspicuous advantage, viz., that the application of the safeguard is within the reach of every reasonably prudent and

careful household, consequently for ease of application it is beyond any comparison with the other preventive measure to be considered. The objections to it do not appear to be important, but there are the facts to be reckoned with that in the lower quarters of every great town there are thousands of families neither prudent nor careful, and also that the population of this country as a rule prefer to take their milk raw. This preference results, no doubt, partly from thoughtlessness and partly from habit. Young children are trained to take it raw, and the belief is widespread that if the milk is raised in temperature to, say 200° Fahr., or even still nearer to the boiling point, it is altered in flavor and constitution, and is of less nutritive and digestive value than when it is given raw; the raw milk, in fact, is regarded as more nearly approaching the natural milk of the mother.

There is no chemical evidence whatever to show that sterilized or even boiled milk is less nutritive and valuable than raw milk. On the other hand, cows' milk raw, in addition to the risk of tuberculosis, brings many others. The process of milking may involve dirt from a dirty milker, from dirty udders into a dirty milk pail. From this it may be passed through a dirty strainer into a dirty railway can. It is discharged from the railway-can into smaller vessels in which it is hawked about the dusty streets, passing through some half dozen other pots and pans before it reaches the nursery or the table of the consumer, involving a host of possible sources of contamination, not excepting the contamination of tubercle bacillus; in fact, it may be safely said there is no article of food in common use so constantly exposed to contamination or so susceptible of contamination as raw milk. The milk, on the other hand, as Nature intended it to be given, is never once exposed to air, passing directly and at the time of its manufacture, in the gland to the stomach of the young animal, and, apart from the possibility of disease in the gland, is bacteriologically clean and pure.

Sterilization, valuable as it is as a final safeguard against tuberculosis, is after all only an expedient, and must not be put into so much prominence that the importance of the other safeguard is lost sight of, although we cannot take it for granted in considering the merits of different methods that essential accessories common to them all will be observed. The one merit of sterilization is that it is an expedient easy of application and presenting few administrative difficulties. Beyond any question the ultimate advantage lies in obtaining the milk from herds free from tuberculosis. It is in fact comparable with the advantage of obtaining drinking water from a pure source instead of taking it from a contaminated one and relying upon purification afterwards. The first aim must be to ensure that the source of the milk is pure, in other words that the cows are free from tuberculosis; or if this, under existing conditions of the law and public opinion is unattainable, that they shall at least be free from any tuberculous disease of the udder or any tumor or condition of the udder simulating tuberculous disease, or, having regard to difficulties in diagnosis, we may with advantage go even a step further and demand that the udder is all cows from which milk is taken for human food shall be in a perfect normal condition.

The main causes of tuberculosis in cows are notorious: close confinement in ill-ventilated, badly-lighted, ill-constructed cowsheds—defects all as easy to remedy as is removal from the cowshed of the obviously tuberculous animal before it can cause infection of the rest.

In the City of Liverpool about 25,000 gallons of milk are consumed every day; one-half of it comes from cows (about 600 in number) kept within the city, the other half comes from cows kept in the country, and is sent in by rail. Within recent years that part of the milk supply which comes from cows kept within the city has been practically free from tuberculosis. This has been brought about by the sanitation of the cow sheds, adequacy of air, light, and cleanliness, by systematic and frequent inspection of the cows by qualified inspectors with veterinary help, by frequent bacteriological analysis of the sample of milk; these are the measures which have effected this end. I do not say that out of the 6000 cows in the city there is not a single one affected with tubercle, but merely that there are few with such form of tuberculous disease as would be likely to contaminate the milk supply.

These methods and this system of inspection were not

initiated without difficulty and opposition. There is no opposition now; every person acquiesces in advantages which have been gained. But there is another aspect to the question. Only one-half of the quantity of milk consumed in Liverpool is supplied from the city, the remaining half comes from the country districts. But surely, you will say, if the cows kept in the cowsheds within a great and populous city are healthy, those coming from the sunny meadows of the country, with their fertile pastures and ample land, are free also. Unfortunately experience does not bear this out; the milk sent in from the country is more frequently tuberculous. Thus, out of 422 town samples examined during 1899 and 1900 five were tubercular, being slightly above 1 per cent.; but out of 490 country samples taken during the same period twenty were tubercular, being a trifle over 4 per cent. How can we protect ourselves against this? A special Act of Parliament applying to a few great towns, including Liverpool, gives special powers to exclude from the city, under a penalty, the milk coming from the country cowsheds in which tuberculous cows are kept under dirty and unsanitary conditions. But if it is difficult to deal with and supervise the supply within our own city, it is evidently both costly and difficult to maintain a staff to send, under the special Act of Parliament, to the insanitary and tubercular cowsheds of the country cowman; but, having overcome these difficulties, the broad national question comes in, for although we succeed in protecting ourselves what happens with regard to the diseased cows and the diseased milk? The dealer refrains from sending diseased milk to the protected city, but what is there to prevent him from sending his milk for sale and consumption to a district where no special Act of Parliament exists to enable the community to protect itself, or from selling his diseased cows to a dairyman in another locality. This is not the way to secure a supply of milk from herds free from tuberculosis, but there can be little doubt that the action of the great cities will not only protect themselves, but will to a certain extent protect the country districts also, and will strengthen the hands of rural sanitary authorities. No doubt the great cities are financially better able to protect themselves; they have their larger and more costly staff, they have their bacteriological laboratories, their veterinary and medical officers, but at best they are but valuable allies to the rural sanitary authorities, and these after all must take their own action, since the protection the cities afford them is an indirect vicarious one, and, as in cases which I have alluded to, there is nothing to prevent the cowkeeper from sending his diseased produce to rural districts after he has been prohibited from sending it to great cities. Furthermore, the undoubted decline in the proportion of tuberculous milk sent in from the country may really mean that a larger proportion is consumed elsewhere. The subject is quite important enough for a government department—*v. n.*, the local government Board—to take in hand and appoint a special staff to supervise the milk supply and all appertaining to it throughout the country.

I have no hesitation whatever in saying that it is quite possible to insure that the milk supply shall come from cows free from tuberculosis. Difficulties from ignorance, obstruction, and active opposition may be taken for granted, but these must be overcome, and the cowkeeper will learn in time that his own interests are identical with those of his customers, and by keeping healthy cows in a sanitary condition he will be a gainer in every way.

It is only right to say that during last year samples of milk taken at the railway stations on arrival from the country do not appear to be more frequently tubercular than the samples taken from the town.

This may indicate one of two things: either a general improvement in the country cowsheds under the stimulus of city action, or, as in more cases than one which have come under my notice, dairymen who have been detected in sending in tuberculous milk have refrained from sending milk to Liverpool, and now send their milk elsewhere. These points are not to be lost sight of.

Frequency and Significance of Tuberculosis of the Tracheal and Bronchial Glands in Miliary Tuberculosis of Children and in Tuberculous Meningitis. By P. Haushalter, of Nancy, and A. Fruhinsholz. In 78 autopsies of miliary tuberculosis in children below 12 years of age,

tuberculosis of the tracheal and bronchial lymphatic glands was met with 71 times (about 95 per cent.); in 67 cases there was tubercular meningitis, and in 64 of these affection of the glands was present. This glandular affection has always the character of an old and caseous tuberculosis; in 29 cases it coincided with old tuberculous lesions of the lung, generally localized; in 41 cases it formed the only old tuberculous lesion present. In almost all cases, therefore, the origin of the bacillary infection which ends in the miliary form and in meningitis, is in caseous tracheal and bronchial glands. The frequency of this lesion is a proof of the importance of aërial contagion of tuberculosis in children. How does this tuberculous affection of the glands, which is more developed and deeper-seated in the miliary than in any other form of tuberculosis, end in the bacillary infection of the blood, which is considered almost the sole cause of the miliary form and of the meningitis? In spite of the intimate relations of the vessels at the base of the heart with the masses of caseous mediastinal glands we have failed to find, macroscopically or microscopically, any lesion of the walls of the vessels that could explain the direct passage of the bacilli from the lymphatic glands into the blood. The bacillary infection of the blood takes place through the lymphatic system; in the very brief time occupied by the passage of the bacillus-bearing leukocytes from the caseous lymphatic glands of the mediastinum into the blood stream, passing as they do by the efferent lymphatics, and by a short section of the thoracic duct or of the great lymphatic trunks—the destruction of the bacilli has not time to be effected. Even in many of the cases in which pure meningitis exists, without generalized miliary infection, and in which one would therefore be tempted to look for the origin of the infection, not in the blood-vessels but in the lymphatics, it is probable that there exists a general bacillary infection, the manifestations of which are not appreciable to the naked eye, or are exceedingly scattered. This we have been able to prove on several occasions.

The Veterinary Work Done Under the Milk Clauses in Manchester and the Difficulties Met With. By J. S. Lloyd, M. R. C. V. S., Manchester. The Manchester Milk Clauses were put into force on January 11th, 1900. Between that date and April 30th, 1901, samples of mixed milk have been taken at the railway stations or *en route* to the city, corresponding to 401 farms. These samples have been tested for tubercular infection by Professor Delépine with the result that of the samples sent from 259 farms in Cheshire forty-two=16.21 per cent. were tuberculous, from 41 farms in Staffordshire, one=to 2.44 per cent. was tuberculous, from 93 farms in Derbyshire, four=4.3 per cent. was tuberculous, whilst samples from five farms in Lancashire and three farms in Salop were free from tubercular infection. From figures supplied by the farmers themselves to the Public Health Office, the estimated number of cows at these 401 farms is 8408, or an average of nearly 21 cows per farm.

The total number of farms from which tuberculous samples have been sent thus 47=11.72 per cent. At thirty-one of these forty-seven farms, 35 cows with tuberculous udders have been found. At 15 of the farms no cows having diseased udders could be found, and subsequent control samples of the mixed milk from these farms have all been reported free from infection. At the remaining one of the forty-seven farms samples of milk from suspicious cows are still in process of examination.

To give the percentage of cows having tuberculous udders among the cows represented on the 401 farms from which the mixed milk was tested, it will be necessary to strike out the fifteen farms at which no tuberculous udders could be found, and also the one farm from which the milk from suspicious cows is still under investigation. The average number of cows will then be represented by 3147 of 8408=55.45, which taking 35 cows having tuberculous udders at the thirty-one farms, gives a percentage of 0.63.

There have also been a large number of cows chemically examined irrespective of previous samples of mixed milk. In the Manchester cowsheds, 2182 were examined, and among them 8 cows were found to have tuberculous udders, equal to a percentage of 0.36. In cowsheds outside Manchester 1849 were examined, without previous mixed samples of the milk being taken, and among these 9 were found to have tuberculous udders, equal to a percentage

of 0.48. If we add up the number of cows thus, $5545 + 2182 + 1819$, we have a grand total of 9576 cows, the milk from which was tested for tuberculosis, or among which cows with tuberculous udders were found by chemical examination; and by adding up the figures $35 + 8 + 9$ we have a total of 52 such cows having tuberculous udders, which is equal to an average percentage of 0.54.

According to the Agricultural Returns for 1900, the number of common heifers in milk or in calf in England, was 1809,623. If we take 0.51 per cent. of these to have tuberculous udders we have a total for England of 10,257; or if we take the figures of Great Britain on the same basis, viz., 2,620,901 at 0.51 per cent., we have a total of 14,152 with tuberculous udders.

Against the successful working of the milk clauses certain difficulties have been found to arise. The first one is where, on following up a tuberculous mixed sample of milk to the farm, no cow is found exhibiting signs suspicious of tuberculosis.

(a) In several instances where this has been the case the farmer has admitted selling cows from his farm between the date of inspection and the date of taking the sample. But although in a few cases he has admitted that he had sold a diseased cow, or a cow which he states has not been doing well, he has only in one instance admitted selling a cow which he knew to have a diseased udder.

(b) Another possible difficulty which has been met with, is where the farmer also sells milk from his neighbor's cows mixed with the milk from his own cows. In three cases this has come under my notice. In one I failed to follow this up, but in the other two, when followed up, I failed in each instance to discover a cow with a tuberculous udder; still this is a possible source of contamination, and should not be lost sight of.

(c) Another reason given for tuberculous infection in milk is external and accidental contamination. It is possible, perhaps, that a consumptive herdsman or railway porter might infect the milk, but I think it is not probable; and a committee, appointed by the Royal Agricultural Society of England to consider the matter, did not attach any weight to this point. Another external source of contamination has been considered by Dr. Niven, and that is, contamination by dirt and dust in the cowshed. Such would be most likely to occur when the cows and cowsheds are very dirty, and when one or more of the cows are giving off tubercle bacilli in the discharges from tuberculous intestines, or in the matter coughed up from tuberculous lungs. In these cases the presence of such a cow in the herd should not escape the notice of an observant veterinary surgeon.

In all cases (nineteen) where I have been unable to find a cow with a diseased udder at my first visit to the farm, a control sample of the mixed milk was taken for a second bacteriological examination by Professor Delépine. In fifteen of these cases the milk was reported negative, whilst in four instances the milk was still found to be infected, thus proving that the source of infection was still present. In these cases I again visited the farm, and in three of them after a lengthy examination; both previous to and after having the whole herd milked I have discovered a cow showing slight signs of disease about the udder, but in neither of these cows were the symptoms at all typical of tuberculosis. In each instance, however, a sample of milk from these cows was found when examined by Professor Delépine to contain tubercular infection and to be capable of producing disease in test animals. The milk from suspicious cows on the other farm is still under investigation.

These remarks bring to notice another reason why the cow with a diseased udder may not be found on the first visit of the veterinary surgeon to the farm, namely (a) the difficulty of diagnosis.

Several authorities, including, I think, Professor Barry, have stated that a tuberculous cow can give tuberculous milk without having tuberculous disease of the udder. That is not my opinion; I can quite conceive that a cow with an udder apparently free from tuberculous disease can give tuberculous milk, but my experience with several cows is that, if the cows are kept under observation for a short time, one to three months, it will be found that the symptoms of the disease in the udder of the implicated

cow will begin to be manifest. That has been my experience in other cases besides the above three.

In one case, a sample from a "wasting" cow, with an apparently healthy udder, was reported tuberculous. Five weeks later one quarter exhibited very slight symptoms, and a sample from that quarter was found to be infective, whereas the milk from the other three quarters was free from infection. I have also met with another similar case, except that after the diseased cow was milked, slight hypertrophy of the udder could be detected.

In addition to the obscure cases mentioned, the symptoms presented during life vary considerably. Whereas many of these cows are thin and far advanced with disease, others are in good condition and apparently healthy. This is also borne out by post-mortem examination, as, out of twenty-six of these cows which have been slaughtered, nine were fit for human food, the disease being slight and localized, while seventeen were badly diseased, and were totally unfit for human food.

The second difficulty met with in working the milk clauses is the failure on the part of the farmers and cowkeepers to notify the Medical Officer of Health of the presence in their dairy of a cow affected with, or suspected of, or exhibiting signs of, tuberculosis of the udder, as required by sub-section 4.

The third difficulty is as to the disposal of cows which have been proved to have tuberculous udders. Whilst twenty-six of them have been slaughtered, the disposal of the remaining twenty-six has not been satisfactory. Eighteen have been lost sight of altogether; as some of those were in calf, it is quite probable that they may be giving diseased milk somewhere, possibly to be consumed in Manchester. The remaining eight of the twenty-six cows are in the possession of the owners, who have isolated them, and are stated to be feeding them for slaughter.

The Conditions and Diagnosis of the Soil of Tuberculosis, Therapeutic Considerations. Albert Robin, Paris. The prophylaxis of tuberculosis is not fully embodied in the private and public measures taken against the agent of the contagion.

The study of the respiratory changes permits to recognize in advance those subjects which are predisposed and enables us, consequently, to submit them to a hygiene and therapy which are capable of modifying the functional and nutritive trouble which is the necessary condition for the development of the bacillus.

The respiratory changes are increased in 92% of the confirmed and in 63% of the descendant tuberculous.

Alcoholism, the different modes of feeding, increase the respiratory changes, and are capable of producing the soil of tuberculosis in the same proportion as heredity.

The investigation of the respiratory changes permits also to determine the diagnosis of tuberculosis in doubtful cases.

The action of the different medicines and of the various medications upon the respiratory changes allows to discern those which are capable of modifying the soil and institute a new method of prophylaxis and treatment of tuberculosis.

On the Casuistic of Rare Complications of Typhoid Fever.—G. S. Kulesch (*Bolnitchnaia Gazeta Botkina*, Vol. XII, No. 19) reports a case of typhoid fever in a girl 23 years old. The patient died on the 19th day of admission as a result of a double catarrhal pneumonia complicating the disease. On autopsy the usual lesions of typhoid fever were found and also a severe membranous gastritis. The gastric mucosa was covered with a fibrinous exudate, and showed on microscopic examination coagulation necrosis, infiltration of lymphoid cells, thrombosis of the blood vessels, and phlebitis. Having reviewed the conditions found in this case, as well as the data obtained from literature, the author comes to the following conclusions: 1. The mucous membrane of the stomach is subject, in the course of typhoid fever, to changes analogous to those occurring in the intestine. 2. Thrombo-phlebitis observed in typhoid fever may take place also in the veins of the stomach. 3. Non-specific membranous affections of the stomach, like those in the intestine, develop on a soil weakened by preceding morbid changes in the tissues. [A. R.]

Original Articles.

SWEAT BATHS AND BATHS WHICH INCREASE
BODILY TEMPERATURE.

By DR. R. FRIEDLAENDER,

of Wiesbaden, Germany.

Written specially for the PHILADELPHIA MEDICAL JOURNAL.

Translated with permission of the Author by Max R. Dinkelspiel.

In former publications* I have repeatedly alluded to the distinction which must be made between the physiological and therapeutic action of those hot baths which principally cause an increase of sweating without essentially changing the bodily temperature, and such, which in addition to causing diaphoresis also raise the bodily temperature.

We know that in local treatment by heat, as is carried out by means of hot applications or hot air, (Tallermann's apparatus, electrotherm, etc), a material increase in the bodily temperature does not occur, even if a considerable degree of heat is employed. This is the case in local as well as in general thermic procedures such as Priessnitz's applications and packs, dry packs, etc. But in a general conveyance of heat to the body an increase in bodily temperature can take place. In the so-called indifferent baths, with a temperature of from 34-35°C. the loss of heat, and the heat production, are normal in the healthy individual. If, however, the temperature of the bath is increased, the organism tries to maintain its own temperature by increased heat elimination through the skin. This is in the first place made possible by the hyperemia of the skin and the subcutaneous tissues, resulting from the vascular dilatation due to the irritation from the heat. The skin thus becomes warmer itself, and its heat conductivity, as well as that of the subcutaneous adipose tissue, becomes increased. Secondly, an increase in heat elimination occurs from the increased diaphoresis (which is soon set up in the bath by the heat irritation), and the continual evaporation of the sweat from the skin. Third, an increase in heat elimination takes place by reason of the increased amount of heat and evaporated water which escape during exhalation. If these three processes, among which the evaporation of the sweat from the skin plays the most important role, are not able to establish the "physical regulation" described by Matthes and others, an increase in temperature will take place to such an extent, as to give rise to artificial fever, to hyperthermia. There does not exist any chemical means by which the increased conveyance of heat to the body can be regulated in the sense of a retardation and decrease of metabolism.

But in that class of thermic procedures, of which the moist pack (Priessnitz) is the chief type, and in which there is not an increased heat supply from without, but only a decreased elimination, as a result of covering the skin, the "physical regula-

tion" previously alluded to, is enabled to prevent an increase in bodily temperature. Where there is a general conveyance of heat to the body the physical regulation in most cases is enabled to check the rise of bodily temperature, provided the most essential factor of the regulating phenomenon, the increase in heat elimination, caused by evaporation of the sweat from the skin, takes place unimpeded. Such is the case where there is a general heat supply in dry media, in dry hot air baths, Roman, Turkish and electric light baths, as well as in hot sand baths.** In such baths the diaphoresis is profuse, but the increase of bodily temperature in spite of the increased heat supply, remains unimportant.

If, on the other hand, the evaporation of sweat is impeded in hot and moist baths, like the Russian steam bath, an increase in bodily temperature easily occurs, and varies according to the intensity and duration of the heat influence. This artificial rise in temperature is accompanied by an increase in metabolism, both in a quantitative and qualitative sense. The decomposition of albumin also rises above the normal. The investigations of Pflüger, Bartels, Naunyn, Schleich, Formanek and Topp, show that the production of urea is increased by hot baths. H. Winternitz not only observed as a result of hot water baths an increased decomposition of substances free from nitrogen, but an actual increase of oxygen consumption and carbon dioxide elimination to an extent never observed even in high fever.

In order to investigate the difference in the action of hot baths in dry and moist media, I have conducted a series of experiments upon myself in conjunction with a colleague (Dr. Boettcher), which I will briefly report.

It was found that at a similar temperature and duration of the baths the bodily temperature rises much higher in a moist medium, like the steam bath, than in the dry hot air of the electric light bath. From the results obtained in the experiments with five steam chest baths, and five electric baths, tabulated in the following compilation, it will be seen that with an average temperature in the steam chest of 50°C. there occurred in several experiments an increase in temperature (the temperature was always taken by the mouth) of 1.5°C. On the other hand, in the case of the electric light bath, in spite of an average temperature of about 60°C., and notwithstanding that the duration of the baths in two experiments was increased, the bodily temperature showed an average increase of only 0.5°C. Therefore, estimating the temperature of both baths at 50°C. there was an increase in bodily heat of 1.5°C. for the steam bath, and 0.4°C. for the electric bath. The influence upon the pulse also varies in these two varieties of baths; the steam chest bath caused a much higher increase in the frequency of the pulse than the electric light bath.

*Transactions of the Internal Congresses, 1897. Transactions of the International Congresses, 1897. Chapter on "Thermotherapy" in the "Handbuch der physikal. Therapie" of Goldscheider and Jacob, Leipzig, 1901.

**The "sweat bath in bed" occupies an intermediate position between the two varieties of baths above discussed. It is originally a bath in hot dry air, but on account of the small volume of air, and because no renewal of the air takes place, there must soon occur an increase in moisture.

STEAM CHEST BATHS.

No.	Date	Experi- menter	Begin- ning of the bath	BEFORE THE BATH				5 MIN. AFTER BEGINNING OF BATH				15 MIN. AFTER BE- GINNING OF BATH				AFTER THE BATH			REMARKS.	
				Tempera- ture of the bath	Tempera- ture of the body	Pulse per minute	Respirat. per minute	Bodily Weight	Tempera- ture of the bath	Pulse per minute	Respirat. per minute	End of the bath	Tempera- ture of the bath	Pulse per minute	Respirat. per minute	Bodily Tempera- ture	Bodily Weight	Bodily Tempe- rature.		Pulse per minute
1	Jan. 13	A	6.10	47.0°	36.7° C	82	24	86.5 Kg.	45° C	111	28	0.27	45.5°	140	30	38.0°	86.0 Kg.	After 7 min. 37° C	After 3 min. 100	
2	" 15	A	6.36	50.0°	36.7° C	80	22	86.4 Kg.	50° C	118	26	0.51	50.0°	142	30	38.4°	86.0 "	" 1 "	100	
3	" 18	A	6.30	46.0°	36.9° C	84	20	87.0 Kg.	49° C	132	22	0.45	49.0°	148	22	38.4°	86.5 "	10 " 37.3° C	Before rubbing 118 After " 108 10 min. later 100	After 5 minutes marked sweat- ing.
4	" 21	B	6.19	50.0°	37.0° C	68	20	68.0 Kg.	50° C	108	22	0.35	50.0°	138	22	38.1°	67.5 "	12 " 37.7° C	After 3 min. 101	Before termina- tion of bath, pulsation of ca- rotid artery. Slight dizziness.
5	" 23	A	6.25	42.5°	37.1° C	80	20	87.0 Kg.	46° C	126	20	0.42	49.0°	142	22	38.5°	86.5 "	10 " 37.7° C 30 " 37.1° C	" 2 " 104 " 30 " 80	After 5 minutes quite marked sweating.

ELECTRIC LIGHT BATHS.

1	Jan. 24	B	6.21	46.0°	36.0° C	60	20	68.7 Kg.	52° C	74	20	0.37	60.0°	86	20	37.2°	86.5 Kg.	10 " 37.0° C	Aft. 12 min. 60	
2	" 25	A	6.00	46.0°	37.0° C	80	20	86.7 Kg.	52° C	94	20	0.25	54.0°	96	20	37.2°	86.2 Kg.	10 " 37.0° C	" 10 "	80
3	" 31	A	6.18	57.5°	37.1° C	80	20	86.7 Kg.	69° C	140	20	0.38	60.0°	142	20	38.3°	86.1 Kg.	14 " 37.1° C	" 10 "	112
													20 min. after begin- ning of bath.					" 14 "	196	Marked re- laxation of pulse, noted after a few minutes.
4	Feb. 1	B	6.18	50.0°	36.0° C	61	20	68.0 Kg.	62° C	80	20	0.38	60.0°	142	20	37.1°	67.6 Kg.	9 " 36.8° C	" 9 "	78
													20 min. after begin- ning of bath.							
5	" 7	A	5.50	56.0°	36.9° C	80	20	87.3 Kg.	62° C	94	20	0.40	60.0°	120	20	37.7°	87.0 Kg.	15 " 36.9° C	" 5 "	88

While the frequency of the pulse in the steam bath attained an average increase of 63(!) beats to the minute, that is, an actual increase from 80 to 143 beats, the increase in the case of the electric light baths, averaged only 38 beats, or an actual increase from 80 to 118 beats. Together with the increased pulse frequency, there was an increase in vascular relaxation, (radial and carotid arteries) which was more marked in the steam bath than in the electric light bath.

After completion of the baths the frequency of the pulse and the temperature diminished quite rapidly, so that after 15 to 30 minutes normal conditions again were reached; this recession occurred much more quickly when a cool rubbing was performed immediately after the hot bath. Subjective symptoms of palpitation of the heart, heat oppression, and congestion in the head, were much more prominent in the steam bath than in the electric light bath, in which they were almost entirely absent, and even in the steam bath were only noticed to a slight degree when there was a high temperature and longer duration of the bath.

The frequency of respiration was not essentially changed in either form of bath, but there did occur an increase in the depth of the breathing, which also showed itself much more prominently in the steam bath than in the electric light bath. In the

latter the diaphoresis was subjectively more marked than in the steam bath. In contradistinction to this, however, is the fact that a larger decrease in bodily weight could not be demonstrated in the case of the electric light bath. The average loss in weight (about one pound per bath), if anything, was less, after the electric light bath. After the experiments the loss in bodily weight was compared by both experimenters, experimenter A, having even found an increase in bodily weight.

This shows, as I have previously emphasized, that a marked reduction of bodily weight can only be accomplished by diaphoretic procedures when the increased loss of water is not again replaced, and furthermore that a treatment of obesity by means of dietetic regime, and, above all, physical exercises, is to be eminently preferred to the hot bath treatment.

If we again briefly summarize the results of these experiments, it is above all remarkable that the hot bath in the moist medium causes a much greater hyperthermia, and a much greater accompanying increase in pulse frequency, than the bath in dry hot air. This is of the highest importance, in considering the indications and contraindications for these baths.

Common to both varieties of baths are certain

actions of the heat upon the circulation, sweat secretion and nervous system. The blood vessels of the skin and the subadjacent tissues become dilated, and a peripheral hyperemia results, and with a simultaneous decrease in blood pressure, and increase of the vascular dilatation the frequency of the pulse becomes increased; the latter phenomena are certainly much more pronounced in the case of the hot bath in moist media.

Furthermore, in both varieties of baths there is marked sweating, although in the dry media the diaphoresis appears more pronounced (in the hot sand bath a loss of bodily weight up to 3 Kg. was observed). The increase in sweat secretion, where there is insufficient supply of fluid, may give rise to an impoverishment of water in the body; at any rate by the replacement of the lost fluid with fluids from the tissues, a stimulation is produced which is of great importance for the removal of transudates and exudates. The constituency of the sweat in salts and organic material is only slight, but the sweat, like the urine, possesses toxic properties. On account of this toxicity it has been repeatedly attempted to explain the therapeutic action of sweat baths by assuming that the pathological toxins are eliminated by the sweat; this, however, is not supported by experimental proof, it having not yet been shown that the sweat possesses a greater toxicity in the sick individual than in the healthy one. Various poisons, like mercury, arsenic, and potassium iodide, are eliminated by the sweat. In the treatment of nephritis with sweat baths, it is of importance to consider, as pointed out by Koehler, that in renal diseases albumin is eliminated by the sweat. The influence upon the nervous system of the analgesic and relaxing effect of the heat may also be considered identical in both varieties of baths. On the other hand, as we have seen, the influence of the hot baths in moist media, surpasses in a most important feature that of the dry hot baths, on account of the increased hyperthermia, and the accompanying intense stimulation and acceleration of metabolism.*

The question then arises as to the indication and justification for the employment of artificial fever as a therapeutic procedure. The beneficial results which have been obtained in the treatment of many diseases in Japan, where, according to the reports of Baeltz, it has become the custom to bathe in very hot water, and furthermore, the popularity of the steam baths, which has existed since ancient times among the Russians, for the prevention and cure of the greatest variety of pathological conditions, all seem to prove that the artificially produced temperature rise possesses a particular therapeutic value. If we start out with the assumption that fever chiefly represents a natural process which serves the purpose of immunizing and eliminating pathological materials, like bacterial products, etc., it can readily be assumed that in certain cases the production and intensification of this reaction will be of use. In which cases, and how far, such a hyperthermic ther-

apy is justified and indicated, can only be ascertained by careful clinical examination, and extensive bedside experience. As an encouragement for further experimentation in this direction, are the investigations conducted by Walter, Rovighi and Filehne, which showed that, if infected animals were subjected to a general intense heat treatment, they were better able to withstand infection than similarly infected animals not subjected to this treatment.

Furthermore, of importance for this subject is the hyperleukocytosis which can be regularly observed in temperature increasing baths. After intense heat influences in moist media, like hot baths, steam baths, etc., I could regularly show an increase of the leukocytes up to 25%. As the red blood corpuscles during these experiments were increased to a much less degree, and in some cases even decreased, the conclusion was justified, that the condition of the leukocytes was not only dependent upon vasomotor phenomena, but that a specific attraction for the leukocytes was set up by the intense thermic irritation. We must therefore, consider the manifestations recognized under the name of chemotaxis side by side with thermotaxis, notwithstanding that the hyperleukocytosis caused by thermic irritation is much less than that caused after the administration of certain chemical substances. In a large number of experiments in this direction I have always found that the degree of leukocytosis after the influence of heat, is dependent upon the increase of bodily temperature, and therefore in inverse ratio to the quantity of evaporated sweat. In the hot air baths but a slight increase of leukocytes was observed, while in the hot water bath, and in the steam bath, the number of leukocytes was markedly greater. Regarding chemotaxis, I frequently found that immediately after the heat influence there was a decrease in the leukocytes, which was only later followed by the hyperleukocytosis. Regarding the degree of leukocytosis caused by the heat I found individual variations, which appeared to me to be dependent upon the general constitution. In certain vigorous individuals the increase in leukocytes was more marked than in weak anemic subjects.

In order to decide the question whether we had to deal in these cases with entirely transitory phenomena, I have repeatedly examined the blood many hours after the hydrotherapeutic procedure, and in many cases found that even 24 hours after the influence of the thermic irritation an increase in the number of leukocytes existed. For example, in a series of experiments performed by employing steam baths once daily for twenty minutes, the number of leukocytes per cm. increased within three days from 6500 to 9500; I observed an increase of 1000 leukocytes to the cm. on each one of these three days, showing that the increase of one day persisted until the next.

This mobilization of the leukocytes, which occurred under the influence of baths that increased bodily temperature, is deserving of particular attention when we take into consideration how great a role the leukocytes play in the battle of the organism with disease.

Not only are various opinions produced regarding the indication for each variety of bath, but also vari-

*Just as I was about to send this article to press I received a communication containing a report of experiments performed by Dr. Salomon under the direction of Prof. v. Noorden, entitled, "Concerning the Action of Hot Baths and Electric Light Baths." The results concur so far with mine in that the author showed "that the increase in oxygen in the hot air and electric light baths did not differ markedly from the observations of Winternitz in the case of the 'hot bath'."

ous views are entertained regarding the contraindications for such procedures. The hot bath in a moist medium makes more exacting demands from the organism than the simple sweat bath. The artificial fever affects the heart by far more intensely, as has been already observed in the increased pulse frequency. As soon as an increase in bodily temperature occurs the intensification of the processes of metabolism, as it were, affects the economy to a much higher degree than in the case of a simple sweat bath. We must, therefore, be particularly careful in employing baths that increase bodily temperature in patients with cardiac and vascular affections, simple sweat baths being much better tolerated by such individuals. A well pronounced cardiac insufficiency, or arteriosclerosis, is a decided contraindication to the employment of baths that increase the temperature of the body. Also, in older persons, as well as in anemic and cachectic individuals, we must be very reserved in ordering such baths; furthermore, in individuals with apparently healthy circulatory apparatuses, in whom increased functional cardiac activity frequently occasions increased dilatation of the peripheral vessels, such baths are contraindicated.

The effect of the temperature increasing baths is, to a certain extent, weakened when the head of the patient remains in cool air, as, for instance, in the case of the steam chest bath. In such cases where hot baths on account of their general influence are contraindicated, local treatment by means of heat is frequently utilized, in the shape of hot air apparatuses, thermophores, douches, etc. This applies especially to a series of affections of the joints, muscles and nerves.

In conclusion, in order to briefly emphasize the indications for each variety of bath, we prefer temperature increasing baths:

(1). In combating infectious and toxic conditions. In acute and subacute diseases due to exposure, catarrh of the upper respiratory passages, fresh rheumatic affections of the muscles and joints, and also in other infections, the onset of which is not characterized by high fever, and in which individual conditions render an increase of the fever permissible and desirable for the course of the pathological process. Furthermore in syphilis, and in a general gonorrheal infection.

(2) When an intense increase of metabolism is indicated from other causes, such as autointoxication, and in conditions affecting metabolism, like gout.

On the other hand, we favor sweat baths:

(1). When a cure by means of free diaphoresis is contemplated; in exudations and transudations, in nephritis with edema, in hydremia and chlorosis, in metallic poisoning, and in obesity as an adjunct to other methods of treatment.

(2) When chronic inflammatory processes are to be influenced by peripheral hyperemia. In chronic and especially rheumatic affections of the muscles, joints and nerves, in the residual conditions of acute articular rheumatism, in chronic muscular rheumatism and arthritis deformans, in neuritides, and in tubercular arthritic affections.

TRAUMATIC HYSTERIA: CRANIAL OPERATION AN INTERESTING PATHOLOGICAL CONDITION; RECOVERY.

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I first examined Miss N. A., August 19, 1899. Four years previously, almost to the month, while romping with some girl friends, her forehead came violently in contact with another girl's head. She was unconscious for about two hours after the blow and in a more or less dazed state for a still longer period. About three months after the accident serious convulsions began to appear. During a period of four years, between the accident and the operation described below, there was a marked departure from her usual condition of health, a contrast which I shall attempt to make evident in the following notes.

Prior to the accident she had always been well. She had never had a serious or tedious illness, nor a convulsion of any kind. Her schooling had not been interrupted by illness. She was fond of and fully capacitated for household work and for such recreations as dancing, horseback riding and walking. Following the accident there developed within a few weeks convulsions of a very distressing kind, a constant headache, and an increasing physical and mental lassitude.

At my request, Dr. W. R. Ferrell, the attending physician, kindly furnished the following brief resume of the case:

"Miss N. A. suffered continually with a headache from a few weeks after the injury until the operation. The convulsions came suddenly and sometimes lasted for hours with practically no intermission. The first one that she ever had came suddenly while she was at dinner, with no warning of any kind. It lasted six hours, when she seemed to come under the influence of the drugs administered. During this and all subsequent attacks which I saw, the cramping would seize all portions of the body, then she would writhe all over, pull her hair and cry aloud and at times she would seem to smother as though almost asphyxiated. The attacks came in groups about every four weeks. They would disappear in about three days if kept well under the influence of medicine. It was noticed that before the attacks she complained of weakness or prostration and was somewhat depressed in spirits. The operation was followed by a remarkable change. Her appearance since has been that of perfect health, no headache, no pain anywhere, no sign of a convulsion, spirits the best. A few months ago she married. Her father informed me recently that she had been having some slight attacks of vertigo with nausea which they attributed to a natural cause."

From the patient and her father I obtained a clinical history that coincided substantially with Dr. Ferrell's, and nothing important in the way of family history beyond the one item that the mother had had migraine attacks. They quite agreed that the convulsions were becoming more frequent and prolonged, the headaches more severe, and that the disinclination or incapacity for mental and physical occupation and activity was increasing; evidently an increasing neurasthenia which had deepened several shades in the past few months.

The patient was under observation at St. Luke's Hospital nine days; and systematic examinations were made, the details of which I shall not recount, but give only the more important results: A well-

developed woman, 20 years old (at the time of the accident she was 16 years old); blonde type; a florid complexion, giving the impression of habitual vasomotor dilatation; of good proportions and free from any important degenerative signs. There was no evidence of visceral or organic disease of any region of the body, nor were there signs of any focal disease of the nervous system.

We witnessed a number of the convulsions and remarked the several stages and various details of a well-developed hysterical seizure of the *grand type*: A premonitory stage of discomfort and disquiet; with her it seemed to be a malaise which started in the precordial region and radiated with accumulating force and severity to all portions of the body. As this increased it was followed in a typical way by the period of mental anguish, fright and delirium; and then the epileptoid spasm, consisting of tonic seizures followed by writhing, clutching, gyrations of the extremities, and contortions. Especially we noticed the frequency with which she ducked her head down and bored it into the pillows, in a manner often seen in these attacks. Finally the convulsive condition gave way with now and then a ripple of it through the extremities as the sensorium gradually cleared and consciousness returned to find her in a condition of lassitude and inclined to sleep.

There was no scar or sign of injury to the skin. The region of trauma on the forehead was hyperesthetic; not excessively so, but on all occasions manipulation and slight pressure were uncomfortable to the patient. By pressure upon it, in a deliberate manner, I induced a convulsion of the kind above described. In order to accomplish this, however, considerable pressure or force was necessary; therefore, having selected for the first trial an opportune time and having fully satisfied myself that the site of trauma was an hysterogenic point, I did not repeat the experiment for reasons which are readily understood.

During the periods when she was free from seizures, there was no history of the appearance of any of the so-called interparoxysmal symptoms of hysteria. Nor did we find these during our examination, although we carefully looked for psychical, sensory and motor phenomena of this kind. Even the pharynx was not anesthetic, the visual field was not contracted, and nowhere could we find anesthetic, hyperesthetic, or hysterogenic areas, save the one region of the trauma as above described.

Next to the convulsions the headache demanded attention. She insisted that she was never free from it. She described the pain as radiating from the site of trauma in all directions and to all portions of the head, varying in severity, but always present; sometimes a dull, heavy, aching; sometimes sharp, shooting pains. Occasionally there came a pain paroxysm of great severity, lasting for hours, accompanied with nausea and a boring pain in the orbit on the side of trauma—in short, all the features of an attack of ophthalmic migraine. In some of these attacks she became quite blind in this left eye. It was, however, the transient blindness of migraine rather than the more persisting hysterical kind.

There was no mental weakness, no psychical symptoms aside from the attacks. The nurses who

were with her daily in the hospital gave her the best of reputations for amiability and intelligence, and she impressed all of us in the same way. There was a condition of physical and mental listlessness, as it were, growing out of the enforced idleness of her long illness and a fading hope of ever recovering from her unfortunate plight. When alluding to this latter possibility, she sometimes became emotional, but not hysterically or unreasonably so. She was ready to undertake anything in the way of treatment that the physicians agreed upon.

She entered St. Luke's Hospital August 19, 1899. On August 28th Dr. Harvey G. Mudd operated. He has kindly furnished me the following brief description of the operation:

As nearly as could be determined the central point of the trauma was on the line of the coronal suture and three inches from the sagittal on the left side. This point was accordingly made the center of a circular skin flap with pedicle below. The portion of bone to be raised was outlined with a small chisel, grooved with a V-shape, and the line cut through with a plain chisel and mallet. A portion of the bone in the lower segment, corresponding to the skin pedicle, was broken back, as the osteoplastic flap was lifted and turned downwards. The portion of bone raised measured two and one half (2 1/2) inches in each diameter. The presenting dura seemed normal. It was incised around the circumference of the opening and turned down with an attaching pedicle much as the skin flap. The exposed arachnoid showed plainly inflammatory thickening. On introducing the finger under the edge of the bone it was found that the dura was attached to the pia-arachnoid in all directions for a considerable distance about the site of the opening. These adhesions were carefully broken up, producing free hemorrhage which, however, stopped very shortly. The flap of dura was stitched into place with cat gut. The bone flap fitted into place without difficulty. The scalp was sewed and the wound closed without drainage. Union by first intention took place throughout. The dressing was removed in about two weeks. Within two hours after the operation the temperature was 104.8° and pulse 128. This soon subsided and afterwards remained normal, or nearly so.

The pathological findings in this case emphasize the necessity of making reasonably large openings when intracranial inspection is undertaken. The adhesions between the dura and pia-arachnoid were just beyond the exposed area and were only discovered when the finger was introduced to explore. If the site selected had been trephined with the largest size crown and the dura opened, I am sure the slight exudation in the arachnoid just at this point would not have tempted a thoughtful surgeon to enlarge the bone opening, in this region especially, for he would have to think of the unsightly depression he would thus make in the forehead of a young lady patient. The result of the osteoplastic flap was a fine linear scar and no depression or unevenness whatever.

The only possibility of a sufficient exploration is through a large opening. The surgeon knows nothing when he has peeped through a trephine hole.

The presence of the adhesions I would explain as follows: at the site of trauma there was produced a local edema of the membranes, and this edematous area was circumscribed in all directions by a slight exudation and the adhesions found were the remains of this inflammatory circle.

After reporting an interesting case of traumatic (?) hysteria, a recent writer* puts the query: "Was

*Dr. C. B. Burr, Flint, Mich., Reflections on Traumatic Hysteria. Proceedings American Medico-Psychological Association, 1900.

the case scientifically operable?" The question arises in the same form here: In the absence of focal motor and sensory signs were there other considerations weighty enough to scientifically determine an intracranial exploration? In my case the evidence may be stated as follows: A site of trauma definitely located, with indications that it was severe in character; immediately following the trauma prolonged loss of consciousness (about two hours); a constant headache of severe type, focused, as it were, at the point of trauma and dating distinctly from it; grave hysterical seizures, recurring frequently during a period of four years and accompanied with much mental and physical lassitude, which also date definitely from the trauma.

As already stated, the attacks were the only pronounced or characteristic hysterical phenomena present, but their presence admonishes us to carefully weigh all other matters. For instance, in the light of the hysterical spells the prolonged unconsciousness may also have been hysterical, probably was; and why may we not say the same about the headache? With this suspicion once aroused, we may not accept any of the symptoms that were present as reliable guides to the amount of injury to bone, membrane or brain. Even under circumstances where no such suspicion exists we often cannot determine much about the brain trauma from the skull trauma. The cranial injury is one problem, the brain injury another, and the functional disturbance still another, and this latter may only be made out by a careful study of symptoms. In the presence of hysterical symptoms the problem, to say the least, becomes perplexing, often unfathomable. A multitude of hysterical phenomena may spring from apparently trifling disturbances as well as from severe physical trauma, and that, too, in individuals who previously have shown no history or sign of this kind. Evidence is not lacking in proof of this statement but by way of impressing it as I would wish to in this connection, it may not seem amiss to quote the language of a prominent authority:* "All forms of shock, whatever may be their nature or intensity, may excite hysteria, and the disturbances caused by earthquake or by lightning do not necessarily determine graver accidents than a simple confusion received under the most ordinary circumstances." * * * "There are, indeed, certain kinds of shock which may provoke hysterical symptoms in individuals who have no trace of predisposition to the affection."

In view of these difficulties, how are we to consider cases like the one here reported, and that of Dr. Burr's? Briefly, the situation in his case was as follows: A young woman (age not stated). Two years previously an alleged injury to the cranium (site not mentioned) from a chair in the hands of her mother. No evidence of injury to scalp or skull, no cicatrix, no increased tenderness. She frequently had typical hysterical attacks; at times was dull and confused, and on some occasions almost stuporous; showed insane changes of temperament, and even well marked dual mental states, the phases of which extended over months. She at times complained of severe headache referred to the region of alleged trauma and often of sharp pains in this

locality. There was no paralysis or objective sensory symptoms or other focal symptoms of any kind. A sister (whom Dr. Burr had observed) had been in very much the same condition, and there were other items, especially in her mother's case to show a neuropathic family tendency.

During two months of sanitarium treatment under Dr. Burr's observation, she improved. Soon after leaving the hospital she developed profound hysteria. A surgeon diagnosed *meningeal* or *cerebral irritation* at the point of trauma. A button of bone was removed with a Galt trephine. It was affirmed that there was a pathological adhesion of the dura to the bone at the site of the opening and for some distance in all directions. The dura was incised and seemed thick and vascular. Beyond this nothing pathological is mentioned. The patient was so promptly and so much improved that she and her friends believed there was a complete restoration of mental and physical health from the operation.

These two cases are quite similar. They belong to a certain class or type, which fact the neurologist recognizes perhaps more fully than other practitioners; a class of cases in which after some cranial injury there is a question whether there has been a cerebral injury, and in which there is no satisfactory way of deciding on account of the presence of hysterical phenomena, or of certain other vague psychical symptoms which do not enlighten the observer who best understands them, but, on the contrary, only mystify a diagnosis. Even after we have operated and discovered a lesion we may not positively affirm its relation to any of this class of symptoms, no matter what its magnitude. The excision of a sensitive scar from the scalp or a hole trephined in the skull, has been sufficient to dispel on many occasions an elaborate symptomatology of this kind. It is unfortunate that more of these cases with descriptions of the surgical interference undertaken for their relief have not been carefully recorded. Many instructive instances have never reached a record, as every experienced neurological practitioner, and many others, can testify. In looking over reported cases one is impressed with the facts of insufficient clinical histories and very imperfect surgical operations. Yet when carefully analysed the volume of this evidence would sustain our conclusions, hereinafter expressed.

Dr. Burr concludes his communication as follows: "Not one symptom suggested surgical interference. We were chagrined that the value of the operation should not have been foreseen. It was, apparently, necessary, and brought about the patient's recovery, but I fear that under similar circumstances we should act as before. The case is reported to show the possibilities of surgical relief in cases of traumatic hysteria, and it occurs to me to ask two questions in connection therewith:

Given the facts as related, could a neurologist recommend operation?

In a similar case would an operation of such magnitude be justifiable with the possibility of pathological findings and in the absence of them for its suggestive influence?

Or, in other words, could we assume the existence of disease, or failing to find it justify surgical measures because of the presumable moral effect? Or, put more briefly still, was the case scientifically operable?"

I have already shown why my case was not *scientifically* operable; for notwithstanding we knew the site of trauma, that it was tender and hysterogenic and a constant pain center, we actually had no more

*Pere. Twent Cent. Proc. Med., Vol. 1

practical or positive data to proceed from, than were present in Dr. Burr's case. We simply operated to give the patient the benefit of the doubt. The two cases here cited, as well as many others, show the advantage of doing this. I believe it useless to try to formulate any rules, except, (1) if in any case there is doubt about the traumatic origin of hysterical or other psychical symptom, or about the possibility of surgical relief, the patient should have the benefit of this doubt; (2) to determine these matters the case should be *thoroughly* canvassed from a neurological standpoint.

THE USE OF DRUGS IN PULMONARY TUBERCULOSIS*

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In regard to the use of drugs in pulmonary tuberculosis there is much difference of opinion amongst medical men. By some physicians drugs are considered either useless or harmful; by others one drug or method of treatment is considered *the* treatment. Creosote, cinamate of soda, arsenic, formaldehyd, and various other drugs have each their devoted adherents, who regard their pet remedy almost as a specific. A large number of medical men, while not discarding drugs altogether, employ them only for the relief of urgent symptoms.

All these views are in my opinion too narrow; some over-estimating their limitations. From another standpoint also the foregoing views are too narrow. The great variety in the clinical forms of phthisis is dropped out of sight; and the same line of treatment in regard to remedies is sometimes adopted without sufficiently precise reference to the case in hand.

The object of this paper is to point out some of the advantages that may be gained by the judicious use, and some of the evils that arise from the injudicious or indiscriminate employment of drugs in pulmonary tuberculosis. The broad principles will also be indicated which determine my own selection of remedies according to the variety of the case. The subject is one in which the comparison of individual experience is of the greatest value in extending our knowledge, and in putting it on a firmer basis.

The first point to be made clear is that up to the present no specific has been found for tuberculosis. Not merely so; but there is no drug that is useful in all cases. Nevertheless, there are various drugs that favorably influence the course of some varieties of the disease always provided that they are well tolerated by the patient, and that they do not cause any disturbance of appetite, digestion or assimilation.

Time does not permit even a hasty review of all the drugs useful in phthisis. The various conditions only that indicate or contraindicate one remedy rather than another will be rapidly considered.

What medicines have we at our disposal? Drugs may favorably influence the course of the disease—

1. By improving the general health; as for example, arsenic, quinine, strychnine, lime, phosphorus preparations.

2. By increasing the local resistance of the affected tissues, as creosote and its derivatives, salicyl preparations, and counter irritants.
3. By modifying the quantity or character of the secretions, as the balsams, the terebinthines, the essential oils, morphine and apomorphine, and inhalations, especially of formaldehyd.
4. By controlling symptoms that react prejudicially on the patient. Amongst these are:
 - a. Digestive ailments.
 - b. Excessive or needless cough, which shakes and exhausts the patient, causes fever, or prevents sleep.
 - c. Scanty expectoration and retention of secretions.
 - d. Fever, which spoils appetite, and prostrates the patient.
5. By removing complications, such as syphilis.

In the choice of remedies the points to be considered are not the same as guide us in diagnosis or in prognosis. The first and most important point to recognize is, that treatment by medicines must be altogether subordinate to general hygienic management—good food and fresh air with rest and exercise according to the individual needs of the patient.

The first and most important point in treatment is to consider the state of the digestive system. If the stomach or digestion is out of order drug treatment is, as a rule, inadvisable, except in so far as it may aid in restoring the digestive function to a normal state, or in removing some condition that tends to prolong the digestive ailment. For example, appetite and digestion not uncommonly improve with the artificial reduction of temperature, or with the control of excessive cough. In such cases we must feel our way cautiously and be guided tentatively by the results.

The most important indication then is to get the stomach and bowels into proper working order. Nothing goes right so long as the digestion is wrong.

Temperature is the next most important guide to treatment. Pyrexia will in a large proportion of cases yield to absolute rest, bodily and mental, combined with life in the fresh air. In many cases, however, a return to a normal level of temperature can be hastened by the administration of small doses of phenacetin—one to three grains—in combination with quinine and salol and sometimes arsenic. Taken in this way phenacetin seems to have rather a tonic than a prejudicial effect on the heart and on the general health, and many without hesitation be continued for months if need be. My experience of other antipyretics, save for quite occasional use, has not been so favorable, with the exception perhaps of salipyrin.

Arsenic, strychnine, quinine, and salicyl preparations greatly diminish, in my opinion, the tendency to recurrent attacks of subacute inflammatory character and those recurrent febrile attacks without any change in the physical signs which are so marked a feature in a large number of patients suffering from pulmonary tuberculosis. These recurrent febrile attacks are no doubt of very various origin, tubercle as a rule rendering the organism highly sensitive to influences that cause pyrexia. The drugs I have mentioned seem to me to diminish this

* From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

sensitiveness to febrile reaction. In doing so they accomplish something more than the avoidance of a temporary drawback or inconvenience. In tuberculosis, more than in any other disease, slight drawbacks are apt to provoke further prejudicial effects, and each morbid condition tends to become chronic. In averting slight drawbacks, therefore, we avoid great dangers which might completely alter the course of the disease. The disease is one in which preeminently anything short of the best is bad.

Next to pyrexia as a guide to treatment, I would place a marked tendency to hemoptysis. Creosote and guaiacol increase, in my opinion, the liability to pulmonary hemorrhage—as well, in fact, as to pulmonary inflammation—and should be avoided where such a disposition is present. The lime salts, the terebinthates, and the balsams have, I believe, on the contrary, a somewhat restraining influence, as has also morphine in minute doses.

The treatment of excessive cough requires much judgment. A closely allied object of treatment is the modification and, as a rule, the diminution of bronchial and pulmonary secretion—the “drying up of the lungs.” A certain amount of cough is in a large number of cases indispensable, and has a salutary influence. The problem is to secure the removal of the pulmonary and bronchial secretions with the least amount of violence, exertion, or fatigue for the patient. Sometimes the secretions are extremely abundant, sometimes too scanty. The balsams and the terebinthates and tar for the most part diminish bronchial secretion, and the terebinthates commonly render it at the same time less tenacious and easier to get up. Minute doses of morphine—from one hundred and twentieth to one sixtieth of a grain of any of its salts—diminish secretion, but as a rule render it more tenacious. Apomorphine in small doses—one-twentieth to one-sixteenth of a grain of the hydrochlorate—loosens the secretion without making it much more abundant. The recently-introduced morphine derivatives, heroin and dionin, greatly diminish expectoration, while they are free from the drawbacks that morphine has, of rendering the secretion viscous and difficult to get up. They are also practically devoid of constipating effect, and they do not upset the digestion. For the last two or three years they have almost altogether replaced in my practice the phosphate of codeine, which has fewer drawbacks than has morphine for the relief of excessive cough.

The most valuable agent that I am as yet acquainted with for modifying the bronchial and pulmonary secretions is the vapor of formaldehyd. For the last three years I have used this drug extensively, and with more and more satisfactory results. When steadily used it generally causes the secretions to be less purulent and more mucous, at the same time diminishing the amount and rendering expectoration easier. Where the use of the drug has been steadily persisted in for months tubercle bacilli have, as a rule, also become less numerous, and in some old cases even have disappeared. The mode of employment requires a little care. The best way, in my opinion, to use formaldehyd is by means of a muzzle inhaler. The strength of the solution should at first not be more than two or three per cent. in rectified spirits of the ordinary forty per

cent. solution. The addition of some essential oils renders the inhalation quite agreeable. Only from five to ten minims at first should be put in the inhaler, and this quantity should be renewed every fifteen or twenty minutes, the entire time of inhalation being from two to four hours a day. The strength may be gradually increased up to six or eight per cent., and sometimes even to double that amount. If cough is very irritable, chloroform may be added to the inhalation. From independent observations I am strongly of opinion that chloroform, apart from its soothing influence on the cough, has in some cases a beneficial influence on the disease. It must, however, be used with judgment. I have known it seemingly give rise to pyrexia, by causing retention of secretion. The inhalation of formaldehyd, on the contrary, tends to considerably diminish pyrexia due to the absorption of toxins. Formaldehyd has another advantage. If not too strong, it diminishes irritability in the pharynx and larynx. It is, however, very irritating to the eyes and nose, and for this reason should be used only with an oral inhaler, or, if the Burney Yeo oro-nasal inhaler is employed, it should be placed below the nose.

According to my experience syphilis is a complication of pulmonary tuberculosis in a much larger proportion of cases than is usually thought. In such cases I consider the treatment of syphilis to be of the first importance. Small doses of the perchloride of mercury have then, instead of a depressing, a remarkably tonic influence. Intra-muscular injections of mercurial salts, though more strikingly beneficial, have, as a rule, the drawback of being excessively painful. To this rule, however, *huile grise* or mercurial ointment, rubbed up with sterilized oil, is an exception. The iodide of ethyl by inhalation is perhaps the least objectionable, while not the least efficacious mode of giving iodine. It may be combined with the formaldehyd inhalation.

To sum up then, my line of treatment is determined, in the first instance, by the digestive system, by the general health, and by the state of nutrition.

If digestion is bad, the only drugs indicated are such as will restore it to a normal condition. If digestion is good, the general condition satisfactory, and the patient improving, I refrain from using drugs unless some definite indication is present. Amongst the most important indications for drugs are persistent afternoon pyrexia in spite of absolute rest out of doors; a tendency to recurrent febrile attacks or to slight inflammatory attacks. This tendency is usually combined with impaired nutrition and with a low state of general health. In these conditions arsenic, strychnine, quinine, and salol are amongst the most useful tonics. Active softening, excessive cough, over-abundant expectoration, and, more rarely, scanty expectoration, expectoration of extremely purulent or nummular character, require attention; and the drugs useful for these conditions generally seem to me to have a favorable influence on the course of the disease in addition to the temporary relief from discomfort they may afford.

Amongst such drugs are formaldehyd vapor, creosote and its derivatives, except the carbonate of guaiacol, which has generally seemed to me to be inert, terpin hydrate, oil of cinnamon, myrtol, the balsams, and the lime salts. In sluggish chronic

softening, counter-irritation by iodine or by small tlying blisters is of the greatest use. When an old syphilitic taint is present its removal should be our first care.

The short time at my disposal does not permit a detailed examination of the points I have brought forward, and my remarks are rather to be considered in the light of heads for discussion than as even a partial exposition of the subject. What I have said may, however, I trust, be sufficient to induce others to bring forward their experience on the same lines.

THE INHALATION OF FORMIC ALDEHYDE AS AN AID IN THE OPEN-AIR TREATMENT OF PULMONARY TUBERCULOSIS.*

By DR. CROWRY MUTHU, ¹

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Formic Aldehyde.—The discovery of micro-organisms as the exciting cause of disease has brought into prominence many antiseptics and disinfectants, the object of which is to check their growth or destroy them. One of the latest of these is formic aldehyde which is obtained by the oxidation of methyl alcohol.

A great amount of experimental work has been carried on on the Continent, in America, and in England, which goes to prove that formic aldehyde is a powerful antiseptic and germicide, its bactericidal action being equal to, if not greater than, that of bichloride of mercury.

It is at present very popular among the medical profession, its use being extended every day in the fields of histology, surgery, medicine, and hygiene.

It is rapidly superseding the older antiseptics, such as carbolic acid, perchloride of mercury, and others. Its advantages are:

1. It is non-poisonous and non-corrosive.
2. It can be used in the form of vapor, which, being of low specific gravity, is diffusible, and mixes well with the air.
3. It has no action on clothes, textile fabrics, leather goods, and general household articles, or on metals, except iron and steel.
4. It is easy and clean in its application.

F. Aldehyde in the Disinfection of Rooms.—Besides being used as a general antiseptic and deodorant, it has been largely employed in the disinfection of rooms with success.

About two years ago, in the course of some experiments, I made the following observations:

1. Linen strips dipped in broth cultures of staphylococcus pyogenes aureus, and exposed in a sealed room with a capacity of 2,000 cubic feet to the vapor generated from twenty paraform tablets, showed no growth after six hours.
2. Half to one per cent. formalin solution killed a pure culture of staphylococcus pyogenes aureus, bacillus anthracis, bacterium coli communis, bacillus typhosus within thirty

minutes to an hour; and ever since I found formaldehyde to be the most efficient and reliable in the disinfection of rooms in the sanatorium with which I am connected.

F. Aldehyde in Pulmonary Tuberculosis.—The next step in the progressive use of formaldehyde has been its application in the case of throat and lung disease—especially in pulmonary tuberculosis—in which disease encouraging results have been obtained by medical men.

Dr. Lardner Green of Salisbury, was almost the first in this country to bring before the medical profession the desirability of using the inhalation of formaldehyde in early cases of pulmonary tuberculosis.

Dr. William Murrell, of London, in his report to the Scientific Grants Committee, 1899, related twelve successful cases that have been treated with the vapor.

On the Continent, Professor Cervello, of Palermo University, has given considerable attention to this subject, and has invented an apparatus for the production of formaldehyde gas.

My Observations.—I began treating patients with the drug in 1899, and have continued my clinical observations ever since.

I have already published the results of *seven cases*, which are briefly as follows: Three were cured, two were benefited, and in two others the results were not conclusive.

I have now to record the results of *fifteen cases*. Before so doing a few words as to the apparatus used would be desirable.

Formaldehyde was used:

1. In the form of gas, and
2. Formalin (40 per cent. solution).

The gas was generated in two ways:

(a) *The Dry Method.*—In this method paraform tabloids—called dry formalin—were placed on a metal tray over a methylated spirit lamp (alformant lamp).

The principle of this method is that the hot moist products from the combustion of the spirit, acting upon the tabloids, convert them to formaldehyde gas.

(b) *The Moist Method.*—In this method, in addition to the above apparatus, there is a boiler for generating steam, which, mixing with the formaldehyde vapor, renders it more diffusible and penetrating in its action. Of these two methods the latter is the more efficacious.

Method of Using.

1. The vapor is administered either in the patient's bedroom or in the inhalation room, which faces south, having plenty of sunshine; for the drier the atmosphere the more the vapor is generated, the greater its penetrating power. The doors and windows are partially or wholly closed, the lamp is lit, the boiler is filled with warm water, the paraform tabloids are put in, the patient sits in a lounge chair or lies in his bed and inhales the gas.

The vapor at first causes irritation of the eyes

*From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

and nostrils, which passes off after a few minutes. The inhalation is continued for one, two, or three hours, when the doors and windows are again opened.

2. The aqueous solution of the vapor or formalin (40 per cent.), as it is called, is used in two ways.

- (a) It is used (6 to 10 per cent. solution) in an inhaler, which the patient places over his mouth, using it from four to six hours in the course of the day.
- (b) It is also used in the form of fine spray, or in a nebuliser, at a strength of 6 to 10 per cent. solution mixed with glycerine.

The patient uses both these methods in the course of the day, either when he is in the open air or in his day shelter with doors and windows wide open.

Results.

Fifteen patients (twelve men and three women) have been treated in this way for three to five months. All of them have been my patients in the sanatorium, undergoing the open-air treatment for six to eleven months. They have not had any special medicine beyond an occasional pill or a mixture to correct indigestion, consequently the results have not been complicated in any way by the treatment.

Of the fifteen patients:

Five (all men) were completely cured. No physical signs or bacilli were found when they left. They have ever since continued to be in good health.

Seven (six men and one woman) were almost cured; i. e., a few dry crepitations and a few bacilli remained when they left, but they have been in good health and have followed their different avocations.

One (a woman) was slightly benefited.

Two, in the rest it had very little effect.

Of the five who were completely restored to health, three had affection of one lung, one had a large cavity in the left apex, the other had marked signs of breaking-down of both lungs.

Of the seven who were nearly cured, two had cavities of one lung and consolidation of the other, one had empyema complicating pulmonary tuberculosis, and the rest had more or less extensive affection of both lungs.

(Some Typical Cases in Detail.)

Remarks.

1. The results of the treatment to my mind have been very satisfactory, and I would strongly urge that the drug should be given a fair trial in every sanatorium where the open-air treatment is carried out.

2. It should be systematically and persistently used; and some one enthusiastic in the treatment should take charge of the apparatus, for the apparatus requires to be kept clean, and the lamp, etc., need careful supervision every day; any neglect would bring about indifferent vaporisation, and the results will be more or less a failure.

3. Though formaldehyde is non-poisonous, it has-
tens coagulation of blood. Hence the injection of

formalin directly into the veins and tissues of the body complicates the process of treatment and adds a certain amount of risk. Besides, it is not necessary, as the efficacy of the drug can be equally well obtained by simpler methods of some form of inhalation discussed in this paper.

In *chlorosis* the blood is pale and of low specific gravity, but its coagulation power is normal. The red bloodcorpuscles have their resistance weakened and the serum possesses a globulicidal action. Chemically, the serum is normal, but in the cellular elements there is a notable diminution of the potassium salts and of the chlorides and a slight diminution of albumin. The power of absorption of oxygen by the blood is lessened and the activity of the reduction of oxyhemoglobin is very pronounced. The chief lesion, however, is the excessive reduction of the amount of iron in the blood. The enormous lowering of the percentage of hemoglobin. Histologically, the red cells are diminished in number as well as in their globular value. Microcythemia, poikilocytosis and polychromatophilla are also present. The number of hematoblasts is more than double, whilst nucleated red blood corpuscles are very rare. Léger has never seen red bloodcorpuscles with basophilic granulation nor leukocytes with iodophilic granulation. There is a slight leukocytosis, a little more than 10,000 per cmm. The relation of leukocytes to the red bloodcells which is always diminished is sometimes very great. The polymorphonuclear neutrophilic leukocytes are increased in number absolutely and relatively. On the other hand, the lymphocytes are diminished. The large mononuclear leukocytes, the eosinophilic polymorphonuclear leukocytes and mast cells undergo no appreciable numerical change. Milk serum injected subcutaneously in chlorosis increases the number of red bloodcorpuscles, raises the amount of hemoglobin rapidly and then maintains it at a mean figure which does not increase with the continuation of the treatment. The leukocytes are increased in number at first, but soon return to the original figure. The lymphocytes, on the other hand, diminish at first and then increase in number, while the other types of leukocytes are not sensibly altered. In the treatment of the condition by iron protoxalate the red blood corpuscles, as well as the percentage of hemoglobin, increases, but whilst the red bloodcorpuscles increase very rapidly at the beginning of the treatment, later on increase is slower, while the increase in the percentage of hemoglobin at first slightly shown, subsequently becomes much more marked. The polymorphonuclear neutrophilic leukocytes diminish in number whilst the lymphocytes increase. Treatment by sodium cacodylate lowers the percentage of hemoglobin decidedly and at the same time it increases the number of red bloodcorpuscles a little or not at all. Leukocytosis is appreciable and affects the polymorphonuclear neutrophilic cells and the mononuclear elements. The lymphocytes diminish in number. Rest in bed gives the same result, but in a less degree, as the protoxalate of iron. The iron preparations give the best results in the treatment of chlorosis. [J. M. S.]

Recurrent Hemichorea Cured by Hypnotic Suggestion.—

Dr. Paul Faraz reports a case of hemichorea, which has existed for three months, cured in one seance by hypnotic suggestion. The patient, a girl of 19, had her first attack of chorea, also affecting the right side, three years before, when she was suddenly sent for, as her mother was very ill. It took her over six months to recover. This year her mother died. The hemichorea appeared again immediately. Besides, there was marked hemianesthesia, also right-sided, and insomnia. She dreamed a great deal. Having made the diagnosis of hysterical hemichorea, Faraz promised to cure her in one sitting. He then hypnotized her and told her that the movements would disappear when she awakened. When she awoke, the movements had gone. Faraz told her that she was cured, and showed her how well she could move her hands, etc., voluntarily. Massage and electricity soon effected a perfect cure. Faraz also suggested pleasant dreams, the disappearance of all pain, and regular evacuation of the bowels, all of which occurred. She has gained 15 pounds in two months, and is now perfectly well.—(*L'Independance Medicale*, 1901, No. 22). [M. O.]

SLOW PULSE. By Robert T. Edes, M.D., of Boston, Mass.—Continued.

TABLE I.

Cases of permanent slow pulse with nervous syncope or dyspneic paroxysms, in which autopsies were made.

Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
1. Prentiss, Tr. Assoc. Phys., 1880.	M. 51	36-42	Sounds normal-sphygmograms.	Faint short loss of cons; cyanosis	Tobacco; malaria; dimming; faint g. early paroxysms 1887.	Impr. Relapsed. Co. continued paroxysms. Delirium death 1880.	No fatty degen. No atheroma coron. Aorta dil.	Nothing remarkable	Ganglions no change. Slight swelling of card branches of vagus
2. Duncan, Med. Commentaries.	M. 51	26-9		Exhaustion; fainting; convul. attacks.				Watery fluid in ventricles, tetral. appearance some parts of pla.	
3. Gibson, Lond. Med. Gaz. 1858-59, vol. 1.	M. 70	22-46	Very feeble in paroxysms	Pallor, cyanosis; loss of consciousness	Sl. at 20 years before	Last eight years fits more frequent. Died in one.	Sl. atheroma coron. Heart large Aorta dil. Atheromatous lower part.	Congested	
4. Holberton, Med. Chir. Trans. vol. XXIV.	M. 61	22-7 60 before accident		Fainting fits. Dyspnea.	Fall from horse. Injury to neck.	Died in syncope 7 years later.	Large and weak. Lining of vessels thickened	Congestion of mediastinal prolongata from enlargement of oesophageal process	R middle cervical ganglion unusually large
5. Cain, Charleston Med. S. 1880.	M. 45	31 to 38	Sounds normal.	Pseudo apoplectic.	3 years before, exposure (?) with fainting.	Lat. dyspnea, palpitation, exhaustion, increased frequency of fits. Died after 2 years.	Much fluid in pericardium, fainter. Aorta congested	Healthy	Slight
6. Jacobi, Tr. Assoc. Phys., 1880.	M. 51	28-48	Much changed, faint or 2 sounds.	Syncope.			Atheroma of art. Fatty degen. of heart. Heart ganglia enlarged hard & calcareous.		
7. Edes, See text, Case 1	F. 50	56-11	Irreg. weak, area not enlarged.	Syncope; loss of cons. at times.	Shocks, grief, faint spells.	Paroxysms continued. Died in one.	No fatty degen. Very little atheroma Coronaries normal	Normal	
8. Stackler, Rev. de Méd. p. 204.	F. 53	40-28	Two cardiac revolutions to each cardiac beat Irreg. soft, sibilant.	Heart stopped then vomited. Pain; sometimes loss of cons. Cyanosis.	Previous to 1880 nervous attacks with sometimes loss of cons. Probably hysterical.	For 5 or 6 years palpitation, pain in pericardium.	Milky patches on tunica involving 1 vagus. Vagus hard red, swollen.	Tumor of mediastinum involving 1 vagus. Vagus hard red, swollen.	By microscope no alteration of vagus fibers
9. Lepine, Lyon Med. vol. XLIII, p. 313.	M. 65	34	1st complete beats followed by 1 or 2 pair calm sleep. Sometimes a 4th impulse with 1st venience at first sound.	Loss of cons., like fol. by 1 or 2 pair calm sleep. Not followed by any incon. Impulse with 1st venience at first sound.	15 attacks in 18 months.	Late depression for half a day after attacks. Died suddenly. Slight convulsion of face	Narrowing of vertebral canal with prominence of also physis suff. to cause some comp. of r. side of protuberance and bulb.		
10. Tripiet, Lyon Med. vol. XLIII.		60 60 to 12		Epilepsy.			Completely negative		
11. Gibbings, Lancet, 1881, Feb. 11	M. 66	Intermittent ever since he can remember 44-12	No evidence of disease	1st indication of recurrence failure of the head, then epileptiform, face pale. Patient had an aneur.	Anxiety, worry	Improvement re-lapse, fainting, death	Arteries remark at ably free from atheroma. Valves and muscular walls healthy. Coronaries previous	Other organs normal	Autopsy by Moxon atrophied (did not grow)
12. Claylaugh, N. Y. Med. J. 1880.	F. 59	40	Palpitation.	Epileptoid	Bronchitis (Grippe?)	Better than usual, 2 or 3 days. Died suddenly.	Novely dis. Coronary deposits throughout its course. (See last column)		Roof of arch of aorta chronically inflamed. Small calcareous patches in aorta. Pulmonary vein acutely inflamed.

TABLE I (continued).
Cases of permanent slow pulse with nervous syncope or dyspneic paroxysms, in which autopsies were made

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin of early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
13	Sendler Chl. f. Klin. Med. 1892, p. 612.	F. 55	60-77-24-22	Systolic murmur	Fainting fits.	Gen'l debility and fainting fits 6 mos. 30.	Increased pulse to beat large, imbedded in fat. Myocard flabby. Valves norm. Narrowing of pulm. artery by fibroma.		Well brain congested.	
14	Haude & Lurot Soc. Méd. des Hôp. de Paris, 1890.	M. 72	Diag. of slow pulse; 36.	Some "faux pas."	Vertigo, some times unconscious, a few times convulsions.	Not good habits. Sudden attack in 2 syncope, some consciousness. Con- times loss of consciousness. Sudden death.	Frequent vertigo. Sudden attack in 2 syncope, some consciousness. Con- times loss of consciousness. Sudden death.	General atheroma of pulm. artery by fibroma.	Induration of small vessels in cerebral hem.	
15	Sirady Soc. Méd. des Hôp. de Paris, 1890.	M. 68	60-72-28		Epileptiform.			General arterio-sclerosis.	Carotids and arteries at base hard. No lesion of cerebrum. Cerebellum on cord. Both manifestly congested.	
16	Adams Publ. Hosp. Rep. 1877, Vol. IV.	M. 68	Usually 30. Slower than usual in attacks.	Oppression in breathing	Apoplectiform. Complete insensibility. No paralysis.	Athletic. Sudden faintness when walking.	Improvement. Col- lapse. Intermittent pulse. Died 3 days later.	At least 20 attacks in 7 years. Died in one. R. aur. much dil. Aortic valves thickened. R. ventr. fatty. Ven. very thin, covered with fat. Fat degen- coronaries normal. In ven. sl. hypert. Streaked with fat at one point near apex. Small patch atheroma. 1st part aorta.		
17	Robson Lancet, March 27 1897.	M. 38	70-24-20	Normal.	Faintness. Brief loss of cons. Slight tonic spasms.	Temperate, not fat. Winter cough, last two winters worse. Dyspnea.	Died suddenly. Syncope.	Larger than nat. Fat on surface walls of ventr. soft and friable. Aorta atheromatous. R. coronary esp.		
18	Parkes and Cadger Oman Med. Chir. Trans. XXXIII	M. 51	30 irregular	Slight, eulargement. 1st sound muf- fled.	Faintings, extreme short. Both muf- fled.	Fainting fits, frequent for 6 weeks.	Anemic.	Fibrous deposits in m. with L. cavity dil. wall atrophied. Columnar carneæ atrophied.		
19	Bence Jones Fr. Path. Soc. vol. VIII.	M. 53	Feeble 36-28	Sounds distant. Impulse feeble.	Fainting fits; some spasmodic action. Not perfectly insens.	Anemic.	Anemic.	Fibrous deposits in m. with L. cavity dil. wall atrophied. Columnar carneæ atrophied.		
20	Ugler Fr. Path. Soc. vol. VIII.	M. 40	48 Reg.	Action feeble. Sounds distant muffled.	Epileptic attacks.	Had had rheuma- tic fever following diarrhoea, epileptic attacks.	Anemic.	Fibrous deposits in m. with L. cavity dil. wall atrophied. Columnar carneæ atrophied.		
21	Regnard, Case 12. These. de Paris. 1890, p. 100.	M. 55	26	Sounds normal.	Vertigo, loss of consciousness, con- vulsions.	For four years ver- tigo, loss of cons. leptic attack with p. and respiration. followed by general in- convulsions.	Fatty overgrowth. Degeneration. Coronaries narrowed and atheromatous.		Edema of brain.	
22	Regnard, Case 16.	M. 20	25	Hypertrophy. Impulse violent. no souffle.	Dyspneic, anginous, syncope.	Infantile paraly- sis; drunken dyspneic attack; sarcomatous syn- copal attacks.	Died in syncope.	Fibrous deposits in m. with L. cavity dil. wall atrophied. Columnar carneæ atrophied.	Brain (carefully examined) normal.	
23	Regnard, Case 19.	M. 60	20	P. small, average tension and force less.	Loss of consciousness.	For 6 years loss of consciousness with respiration; edema of glottis and convulsions.	Death by arrest of hypert. and dil. with chronic debility. Endarteritis, coronaries dilated but healthy.		Thickening and dilatation of vessels at base of brain.	

TABLE I (continued).

Cases of permanent slow pulse with nervous syncopal or dyspneic paroxysms, in which autopsies were made.

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
32	Jona Riv Ven d Med 1898	M 46	26-30-22	Friction sound, sounds distant; dull. More frequent than radial, almost exactly double.	Epileptiform. Cyanosis. Extreme dilatation of pupils, came afflicted with dyspnea, oppression, prostration.	P. in health 75. Became afflicted with severe attack	Died in unusually	Rough patches on pericardium, 1 vent. sl. distended walls hypertrophied. Sl thickening of aortic valves. Mitral stenosis. Coronary No atheroma anywhere; some scleroses cardiac muscle.	Slight edema of brain	
33	Cornil Gaz des Hop 1875 p 500	M 75	25-30	Heart same	Dyspnea, some convulsive movements. Consciousness lost sometimes lost.	Weak. Emphysema and bronchial catarrh.	Lost appetite. Vom pale.	Size normal; no lesion orifices; complete fatty degeneration. Aorta and valves sl. atheroma tons.	Brain pale. Adhesions of dura mater of pancreas	Fatty degeneration of pancreas
34	Worthington Lancet 1890 II, 2, 326	M 65	75-80 or less		Dyspnea prostration.		Died in unusually severe attack.	Fatty. Valves normal.		

TABLE II.

Cases of slow pulse, without well marked paroxysms, in which postmortems were made.

35	Goddard Rogers, Canstatt's Jbb. 1877, p 199.		18-28					Cicatrices in septum.		
36	Veo Lancet. 1872, p 913.	M 45	36	Apex (open) in natural position. Loud systolic murmur, then 2 short sounds.				Pericardium uniformly adherent; mitral stenosis; aortic valves thickened; heart flabby. Right ventricle thin.		
37	Spencer, Prentiss, Case 37 Boston Med. and Surg. J 1881.	M 50	Much slower than normal.		Accident, fell on neck and head	Complete sensory and motor paralysis below head. Died in 18 hours.			Dislocation between 2nd and 3rd cervical vertebrae.	
38	Abercrombie, Case CXVIII Dis. of brain and cord.	M. Soldier	Slow languid.		Pain in back of head; giddiness; violent headache.				Vessels of cerebellum turgid. Coagulum under cerebellum	
39	Abercrombie, Prentiss, Case XXIV	F. 6	30-40		Headache and right side convulsed				Hydrocephalus and tubercles in left cere-brum.	
40	Bright's Med. Reports 35, Prentiss, p 135, XXV	M 49	39-42 Later 11-78		Had had blows on head; headache.	Giddy, wandering, drowsy.	Heart small; valves normal.		Brain adherent at right temple and indurated in spots	

TABLE II [continued].

Cases of slow pulse, without well marked paroxysms, in which postmortems were made.

No.	Reported by	Sex and age	Pulse.	Heart	Paroxysms	Origin or early symptoms.	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
11	Abercrombie, pp. 89, Prentiss, Case XXVIII	16 months	Remarkably slow.			Injury to back of neck.	Paralysis; convulsions. Died in fit.		Fluid in the ventricles. Abscess at summit of medulla where it was crossed by the pons.	
12	Prentiss, Case XXIX	M. 17	18		Respiration 13.				Fracture between 11th and 5th cervical.	
13	Prentiss, Case XXX	M. 20	10-50			Fall; Complete paralysis.	Lived 3 days		Fracture 5th cervical. Compression of cord with sanguinolent striae.	
14	Schuh, Med. Gaz. vol. 28, pp. 396, Prentiss, Case XXXIII	M. 35	30			Fall, neck deformed, painful. Died on 12th day.			Luxation between 11th and 6th cervical	
15	Schuh, Med. Gaz. vol. 24, Prentiss, Case XXXIV	M. 35	Feeble and slow.		Respiration feeble and slow.	Fall, palsied.			Luxation between 5th and 6th cervical softening of medulla.	
16	Abercrombie, pp. 204, Prentiss, Case XXXV	M. 35	30-40 Shortly before death.			Gradually palsied 2 years. Sight and right limbs; short time before death pulse and respiration became slow lost speech and power of swallowing.	Atrophy of two years. Sight and right limbs; short time before death pulse and respiration became slow lost speech and power of swallowing.		Brain and viscera most healthy; cervical cord hard and like cartilage. Membranes red.	This seems to have been subacute anterior poliomyelitis with bulbar paralysis.
17	Nieden Tr. Clin. Soc. London; vol. VI., pp. 75.	M. 60	Gradually fell to 40.			Fall down stairs. Progressive lowering of pulse and fluid blood. Complete paralysis, lower extremities, chest and greater part of trunk.	Distended with blood.		Dislocation without fracture of 1st dorsal; compression of corresponding portion spinal cord.	
18	Stokes, case 2 Dub. Quart., 1846, pp. 75.	M. 50	Very slow.	Valvular murmurs.		Anemic.	Death apparently from syncope.	Aortic valves thickened; ventricle soft and flabby; covered by very thick layer of fat.		
19	Deboise, Soc. Méd. Hôp. de Paris, 1888, pp. 111.		32		Nothing said of an epileptiform attack				Bulb perfectly healthy. Examination of pneumogastric nuclei—nothing abnormal.	
20	Hutchinson Lond. Hosp. Rep., 1866.		40					Fracture of cervical spine.		
21	Tyrrell, Lond. Med. and Phys. Journal.	M. 24	10-55-70-85 20			Fracture 4th cervical. Small clot on cerebellum; supraclavicular nerves involved in clotted blood.			Blood on surface of dura extravasation in cord.	
22	Pope, Veterinarian 1845.	Horse	10	Strong bounding rattle which made lug and horse fell whole chest shake down.			Killed		Dropsy of spine in cervical region.	

TABLE III.
Cases of slow pulse, with or without paroxysms, resulting fatally, but in which no autopsies were made

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
33	Crocker Brit. Med. J. vol 2, 1873, pp. 168	M. 67	32-34 28		Faintness and indigestion.		Died suddenly.			
51	Bull. Acad. Roy. de Med.	F. 45	18-36	Normal.	Epileptiform.		Died in epileptic form attack.			
55	Brit. Med. 1880, vol 1, p. 114.	M. 52	22		Prolonged fainting fits.		Fell dead after some slight excitement.			
56	W. Henry Day Brit. Med. J. 1880 vol. 1, p. 115.	M. 70	22	For 4 minutes beat 4 times a minute convulsive fits.	Tendency to syncope convulsive fits.	Pulse has been for 9 months 22 full frequency. Died ex fairly strong and regular.	Fits increased in frequency. Died ex fairly strong and regular.			
57	Boyer. Brit. Med. J. 1884 page 135.	M. 58	21-11		Convulsions.		Violent pain in head. Syphilis. Fell in convulsions, tonic on pulse totally absent and clonic spasms. 15 seconds. Death.			
58	Trunet de Fon- tance Schmidt's Jhb. 187-188.		12-11		Apoplectic form.		Died suddenly.			
59	Strüling. Deutsche Med. Woch. 1894 Given in more detail in text.	M. 15	10-12-11 12	At last a systolic murmur developed.	Vertigo, fainting.		Died.			
60	Strüling.	M. 70	70-40	Weakness of heart. Dil. Slight mitral systolic murmur		Rheumatism severe. Death in several times.				
61	Strüling	M. 18	40-32 25-24		Vertigo, general depression. Temp below normal. Loss of consciousness.	Improvement after several hrs. time comfortably if pulse 25-24. Died in about a year.				
62	Tripier. Med. Revue de 1884 and 1885.	F. 61	21-10	Occasional faint spasms. Small second heart. 1.2-1.2	Epileptiform and cerebral attacks.	Cachectic. Probably organic disease of stomach.	Death.			
63	Regnard. These de Paris. 1889-1890. Case 21.	F. 65	25-28	Diag. fatty degeneration.	Freq. convulsions, p. 54.	With tonics pulse up to 35. pseudo-epileptic at two years carried back.	Died in fields in pseudo-epileptic attack.			
64	Rotureau. Union Med. 1870, p. 331.	M. 72	18-28-18-16	No other heart signs.	Syncope.	Much disturbed by losing office.	Died.			
65	Huchard. Arch. Gen. 1885, p. 257, abs. 1	M. 51	40-20	1st sound long and vibratory followed by 2 incomplete systoles. Intermitting and irregular.	Vertigo and prolonged syncope with convulsive movements and slow pulse.	After 6 or 8 weeks, in one day pulse went down to 24. Varied up to 40 or 60.	Death.			
66	Huchard, Potain. Arch. Gen. 1885, p. 257.	M.	Very low	Slight weakness to which attached no importance.		Appeared well.	Died suddenly in office.			
67	Huchard, Potain. Arch. Gen. 1885, pp. 257.			Fatigue and fainting on trying to make toilet.		Face got pale and pulse completely disappeared.	Died suddenly.			

TO BE CONTINUED

The Philadelphia Medical Journal

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Pregnancy and Small-pox.—The recent observations of Roger constitute a valuable addition to our knowledge of the placental transmission of disease to the fetus. It is now generally admitted that there are certain maternal diseases which affect the embryo and fetus, resulting either in the death of the latter or in the clinical manifestations of the disease immediately or shortly after the birth of the child. Antenatal and congenital syphilis is the most striking instance of the kind. For quite a long period the transmission of tuberculosis in this manner was denied, but recent careful investigators, Lehmann, Neil, Kynoch, Charrin, and others, have definitely settled the possibility of tuberculous infection of the fetus. Roger now gives an interesting review of a series of cases in eleven pregnant women observed by him in his small-pox service at Aubervilliers, all of whom gave birth to children who appeared to be absolutely well, but who all presented marked subnormal temperature, in one instance 28°C ., in another 30°C ., and in another 31°C . Seven of the children shortly developed marked manifestations of small-pox, the symptoms appearing in a typical manner, beginning with an elevation of temperature, followed by the characteristic cutaneous eruption; three of the remaining four showed intense infection, the only symptoms being jaundice and subnormal temperature, with death four, six, and eleven days subsequent to birth. One child developed a scarlatiniform eruption, and only one of the eleven survived, the others dying in from two to three days after the development of the eruption. A more interesting and instructive series of observations could not be reported. From the accumulated literature on the subject of transmission of disease through the placenta from the mother to the child, it is evident that next to syphilis the exanthemata are most prone to affect the fetus *in utero*. It is also interesting to note that the association of the disease with the pregnant condition reacts unfavorably upon the mother. Maternal death is not infrequent under these circumstances, and in every instance in which a fatal termination does not supervene the mother passes through a most critical illness.

The mode of entrance of the morbid agent into the fetoplacental circulation is as yet a disputed question. It is probable, however, that access is gained through bacterial action, the germs rendering the placental villi less resistant to invasion, whereby both the microbes and their toxins pass the natural barrier at the choriodecidual junction. A curious fact which has been repeatedly proven on the autopsy table is that, as a rule, the infectious diseases do not manifest their characteristic visceral lesions in the fetus, probably because of the passivity of these organs during antenatal existence. The germs, however, may be detected in large numbers by bacteriological and microscopic examination. Such reports as that given by Roger cannot be too highly commended, inasmuch as they add to the meagre literature of what is evidently a most important but as yet imperfectly understood chapter of medicine.

Immunity in Typhoid Fever.—The subject of bacteriolysis and immunity, has of late been receiving its due share of attention. Dr. Mark W. Richardson, of Boston, has recently completed his studies upon this subject, dealing especially with typhoid fever. He has observed the effects upon the typhoid bacilli of typhoid blood-serum alone, and in combination with normal blood-serum. His investigations of the blood-serum of 41 typhoid patients were made at various stages of the disease and during convalescence, for the purpose of determining whether the blood-serum of typhoid patients is markedly antagonistic to the growth of the typhoid organism, and if not, whether the addition of normal serum would increase its power. Richardson acknowledges his indebtedness to Bordet and Ehrlich for the suggestion of adding normal serum which they used in producing their so-called hemolytic serum. Richardson concludes that nature produces a cure in typhoid fever through bacterial agents acting upon the specific organisms. These agents are produced especially by the cells of the lymphatic system, and appear in the blood in varying amounts. He makes the interesting observations that these protecting agents are at least two in number, one being a specific immune element and

the other a non-specific element or ferment. The function of the immune element is to bind the complement, or ferment, to the bacterial cell which is then destroyed. In order that recovery may take place, it is necessary that both the immune body and the complement be present together for them to be active, and this is not the case in the earlier and middle stages of the disease when the immune body alone is present. It is in the stage of convalescence that the normal element returns to the blood and the bacteriolytic action upon the bacilli begins. Richardson presents the theory that since this marked destruction of bacilli must set free an excess of typhoid-toxin contained within the bodies of the bacteria, this may be a possible explanation of the marked remission of temperature seen clinically during the fourth week of the disease. The addition of the normal serum to the inactive serum of the typhoid patient, tends to make that serum more powerful and to resemble the serum of the fourth week of the disease. Consequently Richardson states on theoretic grounds, that we should be justified in treating patients in the early stages of the disease with normal serum. An objection to this may be found in that in some cases the patient's blood will lack both the immune and normal elements. Some of these will have to be supplied. The blood of a normal individual may possess a destructive power upon the typhoid bacilli, due undoubtedly to substances similar to those found in typhoid serum. As Richardson states, the principles which he believes to hold true in the case of typhoid fever, may be true also of other diseases, and the field offers a most promising one for original research.

The Relation Between Gastric Conditions and Psychic States.—It is generally believed, at least by the laity, that a satisfactory condition of the stomach is conducive to mental quiet. Pron, in his *Paris Thesis*, calls attention to the close anatomical relation between the stomach and the central nervous system. This relation with the brain, he states, is direct and with the spinal cord is indirect through the sympathetic system. We should be inclined to criticize this statement of the anatomical connection and rather to state that the relation with the brain is direct through the pneumogastric nerve and with the cord is more indirect through the sympathetic nerve. However, the author may hold the opinion that the pneumogastric nerve is a part of the sympathetic system. This more or less direct union of the central nervous system and the stomach may serve as an explanation of the action of the solar plexus upon the psychic functions in health and in diseased states. Each variety of food makes a characteristic impression on the solar plexus,

through its terminal branches in the gastric mucous membrane, which is immediately transmitted to the brain. Hunger produces certain slight impressions in a healthy man; in certain dyspeptics hunger is exaggerated, and the absence of food renders the subject incapable of the least intellectual work and produces marked changes in his character. Fasting determines the appearance of hallucinations and of dreams relating to the act of eating. Inanition may produce delirium and insanity. Dyspepsia, all the different symptoms of which are governed by the solar plexus, which favors bad hereditary equilibrium of the nervous system, may produce serious psychical troubles that are at first intermittent, and later, continuous. The theory of autointoxication is powerless to explain certain of these troubles, which appear and disappear suddenly. And furthermore, authorities are not agreed upon the value that should be placed upon the toxicity of the gastric contents of dyspeptics. On the other hand, the reflex theory explains almost all the morbid phenomena; it is, furthermore, in accord with the development of the disease as well as of its course, which consists essentially in intermittent and periodic phenomena. We thus find that there are two theories advanced to account for the mental state of dyspeptics: one, the autointoxication theory, and the other, the reflex theory advanced by Pron (*Gaz. Heb. de Med. et de Chirur.*, June 2, 1901). It seems to us that neither theory is proved, but the rôle of the absorption of toxic substances is being more and more believed in as the cause of cerebral disturbances, and the reflex theory which has so long been accepted is gradually being replaced.

Gasterine.—Le Gendre first suggested the use of the pure secretion of the dog's stomach in therapeutics. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, January 26, 1900.) Later Frémont, of Vichy, managed to prepare the drug, under the name of gasterine. Le Gendre (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, June 27, 1901) has used it in chronic dyspepsia when there is little or no pepsin present, with good results. It has been especially useful in vague prolonged cases of gastritis, in doses of from 4 to 6 tablespoonfuls daily. He has also employed gasterine in post-operative indigestion, in the gastric disturbances of pregnancy or abortion, and in mucomembranous enterocolitis. Sarrade stated that when the liver was large or there was great thirst, gasterine acted well. Daudé found much improvement following its use in a case of chronic hepatitis with persistent diarrhea. Rendu reported a case of gastric intolerance following pleurisy with thoracentesis, cured by gasterine. Frémont reported a case

of chronic enteritis due to insufficiency of the gastric juice, also cured by gasterine. Albert Mathieu and Laboulais (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 4, 1901) report in full 9 out of the 15 cases which they have treated with gasterine. There was hypochlorhydria in all. Two patients who had hyperchlorhydria could not take gasterine, as it caused burning, eructation, and vomiting. The authors believe that when no improvement follows its use, in cases with marked hypochlorhydria, cancer of the stomach is to be suspected. Diarrhea disappears as soon as gasterine is employed. They conclude that gasterine causes great digestive improvement in hypochlorhydric dyspepsia, whether neurasthenic in type or not. If it is well tolerated, it may produce temporary amelioration in cancer of the stomach. Their analysis showed that gasterine contains from 3 to 3.5 g. of free hydrochloric acid to the 1000. Gasterine acts not so much by replacing the gastric juice, as by stimulating pancreatic secretion. Soupault thinks that diarrhea due to gastric insufficiency, when treated with hydrochloric acid alone, will be cured in the same manner as by employing gasterine. All investigators agree in pronouncing gasterine a useful drug.

Yellow Fever Experiments.—It is reported that three deaths have occurred from yellow fever experiments in Cuba. This is, of course, most deplorable. The fact that these deaths demonstrate the truth of a scientific theorem is not sufficient compensation for them—although this truth is pregnant with consequences of the greatest moment to the human race, and is probably as well worth a human sacrifice as many another and less worthy cause that does not scruple to boast of its human martyrdoms. It is a source of supreme satisfaction to know that these deaths were entirely voluntary; that is, that the unfortunate victims were forewarned of the danger, and took the risks deliberately with the intention of securing immunity.

Major Gorgas is quoted as stating that the Sanitary Department is ready to immunize any person who desires to undergo the risk after a full explanation of it has been made. The conclusion is accepted (and the fact seems only too fully proved by these recent deaths) that the poison of yellow fever, whatever it is, can be conveyed by the mosquito. Certainly no further proof that calls for the sacrifice of human life, is required, and no further experiments on human beings should be tolerated—merely as experiments. In order to secure immunity, however, the case is different; and ethically is on a similar plane to the older method of inoculation for smallpox. That method was not only tolerated but

advised before the introduction of vaccination. It was based on the principle of choosing the lesser of the two evils. The person who submits to an infection with yellow fever from the mosquito stands a better chance, according to Major Gorgas, than the one who contracts the disease in the ordinary course, as the former receives care from the beginning.

fooling with Leprosy.—On quite a different plane, however, stands the enterprise of the St. Louis physician who is reported as intending to isolate himself with a leper in order to study leprosy. At last accounts he had taken a dramatic farewell of his family forever, and was about to immolate himself (figuratively) on the altar of science. We should like to tell him, if he were within ear-shot of us, that science does not want his sacrifice and will not be responsible for his folly. We have had enough of the Father Damien business. There is no need for it; and what is worse, it is not only fruitless but it is downright mischievous. Such a method of studying leprosy, or of caring for lepers, is quixotic in the extreme. It tends to make a mystery of the disease, and is barren of scientific results. That it causes the death of a fanatic or two is not of so much consequence as that it misleads public opinion as to the true methods of scientific medicine and hygiene.

More "Medical Chemistry."—A bulletin on bee-keeping, issued recently by the Pennsylvania Department of Agriculture, contains some peculiar information on physiological chemistry. After stating that the annual consumption of cane sugar in this country is sixty pounds per head per year, the following outline of the dietetic relations of this substance and honey is given.

"Excessive use of sugar has in its train a long list of ills, such as sour stomach and various forms of dyspepsia; it is also credited with being one of the causes of that dread visitant, Bright's disease of the kidneys. When cane sugar is eaten, it is changed into grape sugar by digestion before it can be assimilated. If too much of this work is thrown upon the stomach, it rebels and the work is passed over to the kidneys. If the kidneys are overtaken there is no other organ to which the work can be transferred, and a breakdown is the result."

It is further stated that honey contains grape sugar and by its use, therefore, no hard burden is brought upon the stomach or kidneys.

It is a pity that the author of the bulletin, who, by the way, has the title "Dr.," did not limit himself to explaining the establishment and management of hives, a topic with which he is evidently familiar. In a bulletin of this character, there is no occasion

for a dissertation on physiology or chemistry, but if such is introduced, it should be written in accordance with the known principles of the sciences involved.

The author seems to be ignorant of the fact that grape sugar is not invert-sugar, and to be also unaware that honey contains much matter other than sugar. It is also a question whether a material prepared by insects with uncleanly habits is suitable for food. Some claim is made in the bulletin for the high value of honey as a substitute for cane sugar, and even for butter, but this is only suggested and, very wisely, not put strongly.

Sister-in-Law Statistics.—There is no more convincing argument than an array of imposing figures presented to sustain or overthrow an asserted fact. Much of our accepted teaching is based on such numerical proof. There is, however, a growing tendency to gather much material that can have no statistical, or, as far as we can see, other value to science. The truthfulness of this statement has been rather forcefully brought to our attention by a recent series of questions issued by the Committee of Health Statistics of the Alumni Association of one of our most prominent and useful colleges for young ladies. No doubt the object of these questions was a laudable desire to ascertain the influence of college life upon the subsequent health of the student. We can readily appreciate the importance of a knowledge of a girl's general health and of the condition of her eyesight at different periods prior to and subsequent to the college course. Also, as to whether or not nervousness or insomnia had been noted before, during, or after the college life. There is, likewise, much interesting and valuable information to be derived from the menstrual histories of these girls before and after taking a college course. It is difficult, however, to appreciate the value of an accurate knowledge of the condition of health of the husband's relatives, especially as concerns "chronic catarrh," "malaria," "insanity," "brain-paralysis," "spinal-cord paralysis," and "rheumatism," it being necessary, as stated in the question, to specify which form of the latter the individual suffered from.

The knowledge of medical subjects that would be necessary to answer definitely such questions would tax the brain-energies of many second and third-year medical students, and would betray a morbid curiosity on the part of a young married woman. Again, it is most perplexing to establish any relationship whatever between the menstrual or general health of a school girl or college graduate and the uterine disorders of her husband's female relatives. This method of

transmission of disease, if such were possible, could hardly be included under the headings of continuity or contiguity of tissue, and surely not under the toxemias or blood-disorders, while heredity has no bearing at all upon the question. The height of unconscious irony seems to have been attained in the final paragraph of the pamphlet, a copy of which was sent, we understand, to each and every accessible graduate and undergraduate of the college mentioned. We quote: "If the answers to these questions do not appear to you to include all the important facts which should be taken into consideration in your own case, please add here any further statement which you may think desirable." Here might be included the varying conditions of health of casual friends and acquaintances, in order to complete the history of the student's physical condition. *Reductio ad absurdum.* We most heartily endorse the formulating of statistical tables of value, but we would urge the exercise of judgment in gathering data.

The Signs of Cavity Formation in Cases of Pneumonia Following Influenza.—The clinician is often much worried by the development of pulmonary complications during an attack of influenza in which the suggestion of a beginning tuberculosis can hardly be put aside. In some of these cases physical examination elicits signs that seem to indicate the presence of a cavity. Neumager (*Gaz. Heb. de Med. et de Chirur.*, May 12, 1901) calls attention to the fact that the progress of a case of influenzal pneumonia is not frank, that its onset is often insidious, and that convalescence is very slow and is accompanied by frequent and abundant sweats, asthenia and rapid emaciation. The diagnosis between tuberculous cavities and the pseudocavities of influenzal pneumonia is aided by the fact that the former develop slowly, whilst the latter are of rapid evolution, sometimes making their appearance within twenty-four hours. The signs of a true cavity often change their location and are likely to disappear after several days. If a genuine tuberculous cavity exists, the abundant, purulent and nummular expectoration will contain the bacillus of Koch. On the contrary, this bacillus is not present in the expectoration from a pseudocavity, and, indeed, the expectoration soon ceases. The cachectic appearance of a phthisical patient is not seen in one who presents the signs of pseudocavity formation, even when those signs persist for a long time after the pneumonia is cured. Signs of pseudocavity are accompanied by an irregular temperature, but more frequently by hypothermia, whilst the signs of true cavity are almost always accompanied by hyperthermia. The beginning of the affection, its course, the

pneumonic fever which will accompany the appearance of the signs of pseudocavity, the knowledge of an epidemic of influenza or of some concurrent cases of influenza, usually permit of a definite differentiation of the signs of pseudocavity from those of a true tuberculous excavation.

The Treatment of Malaria with Methylene Blue.—A. Ivanoff (*Moscow Dissertation; Trutch, Vol. XXII, No. 15*) found that methylene blue has the same specific effect on malaria as quinine, being however, less rapid in its action. In cases in which quinine failed, methylene blue proved curative and vice versa. The tertian form is the most readily influenced by the drug. The methylene blue destroys the protoplasm of the plasmodia without affecting the pigment. It also acts well on the nervous manifestations of malaria. The dose is 1 grm. 3 times a day, in capsules. [A. R.]

The Role of the Gonococcus and Gonotoxin in the Production of Gonorrheal Inflammations.—Z. V. Sovinsky (*S. Petersburg Dissertation, 1901; Trutch, Vol. 22, No. 16*) gives the following conclusions based on experimental work on the subject: (1) Injections of gonotoxin subcutaneously, into the cavities of the uterine horns, into the anterior chamber of the eye, conjunctival sack and abdominal cavity may cause pus formation; (2) The bodies of the gonococci possess slight pus forming properties; (3) Prolonged heating above 65°C. destroys the pus forming elements; (4) The addition of antiseptics to the cultures weakens the pus forming elements; (5) Concentration of a disinfected culture in vacuo has the same effect; (6) Gonotoxin is destroyed in the animal body. The pus formed within the cavity of the uterus has a tendency to become absorbed in time; (7) Gonotoxin diminishes in a large measure the resistance of the tissues; (8) The pus-forming organisms (the white streptococcus, the colon bacillus and the bacillus pyocyaneus) may prolong the duration of gonorrheal infection; (9) The chronic cases of gonorrhea cannot be explained by the action of gonotoxin which remained inclosed in a cavity. The living gonococci must be present, or the disease may be kept up by the other pus-forming cocci, but in that case it loses its specific nature; (10) Gonotoxin may be preserved in a cool place for a long time without losing its virulence. [A. R.]

The Surgical Treatment of Enteroptosis.—Dr. E. Lambotte discusses enteroptosis for enteroptosis, reporting four cases in the *Presse Medicale Belge* (1901, Nos. 24, 25, and 26.) He first performed this operation in October, 1895. It is rarely done because the diagnosis of enteroptosis is not easily made, and there may be ptosis of several of the other abdominal viscera besides. All other operations devised for this have been unsuccessful, except gastroenterostomy, gastroplication, and gastropexy, all three in the gastric form of enteroptosis. In most cases the splenic and hepatic flexures, one or both, are detached, and the meso-colon is elongated. Some venous stasis may be noticed in the most dependent part of the mesentery. Lambotte's cases were a boy of 10, and three women aged 33, 41, and 38 years. Glénard's great sign, the narrow colon felt as a cord upon the descending aorta, is by no means constant. Constipation occurred, with attacks of intestinal colic, beside the general symptoms of enteroptosis. For operation, the patient should lie upon her back, never in the Trendelenburg position until after the abdomen has been opened, and the position of the intestines noted. A median incision is made, and the intestines found. The colon is then attached by suture, at both splenic and hepatic flexures, to the abdominal wall, and the abdomen is closed. The patient is kept on her back for two weeks, the sutures being removed about the eighth or tenth day. His four operations were performed from two to four years ago, and all are as yet perfectly well. [M. O.]

Reviews.

Diseases of the Heart, A Clinical Text-Book for the Use of Students and Practitioners of Medicine. By Edmund Henry Colbeck, B. A., M. D., Cantab.; M. R. C. P., London; D. P. H., Cantab.; Physician to Out-Patients at the City of London Hospital for Diseases of the Chest, etc., etc. Methuen & Co. 36 Essex street, W. C. London. 1901.

Dr. Colbeck in his preface says "I should have profited more . . . had I possessed a better knowledge of the elementary and fundamental bedside features of cardio-vascular disease. It seemed to me at this time, and it does so still, that a book dealing with the clinical side of the subject of Heart Disease in a form suitable to the requirements of the student and newly qualified practitioner of medicine, would prove of very great service."

To write a book that shall have the merits of a Sanson, or a Broadbent, and be concise enough to be read by the student and busy practitioner and escape the glaring defects of a compend, is a most difficult task. Dr. Colbeck has succeeded admirably in his work, for while in certain portions of his excellent book the tone and conciseness of his sentences savor somewhat of a compend, this feature is rather to be commended than adversely criticised, because on every page and in every paragraph there are explanations enough to show the reasons for the somewhat dictatorial statements.

The arrangement of the chapters is good, leaving nothing to be desired except in one or two instances which will be noted, so that the reader, by a mere reading of the headings of chapters can easily find an account of the particular conditions he desires to look up. Add to this the excellent index and there is nothing left undone in the matter of convenience to the reader.

The volume has an excellent and attractive dress, the press work is of the first order, the publishers are to be congratulated upon this feature.

Among the particularly good statements contained in the book are the following:

Page 6: The areas of both the deep and superficial cardiac dulness are plainly set forth, and while the limits of these areas may not be concurred in by all observers as they are not by the reviewer, it is refreshing to see printed some statement as to the limits of these areas. Each individual I believe has a different conception, within certain limits as to the exact positions of the borders of the areas, and the various books on physical diagnosis published in this country do not throw much light on the subject.

Page 16: Methods of Diagnosis. The whole chapter is excellent. It shows to him who seeks for truth the only possible way in which an accurate diagnosis can be made. The author insists on a *history* of each case, embracing the symptoms and the cause, and then a physical examination of the patient. His statement that Inspection, Palpation, Percussion and Auscultation should be used in every case and in the order named, will be heartily approved by every teacher.

Page 32: The description of the method of differentiation between venous and arterial pulsations in the neck is clear and concise.

Pages 35 and 36. He insists on the value of the locations of the apex beat, in this as in all his remarks, showing the value of careful painstaking observation of ordinary signs so often overlooked in examinations of the heart, in the vain search for a cardiac murmur. The description of murmurs which begins on page 53, is most clear and he must be dull indeed who is confused and not charmed and enlightened by reading the chapters. One remark alone, page 61, "Unless considered in the light of previous observations, the loudness of a murmur is of little diagnostic or prognostic value," is worth the reading of the entire book, if its truth may be fully appreciated.

On page 143, he insists that in all cases which have manifestations of the rheumatic state such as arthritis, erythema, tonsillitis, etc., etc., the heart should be carefully and

repeatedly examined. How frequently this precaution is not taken by the practitioner.

On page 179, he says, "it is the effect of the murmur on the first sound of the heart on which attention should be mainly directed." A most wise admonition.

On page 201 the description of what in this country is called Flint's murmur, is made in concise sentences, as a part of the description of the murmur of aortic insufficiency, as it should be, and not talked of as a sound apart from one of the two great divisions of murmurs, diastolic and systolic.

On page 210, the author calls attention in an unmistakable way to the fact that a systolic murmur at the aortic cartilage is not indicative of aortic murmur in the great majority of cases, a fact constantly misunderstood by students.

On page 231 the paragraphs upon "The Conditions of the Cardiac Muscle" are excellent. It appears to the reviewer that they should have been placed first instead of fourth in order in the chapter.

The chapter on Functional Disorder of the Heart, is very properly the last in the book; it is excellently written. Among the less praiseworthy points in the book may be mentioned the following:

Page 11, the apex beat is described as in relation to the nipple line, surely not so accurate or stationary a point as the midclavicular line.

On page 20, the sentence, "Persons are more liable to suffer from the rheumatic manifestations of heart disease than other people" means certainly cardiac manifestations of rheumatic states.

On page 30, the statement is made that visible epigastric pulsation commonly means either enlargement of the right ventricle, or displacement downwards of the heart, and that accidental causes of epigastric pulse are neurotic pulsation of aorta, etc.

The reviewer believes that epigastric pulsation is much more commonly due to these so-called accidental causes than it is due to any organic change in the heart and that the statement in the book will lead to the error of a diagnosis of some organic disease when some functional disturbance only is present.

On page 48, myocarditis should be added as an important element to the list of causes of "Shortness of the left ventricular first sound, with diminution of intensity."

On page 72, the fact that the "bruit-de-diabie" disappears when the patient lies down is not noted.

On page 149 the impression is given that malignant endocarditis is very seldom seen as a primary disease, when as a matter of fact it quite commonly so occurs. He fails to mention the very great value of a blood count in the differential diagnosis of the conditions. Frequently a decided leucocytosis or its absence is the deciding point for or against a diagnosis of malignant endocarditis.

On page 175 the obvious error is made that the area of cardiac dulness is increased more to the right than to the left in mitral incompetence. Certainly the line extends much toward the left and is only increased to the right when the right heart begins to fail. The statement on page 169 that compensation in mitral incompetence is chiefly effected by a hypertrophy of the right ventricle will scarcely be agreed to by most observers.

On page 188 the term post-systolic is applied to a diastolic murmur as it is throughout the work. In this country the term post-systolic (Griffith) is applied to a late systolic murmur.

It will be noted in reading the descriptions of the various valvular lesions that a palpable thrill is described in each. Thrills doubtless can occasionally be observed in all lesions, but except in mitral stenosis they are certainly rare. To describe them as common is to lead to error.

In the chapters on treatment, the great value of the hypodermic use of drugs as compared with administration by the mouth is not noticed, nor is the extreme value of morphin hypodermically in some conditions given due weight.

In a work of this character it seems improper to devote forty pages to the especial consideration of hypertrophy and dilatation of the heart, when they could better be discussed when treating of valvular diseases, their chief cause.

On the whole the book is of very great value. The profession must always be indebted to its author for its clearness and conciseness and to the publishers for the quality of the press work. [M. H. F.]

Correspondence.

EAR, NOSE AND THROAT IN DISPENSARY PRACTICE.

By W. G. B. HARLAND, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

Dr. Packard in a recent number of the Philadelphia Medical Journal, calls attention to the difficulties surrounding the treatment of the ear in dispensary practice, and suggests some remedies. My own feeling has been that it is unwise to separate ear cases from nose cases in dispensaries. The diseases of each are so closely dependent upon one another that the treatment of one without attention to the other does not afford the greatest good to the patient. A patient will oftentimes be treated in both dispensaries thus losing the benefit arising from a consistent treatment by one person. In the hospital, in major cases, a separation can very properly be made. At the Presbyterian Hospital most of the suggestions advanced by Dr. Packard have been in force for sometime. A clerk at the entrance to the dispensaries makes a record of the name, address and other information concerning the person who seeks treatment, the amount of his wages, number of children, etc. The unworthy are in this way refused admission. The surgeon in charge makes a careful examination of every case of ear, nose and throat trouble, and a full record is made of conditions found. A short entry is made at every subsequent visit of the patient, noting treatment and results. Where a difficulty in diagnosis arises, or the condition does not improve, the patients are referred to the aurist, or to the laryngologist of the hospital. The examination then being a deliberate and thorough one, cultures are made in all suspicious cases, and tissues examined microscopically when necessary. A nurse calls in the patients and assists in various ways. She sterilizes tongue depressors and other instruments, an important matter sometimes overlooked in dispensary work. So far the results have been most satisfactory and compare very well with those obtained in private practice. In fact these measures were instituted as much for our own instruction as for the good of the patient; data gained under such favorable circumstances being of great value. It is necessary, as Dr. Packard remarks, that the authorities should realize the importance of the work done in the dispensaries and should afford every assistance in providing instruments and apparatus, etc., so that the thousands who come may receive the largest measure of relief.

SUPERSTITION IN HOSPITALS.

By WALTER C. GIBSON, M. D., of Utica, N. Y.

To the Editor of the Philadelphia Medical Journal:

In noticing a comment in your valuable Journal of August 24th, 1901, under the heading, American News and Notes, in re "Superstition Abolishes a Ward Number," allow me to say that such purility of sentiment emanating from New York State psychologists, is amusing in the extreme. Reaching the conclusion (*reductio ad absurdum*) to change a ward in the hospital, number "13," for the benefit of the patients, presents a new phase of curative powers employed by such hospitals. It might be suggested that in order not to lose the fatal number in question, especially for those who have "difficulty in figures," the number might be applied to the Mortuary, a thing which was done some years ago at the Utica State Hospital, New York.

COLLECTIVE INVESTIGATION OF THE INFLUENCE OF THE SILVER NITRATE INJECTIONS ON PHTHISIS...

By THOMAS J. MAYES, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

In 1892 the undersigned began a collective investigation of the action of cold in the treatment of acute pneumonia and there is reason for believing that this procedure which resulted in gathering four hundred cases of this disease thus treated, with a death rate not quite five per cent., was an important factor in calling attention to the utility of that treatment, and in introducing it to the profession of this country. That research was based on the conviction that no remedy can be called truly successful until it has

passed the exacting crucible of clinical experience, and it is now proposed to apply the same ordeal to the silver-injection treatment of phthisis, which, in a large hospital, dispensary and private practice, reaching over a period of three years, and during which many thousand injections were administered, has given me greater satisfaction than any other method that I have ever employed. In keeping with the above expressed feeling a cordial invitation is herewith extended to those members of the profession who have the inclination and opportunity to investigate this method of treating phthisis and to whom a reprint on the subject with full information and blanks to report cases, will be cheerfully sent on application.

TOXIC EFFECTS OF ACETANILID.

By FRANCIS T. STEWART, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

Within the past two weeks I have seen two cases which prompt me to write you concerning the danger of toxic effects from acetanilid when used as a dusting powder on abraded surfaces.

The first patient had sustained an extensive burn of the left lower extremity. I covered the raw surface with Thiersch's skin grafts taken from the right leg and thigh, and asked an assistant to dress the right limb while I completed the left. Early the next morning the patient became cyanotic, collapsed and unconscious. On investigating the cause for such an alarming and unexpected episode I learned that the right leg had been copiously dusted with acetanilid.

The second patient was a baby, aged four months, suffering from intertrigo of the scrotum, buttocks, and thighs. A neighboring physician advised a liberal application of the following powder: Calomel 3ss, bismuth subnitrate and acetanilid aa 3 ii. The following day intense cyanosis developed. With the first case fresh in mind, the cause of trouble was easily found.

Both cases reacted readily. I do not know of a fatality following the external use of this drug, but can conceive its possibility, especially if the patient be debilitated from age or disease.

In aseptic cases it has no place; in septic cases there are more efficient and less dangerous agents at our command.

Abdominal Tumors.—In *L'Indépendance Médicale*, 1901, No. 18, a clinical lecture by Professor Hayem, at the St. Antoine Hospital, is reported. He presented a woman of 66, pale, thin, and cachectic. Her abdomen has been increasing in size for 5 months; she has had alternately constipation and diarrhea; and the loss of appetite has been marked. A number of masses about the size of chestnuts are palpable in the abdomen. The spleen is enlarged, as are the inguinal glands. Her chest shows deformity due to the corset. There is mitral insufficiency; with subcrepitant rales upon the right side and friction fremitus over the right base. There is evidently a neoplasm, and from the tenderness, this is near the stomach. The form of the abdomen suggests pyloric stenosis. The age of the patient and the size of the tumors are against tuberculosis. There is no ascites. But her appearance is cancerous. The tumors felt are probably secondary cancers of the omentum. The primary tumor seems most probably to be in the stomach. To confirm this, the stomach contents must be examined. The prognosis is grave. Hayem advised injections of cacodylate of soda. [M. O.]

Airol in the Treatment of Ulcer of the Cornea.—Stasinski (*Nowiny Lekarski*, March, 1901) treats corneal ulcers in the following manner: Having anesthetized the eye by means of cocaine, he injects under the conjunctiva 1 c.c. of a solution containing hydrochlorate of cocaine 2 grm., sulphate of atropine 0.5 grm., chloride of sodium 5 grm. and distilled water 100 c.c. The floor and edges of the ulcer are then scraped with a sharp spoon, painted with a solution of iodine and dusted with airol, this being followed by compresses of boric acid solution changed every 8 to 9 hours. In mild cases the ulcer disappears within 24 hours.

[A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Death of John D. Lankenau.—The veteran philanthropist, President and chief benefactor of the German Hospital as well as President and founder of the Mary J. Drexel Home and Philadelphia Mother House of Deaconesses, died on August 30th at his residence in Philadelphia. His death was due to apoplexy. John Dietrich Lankenau was born March, 1817, in Bremen, Germany. After a successful business period in Philadelphia, he soon distinguished himself for his philanthropy and the active assistance he rendered the German Hospital. In founding the Mary J. Drexel Home, he supported it at his own expense at from \$30,000 to \$40,000 a year. He has been at various times honored by the German Emperor. His personal qualifications which always marked him as a man of distinction will always be remembered by his many friends.

Smallpox in Philadelphia.—A mild form of smallpox exists in the Northwestern part of Philadelphia. In the territory bounded by Susquehanna and Erie avenues, and Broad and Twentieth streets, no less than twenty cases are reported. Rigid disinfection and quarantine are being maintained by the Board of Health, which has issued a statement urging that all persons that have not been vaccinated within the last seven years, be immediately vaccinated.

The Clinical Professorship of Nervous Diseases in the Department of Medicine of the University of Pennsylvania is vacant. Individuals desiring to be considered as candidates for the position may send notice of such desire to the Rev. Jesse Y. Burk, Secretary of the Board of Trustees, University of Pennsylvania, 400 Chestnut street, Philadelphia, Pa., before September 28, 1901.

Vital Statistics for Philadelphia for the week ending August 31, 1901:

Total mortality	410	Cases.	Deaths.
Inflammation of the bladder 3,			
brain 23, bronchi 3, kidneys 16,			
peritoneum 13, pleura 2, stomach			
and bowels 41, tonsils 1			120
Marasmus 20, inanition 22, debility 6			48
Tuberculosis of the lungs			37
Apoplexy 12, paralysis 3			15
Heart-disease of 21, dropsy of 1,			
fatty degeneration of 3			25
Uremia 14, Bright's disease 7, diabetes 3			24
Carcinoma of the breast 2, face 2,			
stomach 9, uterus 2, pelvis 2, liver			
2			19
Convulsions			9
Diphtheria	30		8
Brain-abscess of 1, disease of 2,			
dropsy of 1, softening of 3			7
Typhoid fever	153		8
Old age			9
Abscess of the lungs 2, alcoholism 3,			
asthma 1, burns and scalds 2,			
casualties 4, cerebro-spinal meningitis 1,			
cholera infantum 15, cholera morbus 1,			
cirrhosis of the liver 2, consumption of the bowels			
1, croup, membranous 1, cyanosis			
2, diarrhea 1, drowned 6, dysentery 3,			
fever, malarial 1, hernia 1,			
homicide 1, leukemia 1, locomotor ataxia 2,			
obstruction of the bowels 3, poisoning 1,			
pyemia 1, rheumatism 2, sclerosis, arterial 1,			
spine 1, septicemia 4, smallpox 2,			
sore mouth 1, sarcoma, neck 1,			
suicide 1, sunstroke 1, syphilis 1,			
teething 2, tumor, ovarian 1,			
unknown coroner case 1, whooping cough 6			

NEW YORK.

Westchester County Medical Association.—A special meeting of this association was held in White Plains on August 1st. A resolution adopting by-laws in conformity with those of the New York State Association was passed, and it was further decided to hold five stated meetings during the year.

Accidental Death of Dr. Dana.—Dr. Alfred A. Dana, of New York, while recently attempting to cross the Harlem Railroad tracks at Bronxville, was struck by an express train and killed.

The Medical Association of Central New York is at present holding a well attended meeting under the presidency of Dr. Lucien Howe, of Buffalo.

Malaria at Fordham Heights.—At Fordham Heights, in the borough of the Bronx, quite a severe epidemic of malarial fever is raging, and it is stated that mosquitoes have been more numerous and troublesome there this season than ever before.

American Public Health Association.—The twenty-ninth annual meeting of the American Public Health Association will be held at Buffalo, N. Y., beginning September 16 and continuing until September 21, 1901. Dr. C. O. Probst, of Columbus, Ohio, is the Secretary.

The Death of an Illustrious Surgeon.—Dr. Thomas Masters Markoe, the distinguished surgeon of New York, died on August 27th at his summer home at East Hampton, L. I., at the age of 83 years. Dr. Markoe retired from active practice several years ago, by reason of advancing years. He was born in Philadelphia, in September, 1819; and was graduated from Princeton in 1836, and from the College of Physicians and Surgeons in 1841. One of his first assignments was as professor of anatomy in a medical college at Castleton, Vermont. From 1852 to 1854 he was professor of pathological anatomy in the medical department of New York University. Through the war he served as a surgeon in the Union army, but returned to his teaching afterward, retaining from 1860 to 1870 the position of adjunct professor of surgery. For the next nine years he served as full professor, and during the rest of his active service he was professor of the principles of surgery at the College of Physicians and Surgeons. In these various capacities he became well known to very many New York physicians of the present day, and a considerable proportion of them had been at one time or another under his personal instruction. Since his retirement in 1890, he has borne the title of emeritus professor of surgery at Columbia. Dr. Markoe was also even more widely known to physicians by his authoritative work on "Diseases of the Bone," and by numerous technical papers. He remained up to his death consulting surgeon at the New York, Roosevelt, Mt. Sinai, Woman's, St. Mary's, Vassar, and Nursery and Child's Hospital. He was, in addition, a member of the County Medical Society, the Academy of Medicine, the Pathological, Medical and Surgical, and Surgical Societies; of the Society for the Relief of Widows and Orphans of Medical Men, of the Century Association, the Princeton Club, the Museum of Natural History, and the Metropolitan Museum of Art.

NEW ENGLAND.

Bequest to Cooley Dickinson Hospital.—By the will of Mrs. Elizabeth N. Thompson, widow of Dr. Austin W. Thompson, which has just been filed, the sum of \$25,000 is given to the Cooley Dickinson Hospital, Northampton, Mass., the bequest to take effect upon the death of Mr. Thompson's stepdaughter.

WESTERN STATES.

Dr. George C. Pardee, of Oakland, Cal., will be a candidate for the nomination for Governor before the Republican State convention.

Next Medical Examination in Iowa.—The next examination of candidates for certificates to practice medicine in Iowa, will begin at 9 A. M. Tuesday, October 22nd, in the offices of the State Board of Health, and will last two days.

A Serious Charge.—Certain physicians in Indianapolis, Ind., are charged with conspiring to declare persons insane in order to obtain the fees, and an investigation is being made.

Shepard's Sanitarium.—The Department for Mental Diseases of Shepard's Sanitarium, Columbus, Ohio, has now completed its seventh year of successful work. The new

additions to its buildings just finished, make its capacity 40 rooms, and give ample space for 20 patients and their management.

The Oklahoma Territorial Medical Association will hold its next meeting at Oklahoma City, November 13, 1901. R. D. Love, M. D., Perry, president; E. O. Baker, M. D., Guthrie, secretary and treasurer.

The State Board of Kansas.—The State Board of Medical Registration and Examination of Kansas has just been organized with the following officers and members: President, G. F. Johnston, Lakln; vice-president, E. B. Packer, Osage City; secretary, H. W. Roby, Topeka; Drs. Williston, Lewis, Cook and Hatfield.

D. I. Wolfstein, of Cincinnati, has been elected to the new chair of Mental and Nervous Diseases in the Cincinnati College of Medicine and Surgery.

Faculty Changes.—The following additional changes have been made in the faculty of the Cincinnati College of Medicine and Surgery: C. W. Tangeman has been elected Professor of Ophthalmology; H. Freudenberger, Professor of Pathology; Theodore Schmidt, Professor of Chemistry; and Mark A. Brown, Professor of Clinical Medicine.

Justin D. Lisle, of Paris, France, who is said to have discovered the microorganism which is the cause of syphilis, was formerly a resident of Springfield, Ohio.

To Prevent Malpractice Suits.—The physicians and surgeons at Anderson, Indiana, have agreed to refuse all services in surgical cases unless they receive an agreement from the patient or his family releasing them from liability in the event of any unsatisfactory results.

American Association for the Advancement of Science.—This body held its annual meeting for 1901 at Denver, Col., under the Presidency of Dr. C. S. Minot, of Harvard University. The Association proposes to change its time of meeting to the first week of January. Next year such of its sections as choose to do so will meet in Chicago at that time; but a regular annual meeting will also be held at Pittsburg in June. A new section was instituted, entitled: Section K, on Experimental Medicine and Physiology. The presiding officer chosen for the ensuing year is Dr. Wm. H. Welch, of the Johns Hopkins Medical School; and the Secretary is Dr. F. S. Lee, of Columbia. The presiding officer of each Section is known as a Vice-President of the Association.

SOUTHERN STATES.

Russell Springs Medical Society.—The ninth annual meeting of the Russell Springs Medical Society, Dr. J. H. Scholl, Jabez, Ky., secretary, was held at Russell Springs recently. The following officers were elected for the ensuing year: President, Dr. W. R. Grissom, Columbia, Ky.; vice-president, Dr. C. D. Moore, Cave Valley, Ky.; secretary, J. H. Scholl, Jabez, Ky. The Society adjourned until the first Thursday in August, 1902.

The Southern Surgical and Gynecological Association will hold its next annual meeting at Richmond, Va., Tuesday, Wednesday and Thursday, November 12, 13 and 14, 1901, under the presidency of Dr. Manning Simmons, of Charleston, S. C. The secretary is Dr. W. E. Haggard, Jr., of Nashville, Tenn., and the chairman of the committee of arrangements, Dr. George Ben Johnston, of Richmond.

Tri-State Medical Society.—The thirteenth annual meeting of the Tri-State Medical Society, of Alabama, Georgia and Tennessee will be held at the Tulane, Nashville, Tenn., Tuesday, Wednesday and Thursday, October 8, 9, 10, 1901. The officers are: President, Dr. M. C. McGannon, Nashville, Tenn.; vice-presidents, Dr. W. G. Bogart, Chattanooga, Tenn., Dr. Seale Harris, Union Springs, Ala., Dr. Michael Hoke, Atlanta, Ga.; secretary, Dr. Frank Trester Smith, Chattanooga, Tenn.; treasurer, Dr. Geo. R. West, Chattanooga, Tenn. The attendance promises to be large, and an unusually attractive program will be presented. The railroads will give reduced rates. Those intending to read papers should send titles to the secretary, Dr. Frank Trester Smith, Chattanooga, Tenn.

A Wise Sanitary Precaution.—It is stated that Dr. O. H. W. Rogan, Health Officer for Washington County, Md., has prescribed individual drinking cups for school children.

The Medical Society of Virginia will convene in annual session in Lynchburg November 5 and continue in session three days.

CANADA.

Obituary.—Dr. Overton S. MacDonald, at Toronto, Canada, August 8, aged 39 years—Dr. John Barnhart, at Toronto, Canada, August 9, aged 88 years—Dr. Edwin R. Bishop, at Brantford, Canada, July 24, aged 44 years.

McGill University.—The "Exhibition of 1851" scholarship in McGill University has this year been awarded to R. K. McClung, B. A. The scholarship is tenable for two years at £150 a year, and is for the purpose of encouraging research in industrial physics, mechanics, or chemistry. The Faculty of Medicine in McGill University is making extensive alterations in its library. When completed, it will occupy much more commodious quarters than it does at present.

The Canada Lancet has passed into the hands of the Ontario Publishing Company. It is not expected that there will be any change in the editorial management.

Canadian Cooperation.—The Canadian government has joined the United States in the crusade against tuberculosis by barring immigrants who are affected with the disease.

MISCELLANY.

Obituary.—Charles S. Myers, at Lancaster, Pa., August 25, aged 29 years—Dr. Thomas M. Markoe, at East Hampton, L. I., August 26, aged 82 years—Dr. J. D. Kieley, at Fitchburg, Mass., August 28, aged 44 years—Dr. James C. Trevey, at Travilah, Md., August 29, aged 63 years.

The Camphor-Eater.—It is surprising what a number of camphor-eaters there are amongst the well-to-do classes. The idea seems to prevail that this gum, taken in small and regular doses, gives a peculiarly clear creaminess of complexion, and scores of young women buy it for this purpose. The habit is, moreover, very difficult to cast off, for camphor produces a mild form of exhilaration and stupefaction; and in many instances where very large doses have been swallowed, the habit has become a sort of slavery. These camphor-eaters all have a dreamy, dazed and very listless air, and in most of them there is an ever-present longing to sleep, or, at least, to rest. Extreme weakness generally follows the taking of regular doses, and cases have been seen where it has been almost difficult to tell the effects from those of alcohol. As to the complexion—if a ghastly pallor be an improvement, camphor certainly produces it.—*Ex.*

Do We Drink Enough Water?—The *Sanitary Record* claims it is asserted that people drink too little water, especially in the summer season. When one considers for a moment the large percentage of water of which the body is composed—more than two-thirds—and the further fact that this water is being thrown off from the lungs, kidneys, bowels, and pores constantly. It would seem that no argument was necessary to demonstrate the above proposition that too little water is taken into the system to repair this loss. The free use of water of proper temperature—uncontaminated water—aids digestion, regulates the bowels, is helpful to the kidneys, preserves the contour of the body, and to a considerable extent is fat-producing. Water may be taken alone or with liquid food, such as broths, soups, etc. There are many who seldom drink water unless they are positively thirsty, who would drink it much more freely if it were modified in taste as well as in nutritive properties by the addition of a little unfermented grape juice, or in the form of lemon or orangeade. A cup of hot water with a little sugar and cream to remove the boiled taste, objected to by so many, is a great improvement over tea, coffee, or the much-lauded cereal drinks. We believe that much of the benefit that comes from visiting the most noted watering places is not so much because of any special medicinal property, as because of the free use of the water itself independent of any real or alleged mineral properties, combined with the rest. People go to drink the water and to bathe in it, and they drink it morning, noon, and night, and between times, and during the nights. As a result the stomach, bowels, kidneys, liver, pores, and even the blood vessels themselves, get a much-needed flushing, and the over-clogged machinery of life gets a fresh start, and the supposed mineral in the water gets the praise. We do not advocate the drinking of large quantities of iced water, since but little digestion will

take place until the contents of the stomach have reached the normal temperature of the body.

The Distribution of Plague.—A telegram from the Governor of Hong-Kong to the *Lancet* received at the Colonial Office on August 19th, states that for the week ending August 17th there had occurred 4 fresh cases of bubonic plague, together with 5 deaths. For the week ending August 11th 8 cases of plague and 3 deaths from the disease, all among the natives, have been reported from all Egypt. Six cases and one death were reported from Port Said, one case and one death from Hagizig, and one death out of the hospital at Alexandria.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended August 31, 1901.

SMALLPOX—United States.

		Cases.....	Deaths..
CALIFORNIA:	San Francisco	Aug. 11-18,	1
ILLINOIS:	Freeport	Aug. 17-21,	1
MAINE:	Aroostook County	Aug. 2, Present.	
MASSACHUSETTS:	Boston	Aug. 17-24,	5
NEW JERSEY:	Newark	Aug. 17-21,	5
PENNSYLVANIA:	Philadelphia	Aug. 17-24,	7
	Pittsburg	Aug. 19-24,	1
WISCONSIN:	Green Bay	Aug. 18-25	3

SMALLPOX—Foreign.

BRAZIL:	Rio de Janeiro	July 14-28,	64
CANADA:	Woodstock, District	Aug. 2,	80
COLOMBIA:	Panama	Aug. 12-19,	7
ECUADOR:	Guayaquil	June 12-22,	3
GREAT BRITAIN:	London	Aug. 2-19,	11
INDIA:	Bombay	July 23-29,	12
	Calcutta	July 20-27,	4
	Madras	July 20-26,	3
ITALY:	Messina	Aug. 3-10,	5
	Naples	Aug. 1-11,	25
JAPAN:	Osaka and Hiogo	July 23-27,	1
NETHERLANDS:	Rotterdam	July 27-Aug. 10,	3
SPAIN:	Malaga	July 1-31,	2
	Valencia	July 27-Aug. 3,	11
STRAITS SETTLEMENTS:	Singapore	July 13-20,	1
URUGUAY:	Montevideo	July 6-20,	43

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	July 14-20,	7
CUBA:	Havana	Aug. 10-17,	1 case from Pineda, Riquena.
MEXICO:	Tampico	July 26-Aug. 2,	2
	Vera Cruz	Aug. 10-17,	6

CHOLERA.

INDIA:	Bombay	July 23-29,	5
	Calcutta	July 20-27,	22
	Madras	July 20-26,	1
JAPAN:	Yokohama	July 31,	1
JAVA:	Batavia	July 13-20,	6

PLAGUE—Insular.

PHILIPPINES:	Manila	July 6-13,	12
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PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro	July 20-28,	3
INDIA:	Bombay	July 23-30,	113
	Calcutta	July 20-27,	16
	Karachi	July 21-28,	5

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 days ended August 29, 1901.

PRESTON H. BAILHACHE, surgeon, detailed as delegate to represent the service at the meeting of the American Public Health Association to be held in Buffalo, N. Y., September 16-20--August 24, 1901.

A. C. SMITH, passed assistant surgeon, granted leave of absence for 1 day, August 21, 1901, under paragraph 181, Regulations, U. S. Marine Hospital Service.

W. C. Todd, acting assistant surgeon, granted leave of absence for 14 days from August 18--August 25, 1901.

- F. S. GOODMAN, hospital steward, granted leave of absence for 30 days from September 1—August 26, 1901.
C. A. WARHANI, hospital steward, granted leave of absence for 30 days from September 4—August 22, 1901.
L. P. HALL, hospital steward, relieved from duty at Boston, Mass., and directed to proceed to Vineyard Haven, Mass., and report to medical officer in command for duty and assignment to quarters—August 28, 1901.

RESIGNATION.

HOSPITAL STEWARD C. A. WARHANI resigned to take effect October 4, 1901.

Changes in the Medical Corps of the Navy. For week ending August 31, 1901.

- P. A. SURGEON R. M. KENNEDY, detached from the Bennington when placed out of commission, and ordered home—August 27.
P. A. SURGEON D. H. MORGAN, detached from the Monongahela, and ordered to the Naval Hospital, Newport, R. I., immediately for treatment—August 27.
ASSISTANT SURGEON R. T. ATKINSON, detached from the Washington Naval Hospital, and ordered to the Wabash, immediately—August 27.
ASSISTANT SURGEON A. W. BALCH, detached from the Wabash, and ordered to the Monongahela, immediately—August 27.
MEDICAL INSPECTOR D. N. BERTOLETTE, detached from the New York, and ordered to the Brooklyn as fleet surgeon—August 30.
SURGEON J. E. GARDNER, detached from the Brooklyn and ordered to the New York—August 30.
ASSISTANT SURGEON J. M. BRISTER, ordered to the Marine Brigade, Asiatic Station—August 30.

GREAT BRITAIN.

A Serious Outbreak of Enteric Fever.—The medical officer of the town of Raunds in Northamptonshire reports that seventy-five cases of enteric fever have occurred within two weeks. The disease which is of a very serious character has been traced to a polluted well supplying two hundred families.

The Sanitary Institute.—The next Congress and Exhibition of the Institute will be held in the city of Manchester in the second week of September, 1902, under the presidency of the Right Hon. the Earl Egerton of Tatton.

The Stewart Prize.—The Stewart Prize which is awarded every two years for researches regarding the origin, spread and prevention of epidemic diseases has been awarded by the Council of the British Medical Association to Dr. Patrick Manson for his work on the malarial parasite.

Small-Pox in London.—Seven new cases of small-pox and three deaths from the disease have been reported. Seventy-two persons are now under treatment.

CONTINENTAL EUROPE.

The Fourteenth International Medical Congress will be held at Madrid, April 23d to 30th, 1903. The general secretary is Dr. Angel Fernandez-Caro y Novillas, Faculty of Medicine, Madrid, to whom application may be made for further information.

Dr. S. Baudry, Professor of Pathology at the Lille Medical School, has been appointed Professor of Ophthalmology.

Professors Landouzy and Budin, of the Paris Medical Faculty, have just been made officers of the French Legion of Honor.

A New Phototherapeutic Lamp.—Dr. Sophus Bang, an assistant of Dr. Flinsen in Copenhagen, has invented an electric lamp for phototherapeutic uses, the bactericidal power of which is said to be ten times that of the ordinary arc lamp employed by Flinsen in the treatment of lupus.

The Use of Sugar.—The present tendency of physiologists and authorities on dietetics to encourage the use of sugar as an aliment has not failed to excite some controversy and adverse opinion. A recent article by von Bunge is in point. This author, starting from the common observation that children who eat sugar appear anemic and have bad teeth, reasons that as sugar contains neither iron nor lime, its free consumption, by supplanting these essentials, is damaging and should be discouraged. In noticing the views of Bunge, Professor Lepine, of Lyons, takes exactly the opposite view. He shows from Bunge's tables how little lime and iron is taken in our food, and

hence the improbability of enough sugar being ingested to make up any appreciable difference.

Dr. Paul Garnault, of Paris, has offered to test upon himself Dr. Koch's theory of the non-transmission of bovine tuberculosis to human beings. He has written to Prof. Koch, signifying his willingness to be inoculated with material from cases of bovine tuberculosis.

Prof. Renvers, Director of the Municipal Hospital Moabit, and who had treated the Empress Friederich, has been appointed a Medical Privy Councillor.

Professor Wilhelm Mueller, Chief of the Surgical Department at the Louise Hospital at Aachen has been appointed Director of the Surgical Clinic and Professor of Surgery at the University of Rostock.

Professor van Gehuchten recently received the Belgian Quintennial prize of 5000 francs for medical investigation, for his investigations of the brain and spinal cord. **Dr. Bataille** has been appointed Professor of Anatomy at the University of Rouen.

Death of General Coler.—Staff Surgeon General Coler is dead. He was an honorary professor at the University of Berlin.

On Amebic Enteritis in St. Petersburg.—V. M. Kernig and A. U. Ukke (*Russki Archiv Patologii, klinicheskoi meditsiny i bakteriologii*, May, 1901) present the following conclusions from the literature collated in connection with a case of amebic enteritis observed by them: (1) There are at least 2 forms of ameba coli differing but little morphologically from each other; one form, however, is pathogenic to man and cats, the other is not. (2) The endemic form of tropical dysentery is always caused by the variety of ameba which is pathogenic to cats; the same is true of sporadic cases and exceptional slight epidemics in our latitudes, the most important exception, according to Ogata being Japan. These cases of amebic dysentery or amebic enteritis are characterized by the predominant affection of the submucosa of the large intestines, more frequent formation of hepatic abscesses and a tendency to a chronic course. Special emphasis is laid on the facts that: (1) ameba are present only in dysenteric ulcers and are absent in tubercular and typhoid ulcers; (2) they appear in the abscesses of the liver which accompany almost only the epidemic form of dysentery; (3) Kruse and Pasquale succeeded in causing dysentery in cats by means of the pus from an hepatic abscess in which neither the microscope nor cultures disclosed any other organisms except ameba; (4) all efforts to produce dysentery by inoculations with the various bacteria found in endemic dysentery proved futile. [A. R.]

On the Treatment of Progressive Cardiac Weakness in Acute Infectious Diseases.—P. W. Lubomudroff (*Meditsinskoie Obozrenie*, May, 1901) employs subcutaneous injections of salt solution to overcome the approaching heart failure in the course of acute infectious diseases. The strength of the solution is 0.9%. It is injected at body temperature by means of Prof. Diakonoff's apparatus which consists of a graduated glass vessel connected with a double bulb on one side and a bifurcated rubber tube on the other. The latter is supplied with two hypodermic needles which are inserted under the skin. The solution injected is absorbed in 2 to 3 hours. It acts as a powerful cardiac stimulant, having been found superior to the other drugs commonly employed. It is especially useful in dysentery, permanent recovery having followed its use in a number of cases. In typhoid fever the effects are less marked and usually transient, but even in this disease a few desperate cases of collapse and approaching dissolution were restored to life. The author also used injections by the rectum of solutions (½ to 1%) of Prof. Pel's physiologic salt tablets. These represent all of the osmotic elements of the blood serum, consisting of Na-21.51%, NaO-11.02%, K²O-4.61%, CaO-1.38%, MgO-0.21%, Cl-33.09%, CO₂-17.79%, SO₃-2.39%, PO₃-1.74%. The renal injection of this salt, although weaker in its effect, presents the advantage of being easily applied. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

August 17, 1901.

1. A Discussion of Enteric Fever in its Public Health Aspects. A. C. HOUSTON, F. A. DIXEY, W. G. SAVAGE, H. HANDFORD, E. M. SMITH, A. R. REYNOLDS, A. K. CHALMERS, J. GROVES, E. T. BOND, J. A. WANKLYN, W. C. C. PAKES, H. JONES, J. M. MARTIN, C. R. DRYSDALE, G. H. FOSBROKE, and S. F. MURPHY.
2. Neutral Red in the Routine Bacteriological Examination of Water. W. G. SAVAGE.
3. Notes on Arsenical Beers Recently Examined.
J. A. WANKLYN.
4. A Discussion on the Diseases of Occupation.
T. M. LEGGE, W. MURRAY, H. D. ELLIS, A. SCOTT, W. F. DEARDEN, G. REID and C. A. GREAVES.
5. The Fallacy of the Permanganate Disinfection of Wells (Hankin's Method). M. L. DHINGRA.

1.—Houston opened a discussion on the public health aspects of enteric fever at the meeting of the Section of State Medicine of the British Medical Association. He is forcibly struck by 3 things: (1) That, notwithstanding the progress of science and the great efficiency of the public health service, we find ourselves at the beginning of a new century unable to stamp out a disease which is, nevertheless, still classed as a preventable one. All that we can say is that the mortality from it is less than it was some years ago. (2) That the efficiency of the army medical service, although high, has failed to prevent the British troops in South Africa from suffering from enteric fever to a deplorable extent. (3) That during the last few years some notable discoveries have been made in connection with the bacteriology of enteric fever and fresh light has been thrown on the modes of dissemination of the disease. Among the notable discoveries in relation to the bacteriology of the disease the author spoke of the agglutination phenomenon, the methods of differentiating between the bacillus coli communis and the bacillus typhosus and the isolation and the vitality of the latter organism. Among the recent additions to our knowledge of the modes of dissemination of the disease, reference was made to water, milk and shellfish as sources of contamination, to the soil, to flood water, to sewer gas, ground air and ground water, to sewage, to dust and flies, to sewage effluents, to typhoid bacilluria, to fried fish and infested mangles in relation to the spread of the disease. The author spoke of the incomplete results of preventive inoculation, of the use of the urotrophin in typhoid bacilluria, of the serum diagnosis of the disease and of the sterilization of the drinking water in relation to prophylaxis. The general measures for the prevention of the disease are (1) to protect the water supply from excremental pollution, (2) to see that all articles of food are free from objectional contamination, (3) to see that the drains and sewers are kept in good order and (4) to disinfect the stools, the urine, and the soiled linen of enteric fever patients. Dixey discussed the vital statistics of enteric fever. He finds that the death rate from enteric fever in London is a fluctuating one, but that, on the whole, it has materially diminished, the most marked descent having occurred about 16 years ago. The seasonal relations of the disease remain fairly constant from year to year, but there seems to be a tendency, at least in years of low general prevalence, toward a progressive lessening of the autumnal maximum. A comparison between London and New York in respect of their climate and enteric death rate indicates that some of the meteorological conditions, especially perhaps temperature, are factors in the activity of the enteric infection. The relation, however, is not of such a kind as to make itself apparent from year to year in one given locali-

ty. It is probable that the diminution in the death rate is really somewhat greater than it appears to be from the inclusion, in former years, of enteric cases under other heads. The case mortality of typhoid fever is almost stationary and seems likely for the present to remain so. Handford is convinced of the importance of direct infection in typhoid fever, not merely as an interesting clinical fact, but also as a widespread power for evil, especially in the small and crowded homes of the poor. Smith referred to the outbreak of typhoid fever in York, in 1900. Careful inquiry failed to show a relation with the water or milk supply, but there was a glaring sanitary deficiency in the shape of privy middens, from some of which, at least, there was soakage into the soil, and the author attributed both the epidemic and the endemic occurrence of typhoid fever in York to the existence of these privy middens. The infection can be carried with ease from these open privy middens by flies and the author thinks that this is a common means of distribution in York. Another serious sanitary defect existed in the sewers, which were laid without sufficient fall, so that the pipes contained many inches of deposit. Although sewer gas may not contain the *bacillus typhosus*, the continued breathing of the foul odors will lower the vitality of the body and tend to break down the natural defences. Reynolds said that Chicago was supplied with water from Lake Michigan by 4 tunnels under the lake, ranging from 2 to 4 miles in length. It had been observed that the mortality from typhoid fever and from acute intestinal disorders followed each pollution of these tunnels. Since the sanitary waterway had been cut through the divide between the St. Lawrence and the Mississippi valleys and the sewage of Chicago had been carried into the Mississippi river, the mortality in Chicago from typhoid fever had been greatly reduced. Groves is of the opinion that the majority of the cases of enteric fever receive the poison of the disease through the medium of the drinking water or of water used in the dilution of milk. He referred to Frankland's experiments which showed that the typhoid bacillus ceased to be infective after 5 days in river water. The toxins present from the large number of microorganisms in river water are supposed to have destroyed the typhoid bacilli. Pakes stated that it was practically impossible to give an opinion concerning the safety of a certain water merely from the enumeration of the microorganisms present. A complete bacteriological examination should be made. On several occasions he had found the *bacillus coli communis* in water that only contained 120 to 150 microorganisms per ccm. However few the microorganisms may be, any sample of water that contains one colon bacillus in 30 ccm. should be condemned. In the differentiation between the typhoid and the colon bacilli he referred to the power that the latter group possessed, that the former group did not, of decomposing salts of formic acid into hydrogen and carbon dioxide. Drysdale thought that sufficient importance had not been attached to the dissemination of typhoid fever by dust. [J. M. S.]

2.—Savage considers the use of neutral red an efficient aid in the detection of the *bacillus coli communis* in drinking water. Ten cc. of the suspected water are added to a tube of ½% glucose neutral red broth and a second tube of neutral red glucose broth is retained as a control. After incubation at 37°C. for from one to three days the red color is changed to yellow or orange if the bacillus coli communis is present. A negative reaction, while not certainly excluding the bacillus coli communis, makes it very improbable that that organism is present. Although other organisms are able to produce the reaction, which is only one of reduction, the error is only about 5%. [J. M. S.]

3.—In the recent arsenical epidemic there can be no doubt that much arsenic was present in the beer and that it was to a great extent unrecognized. Wanklyn believes that the failure to recognize the arsenic is due partly to the abandonment of the real Marsh process in England and partly to the fact that arsenic is protean in its combination. [J. M. S.]

4.—Legge opened a discussion on the **diseases of occupation** in the section of State Medicine. The differences between the symptoms of poisoning in workers in certain poisons and the symptoms produced when the same poisonous substances are taken medicinally are very striking. This is particularly true of potassium cyanide, potassium chromate, arsenic, mercury, phosphorus and lead. The manufacture of potassium cyanide is almost innocuous. One of the most difficult points in relation to occupational diseases is the estimation of the effect of dust on the lungs and the relation of fibroid phthisis, to true phthisis. With the exception of the inhalation of mineral dust containing high percentages of silica, of steel dust, of flax dust and a few others, evidence as to injury of the lungs has not been made very clear. However, the close relation between fibrosis of the lungs and tuberculosis teaches the lesson that attempts to control the former by improved ventilation must be associated with collateral attempts to check the latter by (1) education of the workers as to the infectious nature of the disease and (2) suitable action on the part of the health authorities, particularly concerning splitting. Since 1895, it has been compulsory for practitioners in England to notify the Chief Inspector of Factories of every case of lead, arsenic, mercury or phosphorus poisoning and every case of anthrax contracted in a factory or workshop. The reports resulting from this notification have brought out the interesting fact that, in the male sex, poisoning by lead is especially liable to result in saturnine palsy, while in the female sex, headaches, anemias and encephalopathies are more common. From the statistics obtained from the workers in the china and earthenware industry it has been shown that of the employees who come in contact with lead, women are about twice as susceptible to its noxious influence as men. Notification has been especially useful in obtaining knowledge of hitherto unsuspected sources of mercurial and arsenical poisoning. Anthrax is the most protean in its manifestations of all trade diseases and the most difficult to control. Disinfection of horsehair by steam is difficult on account of the hydraulic pressure used in making up the bales and the grease and dirt of the hair. The accepted treatment of anthrax is the excision of the pustule as soon as it is diagnosed. In the country districts, however, where the practitioners are reluctant to resort to surgery, the application of caustics or the hypodermic injection of pure carbolic acid has been remarkably successful. Alcoholism and the consequences of bad housing conditions are factors that contribute to the severity of trade diseases in many cases. **Chronic brass poisoning** begins by the appearance of an anemia of the ordinary oligemia type, accompanied by malaise, headache and extreme weakness and nervousness. The complexion becomes sallow, the patient becomes thin, his muscles waste and there is a loss of strength with muscular tremors and neuralgic pains. Symptoms of catarrh of the air passages are common. There is a green line at the base of the teeth and skin eruptions are met with which are due either to the action of the brass dust directly on the skin or to the action of the sweat impregnated by copper salts. The disease bears a close relation to consumption. Murray believes that copper is the cause of the disease, and the poison evidently gains entrance to the body through the digestive and respiratory tracts. Pure phosphorus, in doses of 1-30 grain, or phosphoric acid exercise a remarkable influence on the disease. Ellis discussed **glass poisoning**. The glass cutter polishes the glass on which he has already cut a design with putty powder, which contains lead and tin. From the use of this powder cases of lead poisoning arise. Scott adds **railway work** to the list of dangerous occupations. Many of the railroad accidents are due to the neuroses of railway servants and these neuroses are the result of the nervous tension at which the individual is kept while performing his duties. Dearden believes that **phosphorus necrosis** is due to a combination of general and local causes. The poison, acting on the blood, surcharges it and, on account of its affinity for bone, softens those organs and thus the tissue is weakened in its resistance to local injury. The

local injury, in the case of the maxillary bones, is supplied by means of carious teeth. Reid believes that one cause of the high infant mortality in certain factory towns is the fact that mothers go to work in the factories, leaving their children to be fed artificially by incompetent persons, instead of staying at home and nursing their babies. Graves spoke of **plumbism** in carriage workers. [J. M. S.]

5.—The **prevention of the spread of plague** from Bombay is due to the excellent **sanitary administration** of the port. This sanitary system includes systematic medical inspection, disinfection and sanitary control of all passengers, crews and ships prior to their departure from Bombay, combined with the detention of all doubtful or suspicious cases of illness for further observation in the hospitals and segregation camps of the city. The paper includes a description of the measures adopted. Adams is convinced that there is much truth in the rat theory, but he believes that there are many other sources of infection. [J. M. S.]

6.—Dhingra believes that **Hankin's method of disinfecting wells** by pumping them after 2 or 3 ounces of potassium permanganate have been thrown in them is fallacious in theory, defective in technique and impossible of application. [J. M. S.]

LANCET.

August 17, 1901.

1. Remarks on the Diagnosis and Surgical Treatment of Carcinomatous Stricture of the Colon.
W. J. WALSHAM.
2. The Sero-therapeutics of Plague. JOHN BROWNLEE.
3. A Case of Primary Hemorrhagic Otitis Media.
H. J. CURTIS.
4. Experiments with the Danysz Rat Bacillus.
E. KLEIN and HERBERT WILLIAMS.
5. A Case of So-Called "Fetal (or Congenital) Rickets."
HENRY ASHBY.
6. A Case of Typhoid Fever with Relapse; Perforation and Operation.
G. THORNTON and HERBERT J. GODWIN.
7. The Comparative Virulence of the Tubercle Bacillus from Human Bovine Sources. (Concluded.)
MAZYCK P. RAVENEL.
8. Atypical Empyema in General Practice, with Illustrative Cases and Critical Notes. C. C. BAXTER.
9. An Improved Method of Photographing Pathological Specimens. J. EFFIE PROWSE.

1.—Walsham speaks of the comparative benignity of columnar-celled carcinoma of the colon the disease often progressing to complete stenosis of the gut without there being lymphatic involvement or metastases. The diagnosis is therefore of vast importance since if the growth be removed early cure may follow. The following symptoms should direct our attention to a carcinomatous stricture in the early stage: Abdominal uneasiness and distension, often classed as indigestion but not referable to the stomach and not benefited by medical treatment; attacks of pain or spasm referred to the colon, frequently occurring daily without reference to the time of eating; almost always liquid stools; progressive loss of weight; and constant desire to defecate. When seen early the only treatment of course is complete extirpation, removing a wide margin of healthy bowel. When symptoms of acute obstruction are present the operation should be done in two stages, the first stage consisting of a preliminary colotomy, and the second stage, in from ten days to a fortnight later, when the patient has recovered from the deleterious effects of the obstruction, consisting of the wide extirpation already mentioned. These remarks are based on some ten or twelve cases which have come under the author's care during the last few years. [F. T. S.]

2.—Brownlee gives an account of his experience in the treatment of bubonic plague with Yersin's serum which was prepared in the Pasteur Institute of Paris. He remarks that the value of this treatment cannot be properly estimated from the results of this series, as the disease was of a mild character in most of the cases. He reports a number of cases. The first case was of the septicemic variety of plague with multiple bubo. The temperature fell 26 hours after the first administration of ser-

um, and the patient seemed out of danger. The second case was an example of the fulminant type of plague. In this case 20 cc. of serum was injected intravenously and the same amount subcutaneously. All the symptoms abated within 24 hours. The third case was one of mild bubonic plague. 20 cc. of serum were injected subcutaneously into the abdominal wall. On the third day, the symptoms abated somewhat, but it was deemed advisable to again inject the same amount of the remedy into one of the veins of the right arm. This was followed by immediate improvement of the condition of the patient. The fourth case was also an example of mild plague. The patient suffered from a bubo in the left axilla. The serum was injected and improvement in the gravity of the symptoms followed for a short while. The severity of the disease again increased and a dose of 20 cc. of serum was injected intravenously and a rapid recovery followed. The fifth case was another example of rather mild plague. The patient had a bubo in the right inguinal region. Subcutaneous injection of the remedy was not followed by any great improvement in the symptoms, so it was determined to inject 20 cc. intravenously. As in the two preceding cases, improvement followed immediately. The author emphasizes that subcutaneous injection of Yersin's serum produced little effect or only a temporary abatement in the symptoms, while intravenous injection of the remedy was followed by rapid subsidence of the symptoms. He reports four cases in which the serum was used and in which the disease progressed to a fatal issue. In the first case, the disease had lasted four weeks and at the time the remedy was employed there was an extensive secondary pyogenic infection of the buboes. The second case was of interest, as the patient was an extremely ill woman about time the remedy was used. At the height of her illness premature labor was in progress. She apparently received little benefit from the use of the serum and death occurred on the third day of the illness. The serum in this case was injected into a vein of the right arm and also into the subcutaneous tissues of the flexure surface of the left thigh, so that it might drain into the bubo situated in the left groin. 20 cc. were also injected into the loose tissues of the abdomen. The outcome in this instance can in no way appraise the serum treatment because the case was complicated. Post-mortem examination showed that the retroperitoneal glands were the seat of mixed infection. The third fatal case was also an example of a mixed infection. The patient came under observation during the second week of the illness. One of the buboes had progressed to abscess and the only micro-organism found in the pus, was the staphylococcus pyogenes aureus. No effect of any kind followed the administration of the serum. The fourth case in this series was of a very interesting nature. The patient, a girl of six years of age, when she came under observation, was profoundly ill and in a state of almost complete unconsciousness. By puncture, plague bacilli were isolated from a bubo in the right groin. Serum was injected intravenously without apparent effect. 100 cc. were also used subcutaneously. On the fourth day after her admission there was an improvement in her condition, but it was only of the temporary nature, and death occurred on the eighth day, preceded by symptoms of heart failure. In two of the fatal cases, the plague bacilli isolated from the buboes which received the drain of some of the serum, were degenerated markedly, while the micro-organisms from other parts of the body were virulent and did not exhibit this peculiar change. The author directs our attention to the fact that the remedy was used as a prophylactic measure in two patients who afterwards developed a mild form of the disease. He therefore concludes that a dose of 10 cc. of serum while in no way affording protection, probably induces a certain degree of immunity. With regard to its curative action, he points out that this remedy, when injected subcutaneously, has little curative value. He explains this on the ground that the lymphatics exercise a distinct action on the serum whereby the antitoxic substances are retained largely in the glands which drain the area of injection. This also seems to be proven by the fact, as noted in two cases, that the micro-organisms in the glands which received the serum, presented degenerated changes, while the organisms in other parts of the body were not affected. Subcutaneous injection can only benefit those cases in which the infection is localized

to the single bubo. Intravenous injection in most cases has a marked therapeutic effect even when the disease was far advanced. He remarks that it is reasonable to assume that the doses which he employed in some of his cases were too small and that should an opportunity to use this remedy again present itself, he would employ an initial dose of 60 cc. or more intravenously, and that the subcutaneous injection would probably only be practiced in the areas draining into infected lymphatic glands. [F. J. K.]

3.—Curtis reports a case of primary hemorrhagic otitis media, which occurred in a female aged 35 years, without any immediate previous illness. The patient, on November 13, 1900, at 8 P. M., which was two hours before retiring, complained of noises which were referred to the back of the head on both sides of the middle line on about the level of the lambdoid suture. Very soon, the noises ceased and excruciating pain developed in the occipital region, just where the noises had been. The severity of the pain increased. At 2 P. M. she experienced the feeling of something bursting inside the head at a point located just to the left of the occiput, and about this time, she also noticed a flow of bright red blood which soon became darker, from the left ear. The bleeding decreased gradually. At 11 A. M., only a few drops of the pale serum escaped. The acute pain subsided with the appearance of the hemorrhage. For two days, the treatment consisted of syringing the ear with warm boric acid solution. Some time after, the patient complained occasionally of dizziness. On November 29, the examination of the left ear, showed that there was a large perforation of the membrana tympani. The hearing was very good. There was a small clot occluding the perforation in the ear drum. On December 6, the patient complained of singing or frying noises in the left ear and occipital headache. A blood clot was found lining the inner wall of the tympani. The pain and headache soon disappeared. Four attacks of a similar nature occurred during the winter and on February 27, 1901, she was reported as being perfectly well. The author states that this case was probably an example of primary hemorrhagic otitis media. [F. J. K.]

4.—Klein and Williams give an account of some experiments with the Danysz Bacillus. Danysz has suggested that this bacillus is capable of producing an acute, fatal, septicemic disease in rats, and that the dead animals would probably constitute a focus for further infection—the disease rapidly spreading and exterminating these animals or causing them to migrate from their locality. As the rat has been instrumental in spreading Bubonic plague, these facts were thought to be important in preventing the spread and communication of plague to the human subject. In the investigations of Klein and Williams, they demonstrate that the Danysz bacillus showed a high degree of virulence in their laboratory experiments, but with practical tests in a dock ware-house in the port of London, the results were far from satisfactory. They placed a rat, which had died after a subcutaneous injection of septicemic disease, in the warehouse. This animal was not touched by the rats. They also offered dead mice and guinea pigs, which were readily eaten by the rats of the warehouse. The results were entirely negative. They observed that rats kept in captivity were liable to succumb spontaneously. This was found to be the case in 25% of the animals, within the first ten days. Therefore they state that this fact should be borne in mind when experiments are performed in the laboratory, and only such animals should be experimented upon which survive after the first week or fortnight of captivity. [F. J. K.]

5.—Ashby gives an account of a case of so-called fetal or congenital rickets. The mother of the infant in question was 48 years of age and had had 14 children. Two of these had died in infancy from some wasting disease. There was no history of syphilis; her only complaint being an attack of jaundice, which occurred before and after the birth of the infant suffering from rickets. At birth, this infant was well nourished. When two weeks old, he was admitted to the Manchester Children's Hospital, suffering from fractures involving the right humerus and radius and the left humerus, ulna, and femur. There was no history of violence of any kind. Craniotabes was present, which involved the occipital and parietal bones. The ribs were soft and bent inward during inspiration, producing broad shallow grooves on each side of the sternum. There were no enlargements at the end of the long bones or any curvatures. The infant was fed on cow's milk and water. When six

weeks old, the right femur was fractured. All of the fractured bones repaired well. At the age of nine months, the infant presented no signs of rickets or infirmities of the bones. [F. J. K.]

6.—Thornton details the history of a woman, aged 27 years, who came under his care about the twelfth day of an attack of **typhoid fever**. Fifteen days after the temperature had become normal a definite relapse developed and on the eighteenth day of this relapse intestinal perforation occurred. Symptoms pointing to perforation were pain, colicky in character, and felt in the right lower quadrant of the abdomen; a rise of temperature of three degrees; a quickening pulse; thoracic respiration; disappearance of liver dullness. The abdomen was scaphoid. He asserts that in these cases a rise of temperature is frequently seen, the fall of collapse not occurring until some hours later; that perforation may occur with a scaphoid abdomen, distension following the consecutive peritonitis; that abolition of liver dullness without tympanites is almost conclusive proof of perforation, that even if there be tympanites the liver dullness is never absent in the mid and posterior axillary lines without perforation having occurred; and that in perforation the pulse and respiration are usually markedly increased in rate. In the case reported a "cracked pot" sound was obtained over the eighth intercostal space in the mid-axillary line. The patient was operated upon by Mr. Godwin, under local anesthesia. There was no peritonitis. The ulcer that had perforated was about three inches from the ileo-cecal valve. The operation was performed 2 hours after the onset of symptoms. The patient died 8 days after operation, not from the operation or from the perforation, but from the effects of the fever, as the postmortem demonstrated. [F. T. S.]

7.—Ravenel communicated a very important paper to the British Congress on Tuberculosis on the comparative virulence of the tubercle bacillus from man and bovine sources. A correct idea of the scope and nature of these interesting and important experimental investigations can be formed only by reading the original article. From the evidence which Ravenel has quoted, he draws the following conclusions: (1) In culture, the tubercle bacillus from bovine sources has fairly constant and persistent peculiarities of growth and morphology; sufficient to identify it from the bacillus found in man. (2) The pathogenic power of the cultures from two sources differs so markedly as to afford further means of differentiation. The bovine bacillus was found very much more active for all species of animals which he tested, with the possible exception of swine, which are highly susceptible to both the human and bovine bacillus. (3) He found that the comparative pathogenic power of the tuberculous material from cattle and from man corresponds closely with pure cultures of the tubercle bacillus from the two sources. (4) "That it is a fair assumption from the evidence at hand, and in the absence of the evidence to the contrary, that the bovine tubercle bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life." [F. J. K.]

8.—Tyrle gives a report of four cases of atypical empyema which were observed in general practice. He directs our attention to the frequent difficulty in making a diagnosis of this condition and the uncertainty of the prognosis in many cases. Sometimes when we least expect a favorable termination, the patient recovers, and at times when we are confident of a happy result, the ending is disastrous. [F. J. K.]

9.—Prowse suggests "an improved method of photographing pathological specimens." He accomplishes this by submerging the specimen in water and by placing the camera in a vertical position. The water should be perfectly clear. Under the glass jar containing the water, a piece of white blotting paper or a dark piece of wood should be placed; this forms an excellent background. [F. J. K.]

MEDICAL RECORD.

August 31, 1901.

1. Metastatic Chorioiditis Occurring in the Course of Pneumonia, due to Grippe, Etc.
CHARLES STEDMAN BULL.
2. Protozoal Life in the Blood of Man and Animals, and

Some of Its Evolutionary Phases in the Bodies of Suctorial Insects. M. P. OVERHOLZER

3. Suggestions in Infant Feeding.

CHARLES GILMORE KERLEY.

4. The Clinical Aspects of Acute Intestinal Obstruction.

HOWARD BLIENTHAL.

5. Remarks on the Scientist, the Practitioner, and the Antitoxin Treatment of Diphtheria.

ADOLPH RUPP.

1.—Charles Stedman Bull discusses **metastatic chorioiditis occurring in the course of pneumonia due to grippe**, based on a study of six cases with two autopsies. Metastatic ophthalmia was first observed in cases of puerperal fever. It was subsequently met with in other forms of septic fever, and was described as **phlebitic ophthalmia**. It has been assumed that the occurrence of metastatic ophthalmitis signifies that the general disease has taken on a particularly severe type, but that it is doubtful, for if true, the ocular metastases would of necessity be regarded as of peculiar and unusual importance, and would have a marked prognostic significance. The frequent bilateral appearance of metastatic chorioiditis, like all bilateral ocular lesions, must be regarded as symptoms of a general constitutional condition, and in such cases we should expect to find numerous metastases in other parts of the region of distribution of the carotid arteries. The disease, as presented in the six cases which form the basis of this paper, was characterized by pain in the eye and head, intense vascular congestion, with the usual symptoms of irido-chorioiditis, and rapid and total loss of sight. The condition may be ushered in by severe headache and vomiting, rise of temperature, and general febrile symptoms. Intra-ocular tension is at first increased, but subsequently sinks much below normal, even when no perforation of the eyeball occurs. The course of the disease is from three to six weeks, and the prognosis is always bad, the case ending in total blindness and shrunken eyeball. The writer does not believe enucleation of the eye is advisable in the acute stage of suppuration, especially if the capsule of Tenon or the orbital tissue be involved. [T. L. C.]

2.—M. P. Overholzer discusses **protozoal life in the blood of man and animals, and some of its evolutionary phases in the bodies of suctorial insects**. One of the most interesting and valuable discoveries of recent date, is the discovery and positive demonstration of two distinct life cycles of some varieties of sporozoal micro-organisms, and the study of the evolutionary phases of these parasites in the intracorporeal and extracorporeal cycles of their existence. This study has thrown much light on those diseases for which the sporozoa are responsible. The author gives a number of interesting examples of the development of some varieties of the sporozoa, including the great scourge of the silk worm, called **pebrine**, which was found by Cornelia to be due to protozoal oval parasitic bodies in the tissues of the developed silk worm. He also describes the development of our knowledge of **bactrachian** or **reptilian** as well as **avian malaria**. He lays especial stress on the accepted value of routine microscopical examination of the blood in all cases of suspected malaria. [T. L. C.]

3.—Charles Gilmore Kerley furnishes **suggestions on infant feeding**. He believes that the most usual error is in beginning at birth with too strong a milk mixture, and inattention to the needs of each case. The milk used for an infant's food should be handled as little as possible. He prefers that milk and cream should not be subjected to the centrifugal process. For the preparation of food two bottles of the best milk and cream should not be subjected to the centrifugal process. For the preparation of food two bottles of the best milk obtainable are required daily. From the top of one bottle all the cream is removed. This is for the reason that that nearest the top of the bottle is much richer in fat than that which joins the milk. The remaining bottles supplies the milk. This should be thoroughly mixed before opening. One pint is used as a basis of measure for our calculation. Tables are given showing the percentage of fat, protoid and sugar in certain convenient mixtures of cream and milk and water. Pasteurization and sterilization are mentioned, and the author states that while milk is rendered more indigestible by heating, it is safer for use. Certain children are unable to digest cow's milk in sufficient quantities, so that two measures are left, the **peptonizing of milk** and the **use of cereals**. Pep-

tonizing is without value except in those cases in which completely peptonized milk is introduced into the stomach by gavage, or into the rectum. He does not believe that this process is of special value. As to cereals, he has found them useful in a treatment of barley water, two tablespoonfuls of barley to the pint, 7% of fat, 3 of proteid and 2 of soluble carbohydrates. If we are to feed cows milk to many delicate infants, we must first remove the casein, which is accomplished by the use of rennet or pepsin, and moderate heat. He mentions many difficult points of feeding and the rare condition of milk idiosyncrasy. [T. L. C.]

4.—Howard Lillenthal presents a paper on the clinical aspects of acute intestinal obstruction. The causes which contribute most to the mortality of this affection are: First, the shock incident to the strangulation of a vital organ. Secondly, sepsis from within the distended and congested gut, even without the onset of peritonitis, and third, the embarrassment of the functions of the lungs and heart by the distension itself, with subsequent exhaustion of the vital forces in an already weakened individual. Either of the two first cases may be fatal without the existence of the third. He believes that true ileus is often due to appendicitis. He does not refer to the banus left over from the previous attacks, but to the co-existence of both acute conditions. Tight strangulation in the small intestine occurring suddenly is accompanied by intense colicky pains, with nausea and vomiting, the ejection of the stomach contents often being violent. Collapse comes on early. Hiccough and frequent strangulation without nausea are common in the later stages of ileus and should be regarded as particularly ominous. The medical treatment of intestinal obstruction of the acute kind is safe until the diagnosis is made, but no longer. He reviews some of interesting recoveries following the employment of atropine. Surgery and surgery alone, can promise relief in acute intestinal obstruction. The fear of operation must answer for many an opportunity missed, and many a life lost. When a patient has recovered after internal medication, or massage and electricity, it is certainly illogical to conclude that an operation would have had a less fortunate result. [T. L. C.]

5.—Adolph Rupp presents some remarks on the scientist, the practitioner, and the antitoxin treatment of diphtheria. This author believes that antitoxin and the philosophy of the scientists in its favor as applied to the treatment of diphtheria in human beings is practically a rapidly vanishing possibility. As reason for this statement it has been generally admitted that the diphtheria antitoxin antagonizes only the diphtheria toxin, and that the amount of toxin in a person suffering from diphtheria is an unknown quantity. He also avers that it is now almost generally admitted that the phenomena of diphtheria in the clinical sense are induced by bacteria and their toxins other than the Klebs-Loeffler bacillus, and says also that it is demonstrated that many cases of clinical diphtheria are not specifically Klebs-Loeffler in character, and that a great many Klebs-Loeffler diphtherias are barren of all clinical evidences of diphtheria. Therefore, concludes this writer, antitoxin is practically a remedy of very limited utility. [T. L. C.]

MEDICAL NEWS.

August 31, 1901.

1. Blood Examinations as an Aid to Surgical Diagnosis. JOSEPH C. BLOODGOOD.
2. The Racial Factor in Hysteria. JULIUS ULLMAN.
3. The Drug Habit; Its Cause and Restriction. JOSEPH M. AIKEN.
4. Two Fatal Cases in Infants. Pemphigus and Erysipelas. FRANK S. MEARA.

1.—J. C. Bloodgood in his article on Blood Examination as an Aid to Surgical Diagnosis gives the following interesting facts: Although there are exceptions to the rule, a rising leukocytosis is an indication for an operation. In the majority of instances, if the leukocytes reach 18,000 before forty-eight hours, it has been an indication of an advanced pathological lesion. For example, excessive exudate with a diffuse appendicitis, gangrene, or an appendix distended with pus, abscess, or beginning peritonitis. When the leukocytes have been below 18,000, or, when counted a number of times, have fallen in number, the pa-

tients have recovered without operation. With a fall in the leukocytes there has been associated a rapid cessation of the local symptoms, or, if operated on, the appendix has been the seat of but slight diffuse inflammation. Observed later in the attack, especially after the fourth day, a high leukocytosis has usually been associated with the localized abscess, or beginning peritonitis. It is to be remembered, however, that it is possible to have an abscess with a low leukocyte-count. Out of the fifty-six cases of appendicitis with abscess fourteen have had a leukocyte-count between 6,000 and 12,000; the remainder have been higher, the majority over 20,000; the usual count is between 20,000 and 25,000, one count 30,000, one 60,000. It is also to be remembered that with peritonitis there may be a very low leukocyte-count. This, so far in our observations, has been associated with an extreme septic condition of the patient, and in every case death has followed. These low leukocyte-counts have been observed in patients admitted to the hospital three days or longer after the beginning of the attack, so it is difficult to ascertain the exact duration of the peritonitis. Observations are sufficient to indicate that in the majority of instances beginning peritonitis is associated with the rise in the leukocytes, which, however, falls as the patient becomes more septic. In a general way we may feel that a patient admitted with symptoms of peritonitis, with a high leukocyte-count, has a better chance for recovery. The leukocyte-count simply indicates, however, a short duration of the peritonitis. The positive prognosis depends more upon the bacteriological findings than upon the leukocytosis. The author also emphasizes the following: A rapid rise in the leukocytes, especially above 18,000, should, in his opinion, be a sufficient indication for exploration, even in those cases in which the local symptoms are very slight. In a few exceptions in which the local symptoms are sufficiently distinct to indicate an operation a low leukocytosis should not influence as to delay operation. [T. M. T.]

2.—J. Ullman gives certain etiologic factors, classified by Gilles de la Tourette, which, if allowed to play a role, will overwhelm the individual and will cause definite symptoms of hysteria to appear in any race, be it Caucasian, Mongolian, American, Ethiopian or Malayan (1) Influences of the emotions, including moral passions, such as disappointment, anger; influences of education, a higher civilization being conducive to the disease; religion with its furors and frenzies; (2) Traumatism, physical and mental; the traumatic neuroses of the Germans; (3) General diseases, typhoid, pneumonia, scarlatina, tuberculosis, grip, rheumatism, diabetes, mellitus, malaria, syphilis and chlorosis; (4) Influence of the sexual organs; as the term implies, the uterus was supposed to be the seat, but, as Chareot later showed, the ovaries seem to be a factor also; (5) Influence of intoxications, lead, alcohol, mercury, sulphur, carbon, and tobacco, the effects of chloroform, ether, morphin, and lastly ptomaines. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

August 31, 1901.

1. The Diagnosis, Etiology, Prophylaxis, and Treatment of Cystitis, Pyelitis, and Pyelonephritis in Women. THOMAS R. BROWN.
2. A Study of the Temperature, Pulse, and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain. J. T. ESKRIDGE.
3. The Esophagometer, or Intragastric Whistle. A New Device for Measuring the Length of the Esophagus in the Living. C. D. SPIVAK.
4. Dupuytren's Contraction of the Palma Facia. NOBLE SMITH.
5. The Effect of Nasal Stenosis on the Throat, Ear, and Organs at a Distance. W. PEYRE PORCHER.
6. Atrophic Rhinitis in its Purely Clinical Aspect. CARL SEILER.

1.—T. R. Brown concludes as follows: (1) The great majority of cases of pyelitis, pyelonephritis, and cystitis are due to infection with various micro-organisms (of which the colon bacillus is the commonest) which may reach the kidney or bladder either exogenously or endogenously. (2) That in the majority of cases the condition can either be prevented or can be cured if the conditions underlying its development are recognized and un-

derstood, and the correct measures inaugurated. (3) There are various conditions, such as urinary hyperacidity, which may simulate almost exactly true vesical infections, and yet in which misinterpretation and improper treatment may lead to the development of true cystitis and its deplorable consequences. (4) In no condition is prophylaxis more essential than in that of the infections of the urinary tract, while, to be able to prevent such conditions, we must have constantly before us the danger of the development of infection in all cases associated with conditions which tend to lower the general resistance of the patient, and also those which render the bladder susceptible to infection, especially by the trauma of an operation or catheterism. (5) While an absolute diagnosis of renal infection can be made only by ureteral catheterism, in the majority of cases a very probable diagnosis may be arrived at by a consideration of the relation between the grade of albuminuria and pyuria and by careful cystoscopic examination of the bladder, especially that portion about the ureteral orifices, and the character of the urine flowing therefrom. (6) Contrary to the opinion expressed in the majority of text-books, a great majority of the infections, both of the bladder and of the kidney, are associated with acidity of the urine—that is, are due to micro-organisms which do not split up the urea. (7) Probably in the majority, if not in all the cases of renal infection due to a urea-decomposing micro-organism, after the condition has lasted for a certain length of time, a stone is formed by the decomposition of the precipitated salts about the bacteria as a nucleus. (8) And, finally, to be able to thoroughly understand the cases of cystitis, pyelitis, and pyelonephritis brought to our notice, to make the proper diagnosis, to inaugurate and carry out a rational line of treatment, to be conversant with the proper means of prophylaxis, and to give a correct prognosis, a careful chemical, microscopic, and bacteriological study of the urine is absolutely essential. [T. M. T.]

2.—J. T. Eskridge gives in his article on "The Study of the Temperature, Pulse and Respiration in the Diagnosis and Prognosis of Certain Critical Diseases of the Brain" the following facts. (1) In all critical brain cases the temperature should be registered every two or three hours, and in some cases every hour, both day and night. It is best taken by the thermometer in the mouth, but as this can only be done when the patient is conscious, it will often be found necessary to use the rectum or axilla. The author prefers the three to five minute thermometer to the one minute one, on account of the latter's susceptibility of very slight variations of temperature. With either instrument it should be left in place at least one minute after the mercury has ceased to rise. In taking the temperature in the axilla the following should be borne in mind: In all cases in which the axillary temperature is to be taken, the author directs the nurse to dry the axilla with a cloth, cover the patient to the neck, and see that the arm on the side corresponding to the axilla in which the temperature is to be taken is kept lying across the chest for a period of, at least, five minutes before the thermometer is put in place. The thermometer is held by the nurse with the bulb against the upper portion of the axilla, while the upper arm is held firmly against the chest. The thermometer is held in place one minute after the mercury ceases to rise. In cases of hemiplegia, in which bilateral axillary temperatures for some reason are not taken, the nurse should alternate between the right and left axilla in taking the temperature each time. It is very important to register the temperature in each axilla in certain acute unilateral brain diseases. The pulse also bears an important part in diagnosis. In a child whose pulse is 120 and regular in character and a temperature of 101° or 105° would indicate that the disease was not organic trouble of the brain, unless there were some localizing brain symptoms, such as are sometimes found in meningeal hemorrhage. A pulse of 100 to 120 and temperature of 102° would be consistent with a tentative diagnosis of tubercular meningitis being probable. If other symptoms pointed to such a condition. An extremely rapid pulse of 120 to 140, with a temperature of 105° would almost enable one to exclude meningitis and suspect scarlet fever. A pulse of 100 to 120, a temperature of 101° or 105°, and respiration 30 to 40 a minute would indicate pulmonary instead of brain trouble. An uncomplicated acute meningeal inflammation is usually ushered in with a pulse from 90

to 120 and a temperature of from 102° to 103°. In persons with apoplexy, with or without hemiplegia, if the pulse is rapid, the greater the probability that the apoplectic attack is due to a thrombus or embolus, and not to hemorrhage. A slow pulse of 60 to 80 is the rule in the exudative stage of acute meningitis. A pulse of from 40 to 60, especially if irregular and intermittent, as it usually is, denotes great cerebral disturbance and rapid progress of the disease. The slower the pulse in apoplexy, the greater the probability that the stroke is due to hemorrhage. The typical pulse of abscess of the brain is slow until that stage is reached in which the functional activity of the brain is greatly impaired. In traumatism of the brain a slow pulse denotes in the majority of instances either hemorrhage or a depressed fracture, and, if the pulse is irregular or intermittent, that the respiratory and cardiac centres are affected. [T. M. T.]

3.—C. D. Spivak describes his **esophagometer** or **intra-gastric whistle** as follows: It consists of a stomach tube provided at its proximal end with a whistle. The whistle is inserted in such a way that its opening, through which the air is blown in, looks toward the distal end, and the opening through which the air makes its exit is in apposition with the side opening of the tube. The whistle is secured in the tube by tying it externally with a piece of catgut or silk. The tube is introduced into the esophagus, and the air blown in by means of a pump, Davidson syringe, Politzer bag, the mouth, or what not. So long as the whistle traverses the esophagus the instrument is smothered and no sound is heard. The tube can be pushed forward and backward several times so as to ascertain the exact point at which the whistle becomes audible. The distances between the distal border of the side opening of the tube and the point at the incisor teeth where the whistling sound is first heard represents with precision the distance between the incisor teeth and the cardia. The esophagometer is to be used in patients who have swallowed the stomach tube several times, and whose stomach is empty. The advantages of this device are: (1) Precision in measurement not attainable by any of the other methods, except by that of Purjesz. (2) Cheapness. The materials necessary for manufacturing this instrument are (a) a stomach tube, (b) a whistle, and (c) a piece of thread. It does not take more than two minutes to insert and secure the whistle in the tube. (3) No special instrument is needed. It is an esophagometer only when used for the purpose of esophagometry. In the twinkling of an eye the component parts are separated and we have our stomach tube and whistle ready for other uses. [T. M. T.]

5.—W. P. Porcher states in his article that it is well known that a complete nasal occlusion from inflammation or obstruction will often set up an otitis which may have a disastrous effect upon the ear, but it is rarely recognized that a small growth occupying the olfactory rather than the respiratory nostril may result in equally serious consequences, even to partial or complete deafness, severe and prolonged coughs, etc. It is therefore necessary in our surgical procedures in the nose that extreme care be used lest serious and unexpected intercurrent disease be set up in the adjacent organs. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

August 29, 1901.

1. The Treatment of Stricture of the Esophagus. THEODORE DUNHAM.
2. A Discussion of the Indications for Operation in Gastric Ulcer. ARTHUR T. CABOT.
3. Cancer of the Intestine. FRED. H. LUND.
4. New Procedures in the Treatment of Hip Disease; Operative Dislocation and Drainage of the Acetabulum in Acetabular Disease. E. H. BRADFORD.

1.—Dunham describes an instrument which he uses for dilating stricture of the esophagus. A black thread is washed down the esophagus into the stomach and the end fished out through a gastrotomy opening. Wire-and-splide bougies are then attached to the stomach end of the thread and pulled through the stricture. [J. M. S.]

2.—Cabot believes that with gastroenterostomy added to the operative repertoire, the surgeon may feel that if he does not find a gastric ulcer accessible to safe removal, or even if he cannot find it at all, he may still be able to

afford relief to his patient by an easy and comparatively safe method. The conditions most evidently demanding interference are: (1) symptoms of perforation, (2) dangerous or persistent hemorrhage, and (3) the occurrence of symptoms that point to chronic course of the ulcer. In case of **gastric ulcer** in which acuteness of pain and tenderness indicate that the ulcer is approaching the peritoneum, it is well to make preparations that will insure a quick operation if the need arises. The danger of fatal hemorrhage is greater in later life, especially where the symptoms point to the existence of a chronic ulcer. Under such circumstances, a tendency to a slight recurring hemorrhage should act as a warning that the ulcer is progressing in a dangerous direction. Gastroenterostomy is efficacious in arresting hemorrhage in a large proportion of cases. The mortality from gastroenterostomy, according to Mikulicz, is 16.2%, while the mortality from the disease is from 25% to 30%. The following summary of the **indications for surgical interference in gastric ulcer** is made by the author: (1) Acute hemorrhages should rarely be treated by operation. When, however, hemorrhage frequently repeats itself, even if severe in amount, it will demand operative treatment as soon as its recurrent character is plain. (2) Small, frequent hemorrhages, threatening anemia, clearly indicate operation. (3) Perforation of the stomach, either acute, with general peritonitis, or chronic, with surrounding adhesions and perigastritis demands instant operation. (4) When an ulcer runs a chronic course with a strong tendency to recurrence, so that the patient's capacity for work and for the enjoyment of life is diminished, an operation is indicated.

[J. M. S.]

3.—The history of the majority of the patients who are subjects of **carcinoma of the intestine** is most unsatisfactory. The surgeon is asked to give surgical aid to patients suffering from the serious emergencies in which this disease terminates, such as general peritonitis from perforation, paraintestinal abscess or complete occlusion of the bowels. These conditions admit, as a rule, of nothing more than palliative operation. Lund believes that the symptoms of emaciation, increasing constipation, perhaps alternating with diarrhea, with localized gurgling of gas and intestinal discomfort, in a patient past middle age, ought to indicate exploratory celiotomy whether a tumor is felt or not. In the rare cases in which a tumor is so situated that it can be felt early in the disease, there ought to be no question regarding immediate celiotomy. As far as we know, the only possible cure of an intestinal carcinoma consists in its early removal and even palliative measures, such as intestinal anastomosis or colostomy, are much more safely performed in the absence of the grave emergency of obstruction and before the patient has been too greatly weakened by the advance of the disease. Absolute localization to a limited portion of the intestine without extensive glandular involvement in a patient in good condition is requisite for successful treatment of an intestinal carcinoma. These conditions demand not only early diagnosis, but frequently exploratory operation in the absence of an exact diagnosis. The author then discusses the different situations in which carcinoma of the intestine is met with. The differential diagnosis is to be made between sarcoma, tuberculosis, benign tumors, carcinoma or tumors of the other organs, fecal impaction, benign scars and tuberculous stricture. He adopts the classification of Boas. (1) Cases in which the subjective symptoms are so clear that no objective signs are necessary. (2) Cases in which the symptoms are doubtful and in which objective symptoms are necessary for diagnosis. (3) Cases in which local symptoms are entirely wanting until the disease has made extensive progress. (4) Cases in which sudden obstruction occurs without previous notable symptoms. Operation is absolutely indicated in all cases in which a tumor is suspected of being carcinoma of the intestine. Operation is indicated in cases in which the symptoms point to stenosis of the bowels, whether a tumor is palpable or not. Exploratory operation is indicated whenever vague intestinal symptoms, associated with loss of weight, in persons past middle age, lead to the suspicion of intestinal carcinoma. In cases in which metastasis has occurred to the peritoneum, the liver, or other organs, no radical operation can be proposed, but all operative measures must be palliative. Excision of the growth with

immediate union of the ends of the bowel is the ideal operation to be sought. Intestinal anastomosis and enterostomy are merely palliative measures. [J. M. S.]

4.—Bradford reports a case of **hip-joint disease**, in a boy, aged 6 years, in which the disease was confined to the acetabulum. The head of the femur was thrown out of the joint by an operation a free incision was made and the acetabulum which was perforated was drained.

[J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

August 31, 1901.

1. Ancient and Modern Conception of Syphilis. WM. L. BAUM.
 2. Intrauterine Amputations. Probably Caused by Fibrin Abnormally Present in the Liquor Amnii. J. MAHER.
 3. Ectopic Pregnancy, with Report of a Case of Ovarian Pregnancy. WM. H. WATHEN.
 4. Gynecology, Its Contribution to General Surgery. HENRY O. MARCY.
 5. A Case of Leprosy. A Case of Multiple Nævus Pigmentosus. BURNSIDE FOSTER.
 6. Report of a Case of Epidermolysis Bullosa Hereditaria. L. E. SCHMIDT.
 7. Protracted Influenzal Pneumonia in Infancy. FRANK X. WALLS.
 8. Membranous Colitis. CHARLES DOUGLAS.
 9. Ureteral Calculus Accurately Located by the X-Rays and Removed by an Extraperitoneal Operation. W. W. KEEN.
 10. Remarks on Spinal Surgery, with Illustrative Cases. ANDREW J. McCOSH.
 11. The Gynecologist as Consultant. HUNTER ROBB.
 12. The Rationale and Technique of Pneumatic Aural Massage. B. ALEX. RANDALL.
 13. Pernicious Anemia. Report of the Progress of Cases Presented to the Association of American Physicians in 1900, etc. FRANK BILLINGS.
 14. Notes on Anesthetics. D. H. GALLOWAY.
 15. Case of Tubal Pregnancy. H. W. HENDRICKSON.
- 2.—Maher reports the case of a baby born without some of its fingers and toes. An examination of the baby 15 hours after birth revealed constricting bands of what appeared to be dry fibrin encircling the fingers and toes. After the constrictions had been removed some of the members in the course of time fell off, having been strangulated to such an extent that they could not recover. He believes the trouble in this case arose from the abnormal presence of fibrin in the liquor amni. He takes issue with the majority of writers who leave us to infer that these **amniotic bands** are all outgrowths of the inner surface of the amnion. [W. A. N. D.]
- 3.—Wathen does not believe it is possible for an **ectopic pregnancy** to develop primarily in the peritoneal cavity, for the ovum cannot be lodged securely in any one place sufficiently long to form chorionic attachments, and the peritoneal secretions will very soon destroy its vitality. Ectopic pregnancy must be primarily tubal, tubo-ovarian, or ovarian, but as it cannot develop to term in any of these structures, it ruptures into the folds of the broad ligament or into the peritoneal cavity; and if the chorionic attachments are not then destroyed there is no reason why the pregnancy may not continue to term. He believes that most cases reported as intraperitoneal pregnancy are extraperitoneal, having developed in the folds of the broad ligament or having separated the peritoneum from its attachment, either extending upward posteriorly or anteriorly between the peritoneum and the abdominal wall. He reports a case of what he believes to be an ovarian pregnancy. [W. A. N. D.]
- 4.—Marcy gives an interesting review of the history of gynecology, which he claims is very naturally in origin a subdivision of obstetrics rather than of surgery. He gives a short review of the different pioneers in this line of surgery, together with an account of the slow growth of ovariectomy up to 15 or 20 years ago. He summarizes the contribution of gynecology to surgery as primarily the entire domain of pelvic, abdominal and intestinal surgery. He says that gynecology which only a quarter of a century ago was looked upon with disfavor by surgeons, who stigmatized it as the "art of puttering," has become the chief corner stone in the new edifice dedicated to surgery.

[W. A. N. D.]

5.—Foster reports a case of leprosy. The patient was 20 years of age and had never resided outside of the state of Minnesota. One of his brothers died of leprosy in May, 1898, from which he had been suffering for eight years. The other members of his family, namely, his father, mother, two sisters, and one brother, are in good health. The patient's brother, who died of this disease, had been nursed by a woman who had two brothers suffering from leprosy. The type of leprosy in the case reported by Foster, was of the anesthetic variety; the eruption was scattered in different parts of the body. There was a distinct node on the right wrist, thickening of both ulna nerves, with a number of anesthetic areas in many parts of the body. The author mentions that this case is of interest as the patient was born in Minnesota, and had never been outside of the State. The author also reports a case of multiple *nævus pigmentosus* which occurred in a male 21 years of age. The patient was born in Sweden. The condition had existed since birth, and from that time has grown considerably larger. The lesion was situated principally upon the back. A microscopical examination of the growth confirms the diagnosis. The author also presented a case of suspected *lupus vulgaris* for diagnosis. The patient, 27 years of age, had been suffering from large ulcers and sores over his body for the past 24 years. The extent of the ulceration varied. When the patient came under observation there was an ulcer on the wrist, and about this area there were three jelly-like nodules which resembled *lupus vulgaris*. Nine years ago, the patient was treated with tuberculin which had a favorable influence. The eruption disappeared entirely for six weeks. The author is inclined to believe that this case is one of *lupus vulgaris* and *lupus erythematosus*, combined. [F. J. K.]

6.—Schmidt gives an account of a case of *epidermolysis bullosa hereditaria*. On April 15, 1899, the patient, Edwin B., aged 9 years, presented himself for examination. There was nothing of importance in the family history which pertained to the patient's present condition. He had measles and whooping-cough some years ago. At birth no eruption of the skin was noticed, at the end of the second week, blisters about the size of a split pea, appeared on the soles of the feet just around the heels. Some time after, when the child was three months old, small irregular blisters, varying in size from a pin-head to the size of a lima bean, appeared on the dorsal surface of the hands and fingers. When the child began to walk bullae showed themselves around the anterior surface of the knee, the ankles and the elbows. Many of the blisters ruptured shortly after their appearance, the remaining contents drying in several days. The fluid from the blisters was usually clear, rarely turbid light yellow in color and slightly tenacious. During the last four years of the illness, the contents of the bullae were occasionally blueish purple in color. Repeated acute attacks of adenitis occurred during the last two years of the disease. This inflammation of the lymphatic glands occurred when the bullae became infected. A hemic murmur was heard occasionally over the base of the heart. The child was peculiar in regard to his diet, refusing to take almost all vegetables and fruits. The treatment consisted in the administration of tonics, especially iron, and more recently the patient had been taking cod-liver oil. If the blisters were very large, they were opened and treated antiseptically, as a rule, however, they were not opened. [F. J. K.]

7.—Walls discusses protracted influenzal pneumonia in infancy, and reports four cases of this condition. We are reminded that influenza in infancy is as protean a disease in all its characteristics as during other periods of life. In regard to the etiology, he states that the four infants were fed exclusively on artificial food at the time they contracted influenza. The onset of the disease in these cases of grippe pneumonia was marked with a gastro-intestinal infection, and in a few days by symptoms relating to the respiratory tract. Disinclination to take food was usually the first symptom observed, and if the food was taken vomiting followed. The infants were cross and fretful, and had a high fever; the respirations were hurried and jerky. The cough which was at first slight increased in severity as the disease progressed. The tongue was dry or coated with a moist whitish fur. The bowels were constipated and there was considerable gaseous distension of the stomach and intestines. The temperature curve appeared irregular and intermittent; hyperpyrexia was observed several times. The respiratory rate varied

from 40 to 80 per minute. Very little sputum was raised by coughing. This sputum was not rusty or even blood tinged, it consisted of tenacious glairy mucus. Influenza bacilli were isolated from the sputum of all of the cases. Clinically, the pneumonia was lobar. Consolidation developed slowly, and the typical signs of pneumonia were noted after several days, a week, or even longer. The rate of the pulse varied from 140 to 180. Few nervous symptoms showed themselves in any of the cases. He then discusses the diagnosis, prognosis, and treatment.

[F. J. K.]

8.—Douglas gives an account of membranous colitis. He states that this disease occurs most frequently between the ages of six months and two years. It is usually a disease of marked severity, and endangers the health and life of the child. Its onset is commonly marked by vomiting, high fever, loss of appetite, pain, and frequent large stools of a mucous character. As the disease progresses, the vomiting ceases and the temperature falls. When this does not occur, marked prostration develops. Abdominal pain and distension are constant symptoms. When the irritation involves the lower portion of the colon tenesmus often occurs. The mucous membrane of the bowel not infrequently protrudes, revealing intense congestion of the mucous surface, and often patches of pseudo-membrane. The latter fact is sufficient to establish a diagnosis. Blood is quite constantly found in the stools, but it should be borne in mind that the appearance of the pseudo-membrane is the only feature which positively establishes a diagnosis. This false membrane does not often appear in large amounts, while mucus and blood are more constantly present and continue to appear for a considerable time. The amount of mucus and the length of time it continues to pass, are of value in determining the severity of the attack. The disease generally runs a course of from ten days to two weeks, and when of longer duration, the prognosis is unfavorable. The author mentions that when the disease occurs in young infants under six months of age, it is generally because they are improperly fed. He gives a report of three cases. [F. J. K.]

9.—Keen's patient was a boy aged 10 years. He suffered his first paroxysm of pain when 2 years old. The skiagraph showed a *ureteral calculus* one half the size of the last joint of the little finger in the left ureter, which was thought to be at the pelvic brim, but which was found a little below this level at operation. An oblique incision was made above and parallel with Poupert's ligament, and the peritoneum pushed back. Considerable difficulty was encountered in isolating the ureter. A hard mass in which the ureter was apparently lost, was found just above the bladder. This was incised and the stone removed. It had evidently ulcerated through the posterior wall of the ureter and lay in a sac partly intra- and partly extra-ureteral. The incision in the ureter was closed by a continuous catgut suture, and a gauze drain was placed against it. Recovery was uneventful, no leakage taking place. [F. T. S.]

10.—McCosh says the reasons for rapid relief in cases of pressure on the cord are as urgent as those of pressure on the brain, though the operation for fractured vertebrae is less satisfactory than trephining for fractured skull. The reverse may be said to be true in regard to tumor. As reasons for delay may be mentioned great shock, and uncertain diagnosis. In the cases where operation is not indicated the symptoms are prone to be irregular. Paralysis are not complete and often muscles of the same group may not be equally affected. The anesthesia is only partial and paresthesia with patches of hyperesthesia is common. Symptoms of irritation are apt to be less pronounced. On the other hand when there is definite pressure on the cord the parts are apt to be decidedly affected. Reflexes are apt to be abolished. If at the end of 12 or 24 hours the condition seems questionable, it is wise to explore, the danger being slight. In a certain class of cases, cord injury is followed by early and persistent improvement up to a certain point, when it ceases and degenerative changes develop. In such patients the symptoms may be due to hemorrhage, inflammatory extravasation or to pressure by fragments of bone. The former disappears gradually but the latter can only be removed by operation. It is often impossible to determine which one of these causes is responsible for the symptoms, but as long as improvement continues it is wise to wait, unless it be positive that a fragment of bone presses on the cord. Ten cases are reported to fortify the assertions made in this paper. In 159

cases collected by Lloyd there were 59 deaths following immediately after operation and 39 at a later period. Of McCosh's laminectomies for fracture, 6 in number, two have recovered and four have died. (To be continued.)

[F. T. S.]

11.—Itob, in speaking of the gynecologist as a consultant, says that the gynecologist, no less than any other specialist must have a thorough broad training and experience in general medicine and surgery before taking up his specialty. Gynecology presents such a wide and important field that it requires the entire attention of the man who intends to obtain the best possible results. In order to appreciate the present condition of affairs one has only to compare the results obtained by any well known surgeon with those of the gynecologist in the first rank in a similar line of work, both as to morbidity and mortality. Taken as a whole the evidence will be found to be strongly in favor of the gynecologist. He claims that the family physician should always summon the aid of a gynecologist whenever the patient presents symptoms that suggest some pelvic inflammatory disease, and no improvement has taken place after a reasonable length of time from the course of treatment that is being pursued. He reports sample cases of conditions in which the diagnosis could only be made by a gynecologic expert. [W. A. N. D.]

12.—Randall writes on "the rationale and technique of pneumatic aural massage." This author states that of all the various measures and appliances of pneumatic massage, Seigle's otoscope is the best. This instrument enables the physician to see exactly what he is doing. He may note the response of the drum-head, whether it be muffled or intense, and determine the response of the malleus-handle. He believes that massage without ocular control should only be performed when the effect of the procedure has been studied well through the otoscope, and has proved itself harmless. The failure to secure good results with massage is often due to the lack of air within the tympanum. Therefore tympanic inflation is often indicated. In order to determine the result of massage, the condition of the patient should be carefully studied during the massage, after it is finished, and at the next examination.

[F. J. K.]

13.—Will be treated editorially.

14.—Galloway says that a surgeon is frequently more concerned about the anesthetizer than he is about his own work, that in more than half of the cases the patient is in greater danger from the anesthetic than he is from the operation; that in the majority of cases of death due to anesthesia the anesthetic has been administered by the unskilled; that the patient should not be brought profoundly under chloroform in less than five minutes, more than ten minutes being never required; that in chloroformization there is seldom a stage of excitement unless the patient be an habitué of alcohol, tobacco or some other drug; that it is unnecessary and dangerous to touch the globe of the eye; that the anesthetizer should be considered a consultant rather than an assistant; and that no man can safely administer an anesthetic and watch the operation at the same time. [F. T. S.]

AMERICAN MEDICINE.

August 31, 1901.

1. Two Cases of Injury to the Diaphragm by Puncture Successfully Treated by Suture, etc.
PROFESSOR CARL SCHLATTER.
2. Diseases and Sin. GEORGE M. GOULD.
3. The Operative Treatment of Saddle-Nose, with Two Illustrative Cases. EMANUEL J. SENN.
4. Pulmonary Tuberculosis as an Insurance Problem.
CHARLES LYMAN GREENE.
5. The Value of Antitoxin in Diphtheria.
WALTER R. GRIESS.
6. The Treatment of Neurasthenia. W. BLAIR STEWART.
7. Report of a Case of Purpura Hemorrhagica.
A. HYMANSON.
8. The Medical History of Dr. Samuel Johnson.
W. C. CAHALL.

1.—This article appears in conjunction with *Münchener medizinische Wochenschrift* and will be abstracted from that journal. [T. L. C.]

3.—Emanuel Senn reports two cases of operative treatment of saddle-nose. The condition is produced by trauma, which frequently causes a depressed fracture of the nasal

bones, or by disease, principally syphilis and tuberculosis. In the former, the supportive bone framework is destroyed, and in the latter, the alae. In case of fracture an immediate elevation of the depressed fragments, and their proper maintenance in their normal position, generally prevents this condition. When there is an old fracture of the nose in which the nasal bones have become deeply depressed there is usually considerable interference with breathing. The author gives his conception of the proper correction of this defect. Physiologic restoration of breathing and cosmetic result are both to be considered. This may be accomplished either by an intranasal or an extranasal operation. In recent fractures, the former method is preferable. Rhinologists are, as a rule, in favor of this plan in cases of old fractures of the nasal bones, but the author believes that an external incision is better in such cases, as it is an operation of precision. The external wound is small, and with careful suturing with a fine suture material, the scar in a few weeks becomes almost imperceptible. He advises a vertical incision, one and a half inches to two inches long made in the middle line of the nose over the depression, the skin and soft structures are to be dissected back carefully from the underlying fragments. With a narrow chisel the nasal bones are fractured at a point where they join the nasal process of the superior maxillary bone, care being taken not to injure the mucous membrane. A Kocher director, covered with gauze, is now passed into each nostril alternately, the fragments are thoroughly mobilized and the nose moulded into desired shape. A straight needle, armed with a medium silver wire, is passed through the nose underneath the fragments. Lead discs are placed at each end; the wire is tightened and fixed on the discs, thus supporting the fragments and also narrowing the width of the nose to the desired degree. The most important step of the operation is the placing of rubber tubes of the desired caliber in the nostrils. These will act as an intranasal splint and facilitate breathing. They are retained by adhesive strips fastened to the cheek. A plastic splint is also applied to conform with the new bridge. [T. L. C.]

4.—Charles Lyman Greene discusses pulmonary tuberculosis as an insurance problem, and lays especial stress on the value and importance of an early diagnosis. He believes that the insurance companies would save millions by paying more attention to direct contagion, and better methods of examination. He gives the early symptoms in the physical signs of the condition, and makes a plea for more thorough and scientific physical diagnosis.

[T. L. C.]

5.—Walter R. Griess discusses the value of antitoxin in diphtheria. He believes that antitoxin ought to be given as soon as the diagnosis is made with certainty; that children require larger doses, as their natural resources for fighting disease, are always less than those of adults. In mild cases of diphtheria 2000 units should be given as an initial dose, and if no improvement takes place within 12 hours, it should be repeated. All laryngeal cases, or cases in which prostration is severe, should have 4000 units as an initial dose, and 2000 units in 8 or 12 hours if there is no marked improvement. Intubation in children should be practiced before the child becomes exhausted, and if not successful, no time should be lost in making a tracheotomy. The value of a stimulant before performing such operations is not to be overlooked. He lays especial stress upon the fact that the results to be expected from antitoxin depend upon two things: (1) When used, in the course of the disease, late or early; and (2) in what type or class of case it is employed. [T. L. C.]

6.—William B. Stewart contributes a paper on the treatment of neurasthenia, in which he emphasizes the necessity of gaining the patient's full confidence, and the value of sympathetic attention and firmness on the part of the physician as well as adhering closely to method. He believes that the patient should be taught to think, move, eat, sleep, exercise and talk by absolute rule, and that these things are necessary as preliminary to successful treatment. It is necessary to relieve, as far as possible, the causative factors of the condition, and then inaugurate the physical methods of treatment, especially rest and exercise, and the writer lays stress upon the fact that the rest should consist of at least 10 hours per day and the exercise should be carefully moderated. As to climate, high elevations above 1000 feet, aggravate most cases. They do best at low elevations, and especially at the seashore. In some

nia and the drug habit must be carefully met. He emphasizes the value of massage and electricity, warm baths, hot foot baths, a cup of warm milk, or a slight walk before retiring, in place of drugs. [T. L. C.]

7.—A Hymanson reports a case of **purpura hemorrhagica**, and he concludes that the case proves the indisputable relationship of purpura, scurvy, peliosis rheumatica and allied affections. The patient, who was a boy of 18 years, presented marked gastrointestinal disturbance, colicky pains and an edematous condition of the joints. Prof. Jacob, who was called in the case, believes that the severe pain in the back was due to mild pancreatic hemorrhage. As to the remedial agents, codeln by the mouth, or morphia hypodermically, alone had some slight soothing effect. Ice bags on the abdomen gave relief, but caused retention of urine. The author advises the administration of vegetable acids in all varieties of purpura. [T. L. C.]

ANNALS OF SURGERY.

May, 1901.

1. The Surgery of the Spleen. J. COLLINS WARREN.
2. Concerning Prompt Surgical Intervention for Intestinal Perforation in Typhoid Fever, with the Relation of a Case. HARVEY CUSHING.
3. Operative Paralysis of the Spinal Accessory Nerve. PEARCE BAILEY.
4. Hydatid of the Prostate. L. BOLTON BANGS.
5. The Surgical Treatment of Amebic Dysentery. FRANCIS W. MURRAY.
6. Some New Points in Tendon Surgery. F. S. COOLIDGE.
7. Some Errors in Diagnosis in Conditions Resembling Appendicitis. GEORGE EMERSON BREWER.
8. Rare Complications after Operations for Appendicitis. WILLY MEYER.
9. Report of Three Cases of Peritonitonal Hernia. JOHN CHADWICK OLIVER.

1.—J. Collins Warren discusses the **surgery of the spleen**. The various diseases of the spleen are reviewed and their surgical treatment outlined. The great frequency of small hypertrophy of the spleen among the Armenian inhabitants of Boston is mentioned and also the fact that in southern Italy this condition is quite prevalent. Operation of splenectomy is said to have been done in the most ancient days. It is said that sometimes the spleen was removed from runners for the purpose of giving them greater speed. Hagen has collected 360 cases of splenectomy with a mortality of 38.3%. Quite a number of large malarial spleens have been removed and in 64 of these cases operated upon after 1890 the mortality was 23.4%. Splenic anemia or splenic pseudoleukemia occurs in young adult life and is to be sharply differentiated from the anemias of infancy. Sippy (*Amer. Jour. Med. Sciences*, October, 1899, Vol. CXVIII, page 428) has collected 25 cases of splenic anemia. Osler (*Amer. Jour. Med. Sciences*, October, 1900) has reported 15. The symptoms of this disease with its insidious onset are next described. As the tumor increases anemia also increases, causing fatigue, edema of the feet and occasional temperature. Bronzing of the skin has sometimes been present. Ascites may develop and petechia and more rarely still hemorrhages from the stomach and intestines. Protracted diarrhea is a late symptom. A careful study of the blood is essential to a positive diagnosis and here a differential count of the white blood corpuscles is as necessary as an estimate of their whole number. At first there is a diminution of the hemoglobin with a lesser degree of the diminution of the red corpuscles. As the disease progresses there is an extreme drop in both hemoglobin and red blood corpuscles. The coagulability of the blood is much diminished. The white corpuscles are actually and relatively diminished and the differential estimate shows an enormous ratio between the young and adult forms. There should be no myelocytes. Atrophy and sclerosis of the Malpighian bodies has been noted by Banti which is in contrast to leukemia, in which disease, according to Cabot, the Malpighian bodies are increased. One of Osler's cases extended over ten years. Sippy regards the disease as fatal unless relieved by surgical interference. In seven of his cases splenectomy was done and five recovered. Osler recommends the operation only in chronic cases with recurrent hemorrhage. The author reports a successful splenectomy for

this condition. The diagnosis of splenic leukemia is made largely on the blood count which shows an increased number of white corpuscles with the appearance of the myelocyte. Splenectomy in this condition is most unfavorable, being almost invariably followed by death. Hagen reports 12 operations with only 4 recoveries. Death in nearly every instance was due to hemorrhage. Richardson reports a successful splenectomy for splenic leukemia. Banti's disease or hypertrophy with cirrhosis of the liver is next described. Banti's cases show an increase in the marrow of the long bone, beyond this there is little definite in the pathology of the disease. Hagen reports 16 splenectomies for Banti's disease with only three deaths. Wandering spleen gives rise to serious disturbance of the stomach and may occasionally produce intestinal obstruction. A peritonitis may also result from a twisting of its pedicle. During the last ten years there have been 13 splenectomies for this condition owing largely to the fact that the organ is usually hypertrophied and more or less diseased. In cases of abscess of the spleen where the organ is surrounded by pus or where it is not too tightly bound down by adhesions splenectomy may be performed. Where extirpation, however, means danger of infecting the peritoneum, opening and drainage constitute the treatment. In cases of rupture of the spleen, unless the rent be a small one and the hemorrhage easily controlled, splenectomy is to be performed. In the last ten years 4 cases of sarcoma of the spleen have been operated upon with operative recoveries and one death. Warren calls attention to the wide field for splenectomy showing that the operation is only contraindicated in such conditions as leukemia, cirrhosis of the liver and amyloid disease. The size of the spleen is much less a contraindication to operation than adhesions which it has formed to surrounding organs. Before removing the spleen Warren suggests that the hand should be passed under it and the organ turned over. In this way the vessels are rendered much more accessible and can be tied before the spleen is removed. The author thinks it has been shown that there is no difference in the resistance to infection from bacteria after splenectomy than before. One of the results of removal of the spleen is a temporary increase in the number of white corpuscles. Enlargement of lymph glands has frequently been noticed after splenectomy (Bolton, Warbasse) and occasionally the thyroid gland has increased in size. A report of 4 cases of splenectomy and one of splenopexy conclude the article. [J. H. G.]

2.—Harvey Cushing discusses the question of **prompt surgical intervention for intestinal perforation in typhoid fever** and reports a case. Attention is called to the fact that more than 2/3 of all the recorded operations for this condition have been done by American surgeons. The author thinks that the mortality of this operation is probably higher than statistics would indicate, because many of the isolated cases operated upon which ended fatally are not reported with the same certainty with which the successful ones are recorded. The results of the surgical treatment of this condition, however, have been so satisfactory as to make the operation one of necessity. In tabulating results it is suggested that a distinction be made between operations for intestinal perforation in typhoid and operations for acute diffuse peritonitis, the result of perforation. The result of perforation and all operations for the relief will greatly depend upon the form of bacterial infection which is set up, and this distinction cannot be made until the abdomen is opened and a culture made. It is thought that prompt intervention in cases of typhoid perforation will very shortly be the means of saving from 50 to 60 per cent. of these cases. Reference is made to the utility and ease of operating under the use of a local anesthetic. Even though no perforation should be found the abdominal section under cocaine will in no way interfere with the recovery of the patient. A case is reported by the author of a boy 20 years of age who from the onset of the fever showed marked abdominal symptoms. Within five days the leukocyte count increased from 5000 to 15,000. The patient passed some blood by the bowel upon several occasions. The baths were taken badly, the patient complaining of abdominal pain during immersion and being cyanosed after the bath. Upon one occasion the patient was considerably collapsed after a bath and at times there was considerable uniform abdominal rigidity and pain in the right iliac fossa. The patient's temperature dropped from 103° to 99°. Operation

was thought of at this time, but there did not seem to be sufficient indication for it. Subsequent to this collapse the patient passed a large amount of blood by the bowel. 45 hours later the patient's condition became serious, he vomited and the leukocyte count was 17,000. The patient was dull, his pulse was feeble and 140. Operation was done at this time under local anesthesia. A large perforation was found in the ileum and several ounces of pus were evacuated from between the coils of the bowel. There was also evidence of recent extravasation in the general cavity. The perforation was closed. A number of other thin spots were found over the ileum; so numerous were these that inversion was out of the question, so the operator wrapped the omentum around this portion of the bowel and fixed it with sutures. The wound was only partially closed and the diseased portion of bowel left directly beneath the opening in the abdominal wall. The patient did well after the operation, the leukocyte count dropping from 17,400 to 3000 in five days. The abdominal rigidity disappeared in two days. Eight days after the operation a fecal fistula developed at the wound. This promptly closed and the patient was discharged about two months after operation. The author thinks that it would have been better to have operated upon this case at the time of the collapse following the bath but excuses himself by a study of the patient's condition previous to this time and the fact that there were no very positive indications for operation. He asserts, however, that in another case, where there is a reasonable doubt, exploration will be made. Attention is called to the frequency of hemorrhage from the bowel in cases of perforation. The author thinks that one reason why better results have been reported from cases operated upon during the period from 8 to 24 hours after evidence of perforation is the fact that patients who survive perforation for this length of time have usually suffered from a mild bacterial infection or else the process has gone on slowly and been well combated by a peritoneal reaction. [J. H. G.]

3.—Bailey reports two cases of **accidental section of the spinal accessory nerve**, followed by serious disturbances of motion in the trapezius and sternomastoid muscles. This is unusual as in most cases the paralysis which results from section of this nerve is not particularly disabling. This is explained by the fact that the cervical nerves commonly participate in the supply of the trapezius and even when the sternomastoid is totally paralyzed freedom of movement of the head and neck is not abolished. When the spinal portion of this nerve is affected the trapezius and sternomastoid show a loss of power without symptoms referable to the larynx and pharynx. Among the producers of such a condition are fracture of the cervical vertebrae, cervical caries, syphilitic pachymeningitis, and such diseases as syringomyelia, locomotor ataxia, progressive muscular atrophy, and traumatic hematomyelia. Within the skull symptoms due to affections of both portions may result from basal lesions generally. An injury outside the skull, to cause symptoms referable to both branches, must be situated directly at the skull base. [F. T. S.]

4.—Bangs reports a case of a man aged 39 years who was born in Germany and admitted to the hospital for **retention of urine**. After a catheterization of the bladder a large tumor in the hypogastrium remained. By rectal examination the left lobe of the prostate is found to be larger than the right and its posterior and lateral margins cannot be defined from a mass in the pelvis with which it seems to be continuous. An incision was made from the umbilicus to near the pubes for exploration. There were a few adhesions to the intestines and the growth was distinctly adherent to the iliac vessels. Some 25 ounces of a clear serous fluid were withdrawn from the tumor by tapping. It contained many collapsed secondary cysts and four or five "pearls." The lining of the sac was rubbed dry and all the secondary cysts cleared away. It was found impossible to remove the sac, so the edges of its opening were stitched to the abdominal wall and drained. Microscopic examination showed the presence of hooklets in the fluid. The author has been able to find three cases which seem to correspond to the one reported. The case is regarded of prostatic origin because of the length of the urethra, viz.: 10 1/2 inches, because the obstruction to the urination was at the base of the bladder in the situation of the left lobe of the prostate, because the beak of the searcher rotated toward the right as it came in con-

tact with the left lobe of the prostate, because of the situation of the tumor, and because of the findings at the time of operation. The patient recovered, and at present a sausage-like mass can be felt extending from the posterior edge of the left side of the prostate backward and upward as far as the finger can reach. [F. T. S.]

5.—Murray emphasizes the very small percentage of cures following the medical treatment of **chronic amebic dysentery**, and recommends forming a complete artificial anus through an inguinal colostomy, preferably on the right side, to put the colon at rest, and in order to carry on a thorough and satisfactory local treatment of the colonic ulceration. If after four months of medical treatment the dysentery is not cured the case should be referred to the surgeon. The artificial anus should be left open for a long time and its subsequent closure should not follow until the ulceration is healed. This fact may be ascertained by the Kelly proctoscope introduced into both the natural and artificial ani, and by examining the irrigating fluid for the presence of the amebae and mucus. If the mesentery of the colon be too short to allow of the formation of a complete artificial anus, or if the ascending colon itself be ulcerated, an ileostomy may be performed. A case is reported which improved very much under the above recommended treatment. [F. T. S.]

6. Coolidge presents some new points in **tendon surgery**. He says it is wrong to turn away cases of infantile paralysis telling them that massage and electricity is all that can be done for them and recommending them to wear braces and shoes for the treatment of their deformities. In every case a special study of the muscles involved must be made, and living tendons transplanted to replace the paralyzed ones if possible. The operation should not be done until it is definitely settled which groups of muscles are affected. Regarding the amount of strength of the muscle to be grafted as compared with the work it will be called upon to do, much may be left to Nature and the gradual strengthening of the muscle to meet the demands made upon it. Grafting should preferably be done above the annular ligament, as this ligament will then hold the tendon in its place. A tendon may be carried by blunt dissection for quite a distance subfascially or subcutaneously. Beck tunneled the interosseous ligament in grafting a posterior muscle into an anterior one. The best method of joining the tendon is to pull the paralyzed tendon through a perforation in the normal tendon and apply sutures; or to cut the paralyzed tendon long, reflect it and suture it to itself, remembering to take a stitch at the bottom of the slit in the normal tendon to prevent its slipping. Chromicized catgut lasting from 1 to 6 weeks may be used. After operation the limb should be kept in a plaster cast for at least four weeks, and some appliance to keep the foot in its proper position worn for several months.

Tenotomy of a spastic muscle causes the spasm to disappear. When spastic paralysis involves the muscles of the pelvis and thigh, tenotomy of the adductors and of the internal and external ham strings may be done. Coolidge reports 2 cases. The first was a five year old male child with spastic paraplegia involving all the muscles of both legs. He was unable to stand alone. The tendo-Achillis on each side, both the adductor groups at the perineum, and both left and right, internal and external ham strings were severed and the right quadriceps extensor tendon lengthened. The immediate result was much less spasm of the right leg and attempts at walking improved. The second case was a male, aged 22, suffering from spastic paralysis as a result of a spinal injury. The adductors, both ham strings, and the tensor vaginae femoris of the right leg were severed and the quadriceps extensor lengthened. The improvement in this leg was so great that the other leg was operated upon in the same manner. The patient is now able to walk 150 feet. [F. T. S.]

7.—Brewer reports 11 cases which were mistaken for **appendicitis**. In two the symptoms were found to be due to renal calculus; in four to diseases of uterine appendages; in one to sarcoma of the ileum; in one to cholecystitis; in one to acute suppurative pancreatitis; and in two to general sepsis. Six were operated upon during a supposed acute attack of appendicitis, four after the attack had subsided, and in one no operation was performed, the condition being determined by autopsy. [F. T. S.]

8.—Meyer reports two cases of thrombosis of the femoral veins and three of intestinal obstruction following appendectomy. The first case was operated on during an

acute attack, the abdomen containing a small amount of turbid serum. On the ninth day after operation the patient complained of excessive pain in the left groin. Two days later edema of the leg and the infiltrated vein were noticed. Three weeks after operation the other extremity was attacked in a similar manner. The patient remained in bed two months. The second case was operated upon during an interval. In the beginning of the second week she also complained of pain in the left groin followed by the signs of thrombosis of the femoral vein. After about ten days the right femoral vein was similarly attacked. He mentions one case occurring in the practice of a friend, in which the trouble was located on the left side. He believes infection to be the causative factor of this complication rather than the mechanical theory of Lennander. The first case of intestinal obstruction occurred four days after an operation for acute perforative appendicitis and was due to kinking of the intestinal coils just below the operative wound. The second case occurred twelve days after an operation for perforative appendicitis. An abscess which at the time of the primary perforation of the appendix had been forming in the left lumbar region, had increased in size and, induced perhaps by an enema given on the twelfth day, perforated into the descending colon, the pus appearing in the stools. One of the coils of small intestine which had been under great tension while the abscess cavity was fully expanded became kinked when the tension was withdrawn. Another kink occurred farther up in the coil where the omentum had become adherent. The third case occurred one year after a perforation of the appendix. The obstruction consisted of a minute band which passed from the cecum over the small intestine to the root of the latter's mesentery. These cases all recovered.

9.—Oliver reports two cases of **properitoneal** and one of **interstitial hernia**. The first patient had been operated on for intestinal obstruction which was thought to be due to strangulation of the bowel through a rent in the mesentery. The patient died two days later. At the post-mortem examination the supposed rent in the mesentery proved to be the mouth of a hernial sac lying wholly within the abdomen. The sac and opening had been dislodged from the left inguinal canal and pushed into the abdominal cavity. The second case presented a strangulated inguinal hernia on the right side which was partially reduced by taxis. At operation the constriction was found at the internal ring which, with the parietal peritoneum, had been pushed away from the transversalis fascia. Case 3 presented an undescended testicle on the left side with a history of having had a hernia on the same side. A large mass was felt over the inguinal canal. Operation revealed a large mass of bowel between the external and internal oblique muscles. The last two patients recovered.

BERLINER KLINISCHE WOCHENSCHRIFT.

July 1, 1901. (No. 26.)

1. The Home Treatment of the Mentally Diseased. C. MOELL.
2. Vegetarian Diet for the Masses and the Proportion of Its Service. (Capacity Balance). BAEIZ.
3. Monolateral Innervation of the Occipito-Frontalis Muscle in Bilateral Total Oculomotor Paralysis. A New Spectacle for Ptoxis. SALOMONSOHN.
4. Rhinological Reports with Demonstration.

B. LEWY.

5. The Treatment of the Night Sweats of Phthisis with Tannoform. A. NOLDA.

1. C. Moell believes that the treatment of the **mentally diseased** in the family is possible independently and without connection with any institution. The households of the patients can be grouped together in one locality in the vicinity of an institution for exceptional cases. The patients will not have to run the gauntlet of prejudice concerning those mentally deranged, and in suitable cases this form of treatment may bring about recovery. In extreme cases the home treatment may be combined with that of the institution. [M. R. D.]

2. The vegetarian diet in Japan where the lower classes almost entirely subsist on vegetable food has formed the basis of Baeiz's observations. The main article of food in Japan is not rice, as is generally believed, because it is very expensive, but on the other hand consists of barley, buckwheat and the goya bean, the latter containing twice as much albumin as beef. As an illustration of individual

accommodation to new nourishment, Baeiz quotes the case of a sailor 18 years of age who had been confined to hard labor in a prison for 49 days. The physician offered to pay the man a certain amount of money if he would eat only certain varieties of vegetables. The sailor agreed, and for 49 days was fed on millet-pap, receiving it three times daily. After 49 days he had gained $1\frac{1}{2}$ pounds in weight, and was fully able to perform his work. This is, of course, an extreme example, but it shows what some human digestive apparatuses are capable of. The prevailing systems of investigations concerning metabolism, which, after all, consist in the mathematical calculation of ingestion and excretion are unreliable, as a variety of conditions may give similar results in figures. [M. R. D.]

3.—Salomonsohn states that **bilateral total oculomotor paralysis**, although not a rare affection, nevertheless is not so very frequently observed. They are, nevertheless, highly interesting because of the difficulty of locating the lesion. After a perusal of the literature on the subject he calls attention to a symptom which occurred in his case, namely, the **monolateral innervation of the occipito-frontalis muscle**. The patient had bilateral ptosis. Nevertheless he could lift the right upper eyelid far enough to be able to see with the right eye. This did not occur through the innervation of the levator palpebrae superioris, but by reason of the fact that the right eyebrow was drawn up together with the occipito-frontalis muscle, and when the finger was pressed upon the latter the innervation did not occur. The author appends an illustration of a pair of spectacles he has devised for enabling the patient to lift his right eyelid without calling upon the innervation of the occipito-frontalis muscle. [M. R. D.]

4.—A description of microscopical preparations of rhinological specimens presented at the Berlin Laryngological Society. [M. R. D.]

WIENER KLINISCHE WOCHENSCHRIFT.

July 3, 1901. (XIV Jahrgang, No. 27).

1. A Diaphoretic Cure for Osteomalacia. RUDOLF SCHMIDT.
2. The Etiology of Tubal Otitis Media. G. ALEXANDER.
3. A Calcareous Hematoma with Amyloid Degeneration of the Spleen. KARL STERNBERG.

1.—**Osteomalacia** has been treated by a number of drugs, by diet, oophorin, baths, and oophorectomy, according to the various theories. Lack of exposure to cold, and warm, moist applications have caused the greatest improvement, by influencing the vasomotor and secretory functions of the skin. Some hyperemia occurs in the intra-osteal and peri-osteal circulation. This may be due either to a weakness of the walls of the arteries and veins, or to obstruction to the course of these vessels through the compact Haversian canals. Therapeutics have been of no avail against this. Hypothetically, a superficial hyperemia should deplete that found in the deeper parts. Therefore Schmidt used **hot air baths**. He reports in detail two cases of puerperal osteomalacia, thus treated for six months, with complete recovery following. Insomnia, which is common in osteomalacia, was also cured by this treatment. Other means of producing diaphoresis should be followed by the same results, hot baths, hot drinks, pilocarpin, etc. [M. O.]

2.—Alexander reports two cases in full in whom **following resection of the upper jaw, deafness developed**. A catarrh of the Eustachian tubes followed the operation, on the side of the operation, causing an otitis media. Both membrana tympani were drawn in. The results of all treatment were negative. Alexander suggests that, in the future, care should be taken to leave the back part of the hard palate, some bone at least, that the dilator muscle of the Eustachian tube be left intact. Otherwise all such operations will induce one-sided deafness. [M. O.]

3. In the autopsy which he performed upon the body of a man of 70, who died of cholera following occlusion of the ductus hepaticus and ductus choledochus by gall-stones, Sternberg found a **calcareous hematoma and beginning amyloid degeneration in the spleen only**. This condition was probably due to the cholangitis, which had not existed long enough to have caused wide spread amyloid disease. [M. O.]

British Congress On Tuberculosis

(Continued from Page 356.)

A Query as to Whether Any Special Types of Pulmonary Tuberculosis and Its Complications are Unsuitable for Treatment in the Climate of the British Isles. By P. S. Hitchens, M. B., M. R. C. P. (Lond.). The author remarks that we have heard very much hitherto about the successes of the Sanatorium Treatment, but very little about its failures. According to some writers, one would imagine that there were no failures, but yet, even excluding the most advanced cases, and cases in which acute millary generalization and violent hemorrhages intervened, there were undoubtedly cases whose rate of progress was at any rate a considerable disappointment to one. Were these disappointing cases of any special type of the disease or its complications?

So far as his own small experience had gone, he had had two types of disease whose rate of progress had been a disappointment to him. In one type the disease had assumed a *bronchitic form*, in the other the disease of the lungs, in whatever form, was associated with persistent troublesome diarrhea with very irregular pyrexia. Two cases illustrating these types of disease were described. These cases had improved but very slowly, and not nearly so rapidly as other forms of disease, which might at first sight have appeared much more serious. With the exception of acute pneumonic cases, and cases associated with pleuritic effusion, he had had most of the ordinary forms of tubercular disease of the lungs and its complications under his care. The ordinary rapidly spreading broncho-pneumonic forms, chronic forms with excavation, and associated with severe tubercular laryngitis and tubercular peritonitis, had all done extremely well. He thought it would be of great interest to know whether others had had the same experience in other types of disease in whose progress they had been disappointed. Would these types do better in a more perfect climate, or would their progress be disappointing under any circumstances?

The excellent results obtained by the sanatorium treatment of consumption in the British Isles were now known to all, and he thought our knowledge would now be better advanced by discussing our failures than by boasting about our success.

Tuberculosis in the Maltese Islands. By Dr. Them. Zammit, Malta. The mortality from tubercle in Malta is exceptionally low. As the general death-rate is not very low, and as overcrowding, and the other debilitating agencies are by no means rare, the comparative freedom from tubercle must be due to the sum total of the telluric and atmospheric conditions which constitute climate. It is a well-known fact in the Island that tubercular diseases in the cattle and among the domestic animals are of rare occurrence. The percentage of deaths from tubercle in relation to the general death-rate is as follows:

During 1890 . . . 9.2	During 1895 . . . 6.8
" 1891 . . . 9.3	" 1896 . . . 8.1
" 1892 . . . 8.9	" 1897 . . . 8.1
" 1893 . . . 9.2	" 1898 . . . 10.7
" 1894 . . . 6.3	" 1899 . . . 9.4

The average being 8.65 for ten years.

Comparing this with the proportion of deaths from tubercle to the general mortality of other countries, we find that Malta stands at the bottom of the list. Detailed tables gathered from the official reports of the Public Health Department of Malta are given to demonstrate the fact.

Statistics and Results of the High-Altitude Treatment in Pulmonary Tuberculosis. Dr. Th. Stephani, Beauregard, Montana, Valais. From observation of 150 tuberculous patients treated at Montana from 1897 to 1900 the following statistics are obtained:

1. Form of the disease: Dry infiltrations, 34 per cent.; Bronchial types, 30 per cent.; Cases with cavitation, 17 per cent.; Congestive forms, 13 per cent.; Pleuritic cases, 3 per cent.; Abdominal forms, 2 per cent.; Tuberculous

adenitis, 1 per cent. The pulmonary lesions are more frequently bilateral (53 per cent.), and are more frequently situated on the right (27 per cent.) than on the left (20 per cent.). Laryngeal complications rank in the proportion of 15 per cent. Heredity is present less frequent (44 per cent.) than it is absent (56 per cent.). The bacillus of Koch was present in three-quarters of the cases, or in almost all those in which it was possible to collect the expectoration. The transmission of tuberculosis from man to man was obvious in 80 per cent. of the cases, a fact which proves the significance of contagion. The inquiry we have made on this matter shows how many barracks, convents, and business offices are common *foci* for the propagation of tuberculosis.

The part played by the pleura as a starting-point of the disease is sufficiently striking, for in 14 per cent. of the cases pulmonary tuberculosis commences with a pleurisy, and in 18 per cent. one finds injuries to the pleura described as having taken place several years previous to the development of the phthisis. 2. As regards appetite, there is a decided improvement in 97 per cent. of the cases, which showed itself in 67 per cent. by a progressive rise in weight. 3. Extension of thoracic capacity, due above all to rarefaction of the air, is frequently noted. 4. The cardiac troubles ascribed to high altitudes have only been noticed in one out of the 150 cases; it was a case of congestive tuberculosis, with malformation of the heart, that had already been diagnosed when in the plain. 5. Nervous affections have not been observed. 6. Hemoptyses do not appear to be any more frequent at high altitudes than on the level, since 35 per cent. had manifested them when at home, and not at the sanatorium; while only 1½ per cent. of the patients had hemoptysis for the first time at the sanatorium. 7. Fever is often combated most effectually by the Alpine climate—it has yielded, in fact, in 60 per cent. of our cases. 8. As to the results from the point of view of actual recovery, high-altitude treatment gives the following: 12 per cent. completely cured, 50 per cent. improved and half cured, 20 per cent. condition stationary, 18 per cent. condition worse, or died. The 12 per cent. of cures may be subdivided thus: Febrile cases with cavities and laryngitis, 0.7 per cent., or 4 per cent. of cavities. Congestive cases without fever, 0.7 per cent., or 5 per cent. of congestive cases. Bronchitic cases with fever, 0.7 per cent., Bronchitic cases without fever, 1.3 per cent., 2 per cent., or 7 per cent. of bronchitic cases. Cases of dry infiltration: Febrile with laryngitis, 0.7 per cent., afebrile with laryngitis, 0.7 per cent.; afebrile without laryngitis, 7 per cent.; 8.4 per cent., or 24 per cent. cases of dry infiltration. Pleuritic afebrile cases, 0.7 per cent., or 25 per cent. of pleuritic subjects. Cases of abdominal tuberculosis, 0.7 per cent., or 33 per cent. of cases of abdominal tuberculosis. It is, therefore, the cases of dry infiltration (a group which embraces ¾ of incipient cases of tuberculosis) that furnish the most hopeful percentage of recovery. Afebrile forms are more favorable than the febrile. Laryngeal complications, although troublesome, do not render cure impossible. Two-thirds of the cured cases were free from hereditary taint, which goes to prove that the non-hereditary cases have a better chance of recovery.

Conclusions:—1. The high-altitude treatment is indicated in all forms of tuberculosis. 2. The treatment yields on an average: 12 per cent. of complete cures, 50 per cent. of improvements, 20 per cent. of cases in which the tuberculous process is arrested, 18 per cent. of failures. 3. The more a case conforms to the type of an incipient tuberculosis of the pleuritic or dry form, free from pyrexia or other complication, and devoid of hereditary taint, the greater is the chance of recovery. 4. The treatment is only contra-indicated in cases of the asthmatic or congestive type accompanied by cardiac disease.

The Treatment of Consumption by Climate. By C. Theodore Williams, M. A., M. D., F. R. C. P., Brompton. Climate has in all ages been considered to exercise an important influence in the treatment of pulmonary tuberculosis, though opinions have differed as to the kind of climate which is most beneficial. In South America, since early times, arrest of tuberculosis has been produced by prolonged residence in the Andes (Archibald Smith, Guilbert, and Weber) without the aid of sanatorium and other treatment, and these successes must be attributed to climate and to climate alone. Numerous authenticated instances of arrest can also be shown as the results of sea

voyages, of warm and of cool marine climates, or of dry warm climates respectively; in fact, it has been proved that the arrest of tuberculosis has occurred in a variety of climates and under very different conditions. The main object is to determine under what climatic conditions arrest of the disease most frequently takes place, and what are the real causes of such improvement.

In all climatic treatment, care must be taken to bring the patient fully under the influence of the atmosphere, and to ensure a strictly open air life, with complete hygienic measures, whether in a sanatorium or elsewhere. The climate which best fulfils these conditions need not necessarily be a warm or a cold one, but should be dry, with abundant sunshine, admitting of much exercise, and producing appetite and muscular vigor. Tropical climates are excluded on account of their relaxing influence, and their favoring bacillar increase. The principal climates utilized for the treatment of pulmonary tuberculosis may be grouped as follows: I. Marine. II. Dry warm climates. III. Mountain climates. Of *marine climates* the temperate ones of the British Islands have been shown to be suitable for a large number of cases of chronic pulmonary tuberculosis, especially in its strumous form, even when accompanied by pyrexia, and for our countrymen and countrywomen the avoidance of long journeys and the certainty of abundant good food and of home comforts is a great recommendation. The warm climates of Madeira, the Canaries, and the West Indies are beneficial in catarrhal tuberculosis, but not as a rule in phthisis generally. Sea voyages are probably the most successful form of marine climates, and provided (1) the patient's cabin be well ventilated, so that he is sure of abundant fresh air by night and in stormy weather as well as by day, and (2) that the food be good and unvarying, and (3) that the voyage be in temperate and not in tropical seas; a sea voyage is often productive of large gain in weight and color and leads to arrest of tubercular disease. Sea voyages are most beneficial in (1) hemorrhagic phthisis, (2) in strumous or serofulous phthisis accompanied by affections of the glands or joints, and (3) in cases of chronic tubercular cavity where the disease is limited and unilateral.

Dry warm climates include that of the Desert (especially the Egyptian) and those of the Mediterranean Basin. The Desert climate is remarkable for its dryness, sunshine, and its purity and asepticity, and is especially adapted to open-air treatment. Owing to the radiation the extremes of temperature are often great. General improvement in consumptives is perhaps more striking than local, but diminution in the amount of lung secretion and reduction of cough usually takes place. The Desert climate appears to act more decidedly in preventing the spread of tubercular disease than in arresting that already present. It seems to most benefit cases of chronic cavity, especially in elderly persons and patients who are incapable of much exercise. The climate of the Riviera and of the Mediterranean Basin, as a whole, is cooler and more stimulating, but liable to greater vicissitudes of weather, though not of temperature, than the Desert climate. It is milder than the latter, and, compared to the British climate, it is clearer and brighter with a good deal of wind, but free from fog or mist, with a winter mean temperature from 8° to 10° Fahr. higher, with half the number of rainy days and four or five times the number of sunny ones. It can be recommended in chronic phthisis, especially when complicated with inflammatory attacks, in strumous and laryngeal phthisis, and to patients with rather extensive tubercularization of the lungs, who from feeble circulation, short-windedness, or advancing age are unable to bear the effects of a high altitude.

Mountain or high altitude climates vary according to latitude, but are all characterized by (1) diathermacy, or the increased facility with which the sun's rays are transmitted through the attenuated air, which causes a difference between sun and shade temperatures of 1° Fahr. for every rise of 225 feet (Denison); (2) by their asepticity, as shown by the preservation of meat for long periods; (3) by their physiological effects on the human body, as shown by the tanning of the skin, increase of both pulse and respiration rate, followed after a certain period of residence by a slowing and a deepening of the latter, and an extension of the thorax, also by an increase in the amount of urea and water excreted by the kidneys; more oxygen is absorbed and more carbonic acid expired by the

lungs. The effect on cases of early tubercular consolidation is remarkable, local pulmonary emphysema is produced around the tubercular nodules, and the healthy portions of the lung become hypertrophied, necessitating enlargement of the thorax which can be proved in several ways. Expansion of the chest takes place unless opposed by extensive lung fibrosis or pleuritic adhesions. It is suggested that the arrest of the tubercular disease is greatly owing to the pressure on the tubercular masses by the increasing bulk of lung tissue, which by emptying vessels promotes caseation and cretification of the tubercle. Accompanying these changes are the disappearance of cough and expectoration, improvement in digestion and assimilation, gain of weight, of color and of muscular, respiratory, and circulatory power. The high altitudes have produced the best climatic results of all climates in the treatment of phthisis, but they are most successful in cases of early tubercular consolidation, where they produce complete arrest in by far the larger proportion of patients, and in hemorrhagic phthisis, but they are not equally successful in cases of excavation, which require a longer sojourn to produce arrest. The high altitudes are much more beneficial to the young than to the middle aged of both sexes, males over thirty and females under twenty benefit least. The special effects above named have been noted in the Alps, the Andes, the Rocky Mountains, and are common to all mountain ranges. The period of sojourn for patients in any climate must depend on the conditions of the climate and of the individual to be treated, and in many instances a change of climate after a prolonged stay has many advantages. Contra-indications to the various groups of climates are enumerated. All climatic treatment should be carried out under as strict medical supervision as sanatorium treatment.

On the Comparative Influence of Climate and Individual Resistance in Experimental Tuberculosis. By Messieurs Lannelongue, Archard and Gaillard. The experiments which we have made in studying the influence of climate in the evolution of tuberculosis inoculated in the pleura of the guinea-pig have taught us that this influence is inconsiderable, and has not the importance which clinical experience has been wont to attach to it. They have enabled us, in addition, to observe remarkable differences in the progress of the disease and in the nature of the lesions in various animals of the same species, which have been similarly inoculated and submitted to the same conditions of climate and food. Certain of these animals offered such a remarkable resistance that it would seem that in their cases the infection had not matured, or had been spontaneously cured; some even increased in weight, and the records show that some died quite fat, whilst at the same time exhibiting lesions of generalized tuberculosis. In nearly half the number of cases the lesions remained localized in the thorax. Affections of the serous membranes, the pleura, pericardium, and peritoneum were extremely frequent, and exhibited the whole series of tuberculous lesions of such membranes met with in man—dry, sero-fibrinous, purulent and hemorrhagic forms.

A very special feature of tuberculosis in guinea-pigs, of which we have met with six examples, is rupture of the spleen, with profuse hemorrhage into the peritoneum. The spleen was often affected to such an extent that we have seen it weigh more than one-tenth of the animal. Most of the lesions met with have their counterpart in human pathology, one can compare these experimental results with what one finds in tuberculous human beings. It is therefore internal causes which together constitute the "soil," far more than external causes and climatic influences, which determine the nature of the lesions and general progress of the disease.

The chances of tuberculous infection are almost the same for a large number of human subjects; the onset is also very similar, but the progress of the disease is very different in individuals. If the number of men who resist it is relatively considerable, and larger than was the case with our guinea-pigs, it is because man is less liable to tuberculosis than the guinea-pig, and he is slowly infected and in small doses, and not in wholesale doses, as in our experimental inoculations.

Original Articles.

ON STREPTOTHRICAL INFECTIONS.*

By JOHN H. MUSSER, M. D.,
of Philadelphia,

Professor of Clinical Medicine, University of Pennsylvania

We have for some time been familiar with two streptothrical infections, actinomycosis, and the affection designated Madura foot. There have been accumulating, however, in the last few years, interesting accounts of various conditions due to other members of this group, and we must now recognize the fact that we are liable at any time to meet with pathogenic streptothricæ, other than those mentioned, causing very definite lesions.

Our knowledge of these streptothricæ dates from Rosenbach's communication in 1887, in which he describes as a cause of an erysipeloid condition an organism, growing as branching threads, but which from the branching being only apparent, not real, he calls a cladothrix. Rosenbach was able to produce the infection on himself and to obtain a pure culture of the organism.

In the following year Naunyn observed a branching thread-like organism in a red-brown stained area of the cerebral pia mater and in the endocardial excrescence in the heart of a girl dying of chorea. Baumgarten confirmed the observation. No cultures were, however, obtained.

Almqvist in 1890 obtained in culture from pus of cerebrospinal meningitis a streptothrix which he considered, however, a contamination. Growth on various media was readily obtained.

Eppinger's careful paper (1890) gives the most complete information of the nature of these infections up to that time. His case, one of abscess of the brain, was a glass polisher who two weeks previously had suffered from arthritis, and showed paralysis of the left side of the face and body, with distinct tenderness over the right half of the skull. From a large abscess of the brain, and of the spinal cord, cultures, pure, of a branching thread-like organism were easily obtained. In the semi-calcified bronchial and supraclavicular glands organisms of similar structure could be demonstrated. Eppinger's illustrations do not, however, seem to justify his naming his organism "cladothrix asteroides," as the branching seems more real than apparent. The experiments with animals gave rise to typical pseudotuberculosis.

No further demonstration of pathogenic streptothricæ occurred till Buchholtz's report of his findings in a patient taken suddenly ill with acute pleural pains, fever, bloody expectoration, and running for several weeks thereafter the course of an acute tuberculous pneumonia followed by empyema and death. Necrotic peribronchitis, cavity formation and an advanced tubercular-like condition showing caseous and ulcerating areas were present in the lungs. Some slight differences, however, between the condition found and true tuberculosis were the fact of the apices remaining unaffected, the irregular fatty-looking cavity wall, and the resemblance of the

infiltration to a fibrinous pneumonic state. In the sections a branching streptothrix could be demonstrated. Cultures were not obtained.

Sabrazes and Rivi re describe a streptothrix, cultivated from an abscess of the brain; also present in small abscesses of the kidney, and bronchopneumonic areas in both lungs. The subject gave the history of epileptiform attacks, and showed dulness, aphasia, vomiting, headache, paralysis and anesthesia of right arm and leg, some pain in neck and contracted pupil. The authors were able to obtain culture growths, though extremely scanty. This streptothrix, an ana robic organism resembled streptothrix actinomycosis in many ways, but did not show any of the clubbed forms. Some filaments could be seen within the leukocytes.

The same authors isolated an a robic streptothrix from the sputum and from a subcutaneous abscess, in a second case, the second streptothrix being pathogenic for small animals.

Ferri and Faguet report a case very similar to the first of those described by Sabrazes and Rivi re, isolating from an abscess in the brain of a patient taken suddenly with epileptiform attacks, pure cultures of a branching streptothrix which, however, was not pathogenic for animals.

Under the title pseudotuberculosis streptothricæ-hominum, Flexner reports a streptothrical infection resembling clinically pulmonary tuberculosis, with extensive consolidation. Some ascites existed. There was but little fever, and no expectoration. Autopsy showed a condition resembling closely tuberculosis: caseous pneumonia, small cavities, many areas of softening and small tubercle-like nodules throughout. In the omentum, liver and spleen were many similar nodules. The resemblance to tuberculosis was everywhere very decided, in the lesions and exudates, in the tubercles (?) the streptothrix was readily demonstrated. Flexner considers this streptothrix and that of Buchholtz morphologically most similar to each other. Cultures were not obtained in spite of all endeavors. Animal experiments were negative, but showed that the organism was apparently not tubercle.

A pathogenic streptothrix was shown by Scheel and Petruschky in 1897 at the Congress f r innere Medicin. The organism was from a woman with tuberculous history who had suffered from an influenza-like illness, with cough and left-sided pain and irregular remittent fever. To these conditions were added later cystitis and a pustular exanthem. A pleuropneumonic condition in the left upper lobe, an enlarged heart and spleen were the chief clinical signs. A penicillium-like organism was obtained from the sputum and the skin pustules during life, and, after death, from the lungs. Petruschky's description shows fine branched threads without fructification forms, belonging to the genus streptothrix. He considers the streptothrix in this case as being secondary to the primary influenzal infection.

An infection clinically identical with actinomycosis, but due to a different streptothrix is described by Fullerton in 1897. Pulmonary and cutaneous lesions, the latter an extension from the former, were present. Sputum and pus from the skin showed

*Read in part before the Cleveland Medical Society, Cleveland, 1901, and in part before the Chicago Medical Society, June, 1901.

The cuts illustrative of this paper will appear when it is published in the Transactions of the Association of American Physicians.

the sulphur-like grains supposedly characteristic of actinomycosis, but the cultural qualities differed distinctly. Fullerton designates his case one of streptothirical infection. Berestnew, and later Bruns, have described various similar organisms giving rise to infections which were considered clinical instances of actinomycosis. Berestnew's application of the term pseudoactinomycosis is objected to by Bruns on the ground that the streptothrix found is a species distinctly different from actinomyces.

From the sputum in a case of abscess or bronchiectasis of the right lung Rullman and Ziemssen isolated a streptothirical-like organism appearing very differently under different conditions, cladothrical at first, without branching on some media, with distinct branching on others. In the sputum small yellow-green masses of the mycelium, resembling somewhat the granules of actinomycosis, were readily distinguished. In animal experiments, supuration of lymph glands was produced, no evidence of tuberculosis being shown.

In a very complete paper Aoyama and Miyamoto describe the finding of a streptothrix in the sputum and in the contents of a lung abscess in a case rendered very obscure by the simultaneous existence of an aneurysm in the brain, which added to the very slight symptoms of a lung affection (slight fever and cough), convulsive seizures and signs of cerebral irritation. After intensification of pulmonary abscess streptothirical structures could be demonstrated in the mucopurulent sputum previously negative.

In the lungs, at autopsy, was a cavity toward the right base, with ragged, fatty-looking wall, surrounded by an area of gray hepatization and gelatinous pneumonia, with numerous bronchopneumonic areas in both lungs. Histologically, the absence of true tubercles and giant cells, numerous areas of necrosis, infiltration of the alveolar with small round cells or with fibrin and alveolar epithelium, infiltration of the septa with small round cells were the chief features. Aoyama considers the picture similar to that of Buchholtz, particularly as regards the gross appearance of the cavity. Pure cultures of a streptothrix producing in experiments pseudotuberculosis of the serous membranes, and organs were readily obtained. This organism resembles most closely that of Eppinger, but is quite different from that of Rullman, and that of Scheele and Petruschky in its cultural qualities. It is quite distinct from actinomyces. Like many of the streptothrices at present known, it is very resistant to acids, staining well with the differentiating stains used for tubercle bacilli.

In a second somewhat similar case, diagnosed tuberculous hemorrhage, pleurisy and kakke, Aoyama was able to find both tubercle bacilli and a streptothrix which, though not growing readily at first, could be cultivated from the pseudotubercles produced in animal injections.

A most instructive article, showing the pathogenicity, the morphological and cultural peculiarities of this group of organisms is that of Larkin and Norris. Of their two cases the first, a carpenter, gave the clinical appearance and history of gangrene

of the lung, following acute pneumonia. Extensive consolidation, fever, cough, very offensive sputa were present. The whole duration of this case was but a little over three weeks. The second gave a history of having had Pott's disease of the spine, a chronic cough for thirteen years, mucopurulent expectoration and night-sweats for several years. During the last year, aggravation of symptoms. Consolidation of both lungs could be made out and signs suggestive of cavities. The lesions of the two cases at autopsy can be summarized as acute exudative and necrotic bronchitis with bronchiectasis, bronchopneumonia composed of alveoli filled with cellular or fibrous exudate, more or less organized, productive inflammation and thickening of framework of the lung.

The most striking feature at autopsy, however, was the finding of large numbers of whitish opaque masses 3 to 5 mm. in size, attached to the necrosed areas of the bronchi, and throughout the necrotic and consolidated parts of the lung, and consisting of a network of filamentous organisms whose ends were often bulbous. Although not definitely branching at first, the organism in later cultures showed this peculiarity markedly. Most noteworthy in their experiments is the fact that intravenous injections of cultures or material containing organisms could produce pulmonary abscess and empyema. Intrathoracic and intratracheal injections produced readily similar lesions.

As showing the comparative frequency of myelitis suppurativa as a metastatic occurrence in bronchiectasis, Chiari describes an instance of such a condition due to a mixed infection with the diplococcus pneumoniae and a streptothrix. The subject entered the hospital with a history of a sudden onset of pain in neck and head; pain and impairment of muscular power in the whole right side of body, marked stupor and weakness, preventing examination and further history.

Autopsy, after brief illness of seven days, revealed large cerebellar abscess; multiple abscesses of spinal cord; spinal meningitis; complete obliteration of pleural cavities; pulmonary congestion; old scars at apices, with caseous masses; numerous bronchiectatic cavities in lower lobes; cylindrical enlargement of the whole bronchial tree, with large purulent collection therein, and marked reddening of the mucous membrane. Aural cavities negative. Culturally only diplococcus pneumoniae could be found.

In section of the affected tissue, and in the abscess walls could be demonstrated in addition to these organisms bundles of thread-like branching structures which frequently could be seen to be completely within the capillaries. Thrombosis of some of the larger vessels and marked inflammatory reaction about the "bundles" were also demonstrable. No actinomycotic granules or rosettes were to be seen. The structure of the mycelium was such however, that Chiari considers the streptothrix to stand in close relation to or to be identical with actinomyces. He also sees a close resemblance in some of the lesions of his case to the histological changes described by Eppinger. Reference is also made by this author to a case in von Jaksch's clinic

diagnosed as meningitis suppurativa in which a bronchiectatic cavity was suspected of being the focus of infection from which the suppurative meningitis might have arisen. Section confirmed the diagnosis, but disclosed in addition a large abscess in frontal lobe. The pus of the bronchiectatic cavity and of the abscess, the abscess wall, and the inflamed bronchial walls showed structures closely resembling those of Chiari's case. No cultures were obtained.

Ucke (*St. Petersb. Med. Wochens.*, 1901) has met with streptothrice in various conditions; in two cases, one of pulmonary abscess, with purulent pleurisy; the other, one of pulmonary gangrene, organisms were abundantly present in the sputum; it could be demonstrated also in the purulent exudate of the first case, and in the gangrenous and inflamed tissue of the second. Ucke also relates the finding of streptothrical organisms in two later cases of gangrene of the lung, in the expectorated matter and in the contents of a subphrenic abscess following duodenal perforation, and breaking through into the lungs, and in the tissues from a case of noma; only in the last mentioned instance were cultures obtained. Perthes (*Archiv für Klin. Chir.*, 1899) is quoted by this author as having also obtained cultures of streptothrice from cases of noma.

The pathogenicity of all these varieties of streptothrices and their relation to infections and lesions described is very evident, though cultural and animal experiments are lacking in some of the earlier observations, and it is clear that actinomycosis and madura foot can no longer occupy their isolated positions as examples of streptothrical infections. The pre-ilection of these organisms for certain regions or systems of the body is very apparent, the *lungs*, the *brain*, and the *skin* being most frequently affected; the *brain*, however, more often as a metastasis in cases of primary pulmonary or bronchial gland infections. In Rosenbach's case, "erysipeloid," the skin alone was involved. Scheele and Petruschky's patient showed pulmonary and cutaneous lesions, the latter a pustular exanthem. The actinomycotic-looking skin infection described by Fullerton, was probably due to an extension from the pulmonary lesions through the chest wall. Ferri and Faguet's case showed in addition to pulmonary lesions a subcutaneous abscess.

The *pulmonary lesions* in which the streptothrices have been found either alone or with other organisms show considerable variety; broncho-pneumonia, extensive consolidation, abscess, bronchiectasis, empyema, and necrotic bronchitis. The histological characteristics of some of these have been already considered, and the resemblance to and difference from tubercular infections pointed out.

Fullerton's case, clinically so like pulmonary actinomycosis, did not come to autopsy.

The lesions in the *nervous system*, practically always metastatic infections from pulmonary or bronchial gland disease, have been abscess, meningitis, or large areas of softening from thrombosis. No special peculiarity in the formation of the lesions is described. They have been most often met with in the cerebral region. In one instance both cerebellum and spinal cord were extensively affected, spinal meningitis occurring as well. Almquist's or-

ganisma was isolated from the exudate of a cerebro-spinal meningitis. The formation of "tubercles" is not described in the lesions of the nervous system, though in Eppinger's case the cerebral lesion resembled a broken-down tubercular focus.

But few other lesions are described. General "tubercle-like formations" throughout the peritoneum and abdominal organs have occurred, and in experiments pseudotuberculosis has been frequently reproduced. An abscess of the kidney was noted in one instance. Naumyn found an *endocardial excrescence* containing a streptothrix in his case.

From a clinical stand-point but little distinctly new is presented in streptothrical infections. The cutaneous lesions of madura foot, the cases of Rosenbach, Ferri and Faguet, Scheele and Petruschky, the cutaneous expression of actinomycosis, the actinomycotic-like skin infection of Fullerton, show some distinct differences. The pulmonary infections with their secondary accidents are all more or less hidden under the mask of a tubercular process, acutely termed pseudotuberculosis, or resemble some one or other of the number of pulmonary lesions, such as abscess, gangrene, or bronchiectasis, but the detection of the streptothrix and its mycelial masses is as diagnostic as the demonstrations of tubercle bacilli. Not all instances reported have been primary infections. In many the streptothrix may have been a very late invader. Many instances of streptothrical infections have probably passed unrecognized, owing to its peculiar tinctorial and cultural reactions. Rullman, Ferri and Faguet, Aoyama, Scheele and Petruschky were able to determine the nature of the disease in their cases by the findings in the sputum, as was Gwyn in the case we herein report.

The position occupied by the streptothrice in bacteriological classification is one between the moulds (hyphomycetes) and the bacteria, to both of which organisms they show some resemblance; to the former, in that they develop from spores into cylindrical dichotomously branching threads which alternately grow into colonies of masses of radiating filaments (the sulphur granules of actinomycosis.) Some of the threads, however, became "fruit hyphae," breaking up into chains of round spore-like bodies. To the latter (bacteria), in appearing as homogeneous threads resembling the filiform bacteria, which in old cultures may break up into shorter bacillary and coccus-like forms; in lacking a doubly contoured membrane and in not being composed of hyphae filled with fluid and granular contents separated from each other by partition walls. Unfortunately for this classification other organisms, bacillus proteus, diphtheria, and tuberculosis may occasionally show branching threads, and the latter has been described as showing figures almost indistinguishable from those of actinomycosis.

Of the genus streptothrix there are probably many species showing more or less marked morphological and cultural differences, as is well instanced in the now numerous streptothrices found in the lesions of actinomycosis and in the description of the various streptothrices in the above-mentioned cases. Some are readily cultivated; others can only with difficulty be grown on special media. Of most im-

portance to the clinician is the appearance of the mycelial tufts or granules in the discharges from the lesions, and the ready demonstration of the organisms therein. Many of the organisms are very resistant to acids and stain well by the stains used for detection of tubercle bacilli. Others are less resistant and are better revealed by Gram's stain. It is possible and probable that many instances of streptothirical pulmonary infection have been passed unrecognized, the organisms either having been considered tubercle or not having been revealed at all.

To these reported instances we wish to add the notes of two cases, one of which, though incomplete from lack of post-mortem observation, is yet of interest as demonstrating the possibility of recognizing the more or less obscure conditions met with in a pulmonary streptothirical infection; the other as showing the doubtful symptoms and rapid course of a localized cerebral infection by these organisms. The cases described so far in this country have only been recognized at autopsy. One may, however, as in the first case and in those of several of the foreign authors, detect the organism in the sputum and at least presuppose the nature of the infection.

CASE I.—J. T., aged thirty-seven years, male, married; very active in business; under the care of Dr. Dercum for mental disorder of several months' duration. I was asked to see him September 25th because of slightly increased respiration, pulse-rate, and temperature without apparent cause. Physical signs of bronchitis of very moderate amount were found. A slight morning cough was observed. The temperature until October 30th was about 99.4-5° to 100.1-5° in the evening; the pulse 100 to 125. The mental symptoms, confusion, and some excitement continued. He gradually became more dusky and the respirations more frequent. He had sweats during this time, and lost weight. The physical signs of bronchitis became more marked and the heart became dilated. On the evening of September 30th the temperature began to rise, reaching 101° October 3d. Physical signs of broncho-pneumonia developed, and death took place October 6th from exhaustion, due to dilated heart, which also caused edema of the lungs. The blood, the urine, and the sputum were examined as frequently as the state of the case permitted. Of the first two, nothing could be obtained to throw light on the case. The urine was always of normal specific gravity; contained a trace of albumin, no sugar and a few hyaline casts. The blood did not show leukocytosis. The one count reported is typical of all. The hemoglobin was 80 per cent.; red blood-corpuscles, 4,572,000; white blood-corpuscles, 3200. Of the whites there were, polymorphonuclear, 79 per cent.; small mononuclears, 17 per cent.; large, 3 per cent.; transitional, 1 per cent.

The sputum was studied most carefully by my associate, Dr. Norman Gwyn, and to him I am indebted for the suggestion of the nature of the infection. His report is as follows:

The sputum first obtained was small in amount, yellowish, homogenous looking; not foul, and contained no blood. No granular masses were present. Unfortunately, after the second day the stuporous condition of the patient seemed to prevent the collecting of pulmonary discharges, the later specimens being only nasal and buccal secretion. The first examination showed apparently a few thin tubercle bacilli retaining faintly the red stain of carbol-fuchsin after counter-staining with Gabbett's methylene-blue. Owing to the illform appearance of one of these, further examination was made and revealed, in addition to small rod-like forms, some definite branching structures resembling those pictured by several of the before-mentioned authors. No rosettes or club-like bodies were present. Many presented bevelled ends and were present as short filaments. By Gram's stain, principally, rod-like forms, containing the round coccus-like bodies (polychromatosis), were to be found. Some showed true branching. The organisms were extremely few. The rod-

like forms, by themselves, could readily be mistaken for tubercle bacilli. Only in the specimens stained by Ziehl-Nielsen and Gram's method were definite streptothirical filaments found. Great numbers of streptococci and pneumococci (?) were present, which caused the death of the guinea-pig in ten days without any signs of streptothirical or tubercular lesions. As I have mentioned, after the first two days no true sputum was obtained. After the second day the nasal and oral secretion showed no organisms like those found in the specimens of the first days. Cultural experiments had no results. The definitely branching structures and the appearances presented by Gram's and Ziehl-Nielsen stain, together with the resemblance to previously described streptothirica, induced us to suppose that we had to do either with a primary streptothirical infection or one secondary to a streptococcus infection of the bronchial tract. The possibility of these organisms being branched forms of the tubercle bacillus must also be considered.

CASE II is of extreme interest, and is the first of its kind to be reported in this country. It is, however, a very accurate picture of that described by Sabrazes and Riviére, and is very similar to those of Eppinger, Ferri and Fagnet, Aoyama and Chiari. Clinically it is of importance as showing how large an area of the brain can be affected without giving rise to localizing symptoms, and how different the diagnosis of such conditions may be. Further, it may explain the nature of some of those instances of cerebral infection, particularly abscess, in which neither by culture nor by animal inoculation can an infective agent be discovered. It is unfortunate no complete autopsy could be obtained to disclose if possible primary infection in the lungs or bronchial glands, were a possible condition.

The history of the case is as follows:

CASE II, single, aged twenty-four years. Complaining of an attack of loss of consciousness, with later, nausea and vomiting. His father had died of pulmonary tuberculosis. He had always been fairly well; habits good; had gonorrhea some years ago; no lues; no history of lung trouble; no ear disease. Had some small operation on nose recently.

Was quite well up to Wednesday, February 6th, when he had severe headache. The following day while at work he felt uncomfortable, retired to an adjoining room, and in a few moments lost consciousness, falling to the floor and biting his tongue. He was quite alone, so that nothing further could be ascertained. The patient felt dazed and stupid and noticed numbness of the right arm and leg, with some twitching of these members. On Friday he felt better; on Saturday and Sunday he was much the same. On Monday, the 19th, another attack distinctly convulsive and resembling epilepsy, occurred. The numbness of right arm and leg was a little more pronounced, and the occasional twitching was evident. There was slight headache, no chills, no cough, no pain or discharge from the ears, no eye symptoms.

Seen by Dr. Dercum at this time, no definite localizing symptoms could be made out. Previous condition persisted. There was no fever. The patient remained fairly well and was conscious. Pupils were equal; tongue heavily furred. The pulse was fair and the patient seemed to be improving. There was, however, slight hyperesthesia of the right side.

On Wednesday morning about 9 o'clock, after a fair night, there was, according to the nurse, a sudden collapse. The pulse could not be felt at the wrist. When seen half an hour later the pulse was very slow (30 to 50), very irregular, but of fair volume. The patient was semi-conscious, answering only when shouted at. The patellar reflexes seemed exaggerated, especially on the right side. There was marked hyper-extension of both feet. The

Babinski reflex was marked in the left leg; Kernig's sign well marked; very decided ankle clonus. Heart, lungs, and abdomen negative. Feces and urine were being passed involuntarily; some cyanosis of the nose and ears beginning. There was no rigidity of the neck, nor any tenderness over the skull. The examination of the eyes by Dr. de Schweinitz showed deviation of the left eye; pupils negative; very marked edema of the disks, probably due to meningitis. The patient was unconscious by evening, pulse was irregular and variable; distinct Cheyne-Stokes respiration. Prof. Hare joined in the consultation.

Lumbar puncture was performed. Two ounces of turbid fluid contained a few leukocytes, but no bacteria were obtained. There was immediate improvement, the patient regaining consciousness and remaining so until 6.30 next morning, Thursday. Lumbar puncture was repeated, with no improvement. The patient lapsed again into a semi-conscious state; rigidity of the right side became quite marked. Occasional convulsive movements were, however, sometimes, seen on the left, and a general convulsion, apparently of pontine origin, occurred. The hyper-extension of the feet was extreme, the dorsæ of the feet being level with the tibiae. No rigidity of the neck; reflexes still exaggerated; Babinski's reflex still present. The patient gradually failed, dying at 6.30 P. M. on Thursday, one week from the onset of the first convulsion.

The temperature, though subnormal at first, began to rise in the last three days, and for twenty-four hours before death was between 103° and 105°. The pulse increased in frequency meanwhile, but lost very much in volume. Apart from the slight deviation of the left eye, slight impairment of sensation on right side, no paralyses or localizing symptoms were observed.

The autopsy and the histological, cultural, and experimental examinations were made by Dr. R. M. Pearce, to whom we are indebted for much care and great skill in prosecuting the inquiries.

Head only Examined. Scalp and calvarium not noteworthy. Dura mater normal; pia normal; posterior and upper hemisphere prominent. At a point just posterior to upper portion of the fissure of Rolando is an area 3 cm. in diameter, which is fluctuant, grayish-yellow in color. On section there is found at this point, principally in the white matter of the hemisphere, but also involving the cortex, a cavity $3\frac{1}{2}$ cm. in diameter, containing a thick fluid, the first portion of which to escape is chocolate colored, the remaining portion is grayish-yellow and of the consistency of oil. No granules resembling those of actinomyces were present. The cavity is lined by a thin greenish-gray necrotic membrane, beneath which the brain tissue is much infected. The odor of this pus is exceedingly foul. Brain-tissue surrounding abscess for the distance of 2 to 3 cm. is softened and yellow in color, though there is apparently no direct extension of the inflammation.

Microscopically there is no inflammation of the pia over abscess. The rest of the brain on section is normal. There is no evidence in the vessels of the brain of arterial disease, thrombosis, or embolism. Bony ears are normal, and nowhere in the skull is there evidence of necrosis or bone-disease.

Smears from the abscess contents showed no tubercle, and only after prolonged search and staining by carbol-fuchsin, followed by Gram's solution and decolorized by aniline oil, could anything be made out. In one of these specimens was found a large ball-like and tangled mass, made up of long, thin filaments, staining irregularly. There is some suggestion of branching at the periphery of this mass. Only the one clump of these organisms was found. Cultures, aerobic and anaerobic, were quite negative.

Inoculations of two guinea-pigs were made, subcutaneous and intra-peritoneal. The first of these died in nine days, nothing suggestive being found; the other being killed after thirty-two days, and showing nothing but a few milary nodules at point of inoculation in the peritoneum. No evidence of tuberculosis in either animal. Cultures from both were negative.

A histological examination of the abscess wall showed the inner edge to be composed of necrotic pus cells. Indicating its chronicity, the deeper layer of fairly well preserved pus cells, lymphoid cells, and occasional endothelial cells. In the adjoining brain tissue lymphoid and plasma cells were quite numerous. About the blood vessels at periphery of abscess are many lymphoid and pus cells.

The surrounding brain tissue shows degeneration with polymorphonuclear leucocytes. No evidence of tubercle, or tubercle bacilli.

Sections stained with carbol-fuchsin, potassium iodide, and iodine and aniline oil show in one spot a large mass of threads radiating from a common centre. At the periphery, where the arrangement of individual elements are loose, they appear as long, thin threads, with small irregular staining. The general appearance is that of the centre of a colony of actinomyces. No clubs or rosettes are, however, present. Along the edge of the abscess wall a few single threads, similar to those in the original smears, were found.

In the study of the previously reported cases, and those of the writer, two interesting questions arise. First, is it possible that the cases hitherto reported as sterile abscess, in which it was thought the micro-organisms had died out, were cases of streptothirical infection. The experience of Dr. Pearce tends to this view, and that in previous examinations these organisms were not found. In his investigations Dr. Pearce made one hundred sections of the abscess wall before finding a colony, and nearly one hundred more before finding another. Smear after smear was stained to the number before colonies were detected. Moreover, the most recent writer, Ucke, has found the streptothrix in liver abscess, brain abscess and in noma infections, the pus of which has so frequently been found sterile.

Second, in Case 2, the cerebral abscess, the course was afebrile. This is a well known clinical fact of this affection, and is it therefore not possible that in abscess of the brain, in which the course is afebrile, the infection is streptothirical in origin? Moreover, may not abscesses in other locations, as the liver and lungs, and gangrene as that of the lungs in diabetes, be not of similar infectious origin? It seems in the cases reported thus far in the literature of the infection when fever was present there was a mixed infection, as those of streptococcus, pneumococcus or the like.

III. That, in the pulmonary cases especially, death is due to a mixed infection.

IV. That, so-called sterile abscesses may be instances of streptothirical infections.

V. That afebrile processes may be due to this infection, or, conversely, this affection may be unattended by fever.

VI. That, the morphological relations to tubercle bacilli and allied organisms must be remembered.

VII. That clinical observation and laboratory studies have yet to determine the clinical course of the streptothirical infections and their relationship to other streptothiricæ on the one hand, and to tuberculosis on the other.

They are not unlike other streptothirical infections, if these clinical facts are true, in that in actinomyces, for instance, we find frequently a chronic afebrile course.

These questions are as yet sub judice and require for their settlement laboratory investigations and further clinical observation, particularly in the light of the more recent studies. As a suggestion of the nature of the infection the question of leucocytosis should be looked into, therefore, although our cases present no facts.

It seems, therefore, worthy to conclude:

I. That the streptothrix in some varieties is path-

ogenic to man and gives rise to inflammatory, suppurative and necrotic lesions in (a) the lungs, and (b) the skin, and (c) by metastasis, probably, in the brain and spinal cord and rarely, other organs (the kidneys).

II. That, while this pathogenicity is more than likely and is primary, yet it must be remembered, it may be a secondary growth in the course of other infections.

POST-TYPHOIDAL ULCERATION, AND ABDUCTOR PARESIS OF THE LARYNX.—TRACHEOTOMY—RECOVERY.*

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Examination of the larynx during the course of an attack of typhoid fever is seldom made, partly because of the slight character of the laryngeal symptoms but chiefly because of the difficulty of making a laryngoscopic examination, while the patient is compelled to lie recumbent.

The record of a case of ulceration of the vocal cord, attended by paresis of the abductors, is therefore worthy of mention, especially as the lesion itself is rare among the recorded typhoidal lesions of the larynx.

I am indebted to Dr. McKibbin, for the following notes:

F. S. Aet. 41. Glass-blower, married. Father died at eighty, of bladder trouble; mother at seventy-eight, of pneumonia, a brother at seventeen, of a tumor in the left side of the throat, occurring during convalescence from typhoid; the remainder of the brothers and sisters are all living and in good health. Has been always a healthy man, and has followed his occupation for twenty years. Height 6 ft. 3 in., weight 170 lbs. No history of syphilis. Consulted me on March 23rd, on account of run down condition. Quit work on April 6th, with symptoms resembling la grippe. On the 15th, took to his bed with symptoms of typhoid, and temperature of 103°, followed by a characteristic course for four weeks. On the 6th of May symptoms of laryngeal irritation developed, lasting three or four hours, and consisting of hoarseness, and a tendency to clear the throat. These attacks occurred twice a week, at night time generally.

About this time also pneumonic symptoms developed in the upper lobes of both lungs. It was thought that this might have been tubercular, but examination of the sputum was negative, while the blood gave the typhoid reaction. The temperature remained high throughout, becoming normal on the 20th of June. For the next two weeks convalescence proceeded steadily. Every few days a spell of distressed breathing would occur, requiring medicated steam inhalations to give relief. Throughout the whole attack, the patient exhibited a neurotic temperament, and the attacks of dyspnea were markedly periodic. The temperature remained normal till the 9th of June, and immediately subsequent to the operation, registered 100.45.

I was called by Dr. McKibbin, to see patient on Sunday, June 2nd. Found him lying prone, respirations increased slightly, expression anxious, voice hoarse. On palpation the neck revealed nothing, neither tenderness, swelling, nor flidity. The patient was able to sit up without increase of the dyspnea, but the tracheal tugging was marked. There was nothing noticeable in the mouth or oro-pharynx, except the anemia, which was decided, and extended to the parts bounding the laryngeal vestibule. The vocal cords were almost in contact and the patient seemed unable to abduct them except very partially. The cords themselves were congested, and appeared swollen and somewhat nodulated, the swelling being entirely confined to the inferior surface of the cords, the infra-cordal por-

tion of the larynx, appearing to be bounded on either side by a rigid wall, extending diagonally outwards from the free edge of each cord. The left cord was notched towards its posterior extremity, the notch being filled by a pure white slough, and measuring about 6 m.m. in each direction. The edges of the notch were congested, uneven, and undermined. The examination produced an expulsive cough, which cocaine allayed, and apart from this, there was no difficulty in making the examination. (The false vocal cords appeared unaffected except by the anemia. The right arytenoid was swollen on the external surface). The patient was nervous and weak, and the examination brought on some nervous excitement, which was followed by an attack of dyspnea. The patient was able to lie down, however. Directions were given to continue the steam inhalations. A menthol and cocaine oily spray internally, and cold packing externally were prescribed. Did not see patient again till the following Sunday, June 9th. The breathing had been much relieved for four or five days, since then gradually more embarrassed. The previous evening there had been a very bad attack of dyspnea, and the patient was much exhausted. The examination which was made again without any difficulty, presented a similar picture to that recorded above, with one exception, that a distinct crevice had appeared between the slough, and the cord. Abduction was more deficient than formerly, and the rim-glottidis was simply a narrow slit. Tracheotomy was advised, should the breathing continue embarrassed. At 3 P. M. the same day, the condition became so much worse, that unconsciousness set in, and when the patient arrived at the hospital three hours later, he was insensible, and practically moribund. The trachea was opened in the high position, without an anesthetic, and artificial respiration practised. After breathing was restored, the tube was removed, and an attempt was made to obtain a view of the vocal cords from below. This was not entirely satisfactory. There was no evidence, however, of either ulceration or tumor formation below the cords, the walls of the infra-larynx being smooth, and sharply leaning toward each other. The patient was kept in a tent bed, filled with steam, and vaporized lime-water, and made a steady improvement, being discharged on the 21st day. Repeated examinations of the secretions from the tube were made with a negative result, nor was any adequate explanation forthcoming, for the rise of temperature between the 12th and 14th days. The noisy respirations prevented any satisfactory examination of the lungs.

On the 10th of July the patient was examined in my office, and the following notes were taken.

Weight, 150 lbs, steadily increasing. When the tube is closed, the voice is almost completely restored, no difficulty in swallowing, no sensation of smothering, voice not easily fatigued. The nose is freely patent in both chambers, there is no anemia, or lesion on the septum; the naso-pharynx is roomy, the lining membrane thin, and very closely adherent, with some congestion in the middle line close to the choanae. The mucous membrane on either side of the septum, is markedly puffed about the middle. In the mouth and pharynx, the soft palate is anemic. The isthmus faucium is capacious, the membrane of the posterior wall is thin and pale, and streaked with a mucopurulent secretion from the naso-pharynx.

Larynx.—Epiglottis pale at the edge, the right half is folded back upon itself so that it appears as a line projected directly backwards from the central point of the apex, and thus partially conceals the cavity of the larynx. The right arytenoid is normal in outline, but somewhat anemic, while the left is so placed as to lie in front of the right, and its contour is somewhat blurred by swelling of the internal surface, the capitulum of Santorini, however, being plainly seen. There is no abrasion of the surface, and the color is normal, or nearly so. The vocal cords: both are slightly thickened, of a reddish pink color; the vocal process is plain in the right, but cannot be seen in the left, being probably hidden by the swollen, and misplaced arytenoids. The edges are even, and without abrasion or nodule. In phonation, the cords meet evenly, and exactly, but the right arytenoid appears to have the greater excursion, while the left has almost none.

The parts of the larynx below the vocal cords, the sinus pyriformis, and the ventricular bands, etc., present no abnormality.

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On July 17th. Weight 160 lbs. Swelling of the left arytenoid lessened. Removed tracheotomy tube.

July 29th. Condition of throat as above. Improvement continued in every direction, voice still a little foggy, tracheotomy wound healed, patient dismissed to the country.

In examining the literature of this interesting subject, the most satisfactory remarks are those of Friederich, (1), who "divides the laryngeal phenomena occurring in typhoid fever into three main groups—catarrhal conditions, ulcerations, and palsies; edema and perichondritis being regarded as accompaniments or complications of one of the three main divisions, and quotes Luning, as to the percentage of frequency of the occurrence of these phenomena—from clinical statistics 3%, and from post-mortem examination, 17%."

He further states that "clinically speaking, simple catarrh, and superficial ulceration, are the complications most frequently observed, while deep ulcerations which lead to edema, and perichondritis, or which, when extensive, present the so-called diphtheritic form (laryngotyphus), are much rarer."

"The pharyngeal and laryngeal mucous membrane, is often attacked by catarrh in the beginning of the disease—characterized by intense redness, while the swelling of the mucous membrane is comparatively slight." Superficial ulcerations occur from necrosis of circumscribed portions of the swollen mucous membrane, and manifest a preference for certain regions—the faucial pillars—the free border or laryngeal surface of the epiglottis—the aryepiglottic folds,—and occasionally below the glottis; they are rarely seen on the vocal cords." "At first there is diffuse catarrh, the membrane is darker in color, and slightly swollen in the areas mentioned; the epithelium breaks down and exposes a small shallow ulcer, with a yellowish floor resembling herpes, these coalesce to form larger quite superficial ulcers, with clearly defined edges, without redness, or swelling of the adjacent parts."

Friedreich denies that these are the effect of decubitus, as there is no reason why, if we accept such an etiology, simple ulcers should not occur in any other disease attended with the same degree of prostration; or from contact and direct infection with typhoid bacillus, since the latter has only rarely been found in them; but believes that they are the result of a nutritive disturbance in the membrane, connected with the general typhoid infection. They are benign, and heal without leaving a scar."

Friedreich also describes a class of cases where the ulcer extends to the deeper structure, as the result of a mixed infection; these Eppinger styles "mycotic ulcers," they invade the deeper structures, and eventually destroy the perichondrium and cartilages," and are to be distinguished from a diffuse typhoid infiltration in every way analogous to the typhoid lesion in the intestinal follicles, and originate in circumscribed areas containing adenoid tissue. These infiltrations lead to ulceration, the ulcers being distinguished from the former group by the hardness and swelling of their undermined edges." "The healing of those ulcers leaves defects and adhesions."

"Paralyses of laryngeal muscles occur chiefly in the stage of convalescence and present no character-

istic type, the abductors must be regarded as most frequently affected." It is a peripheral paralysis—and prognosis as to recovery is favorable."

Lockart divides the lesions into two classes—specific and non-specific, according as they are the direct effect of the typhoid poison, or due to secondary bacteria, decubitus or diphtheria." In the specific lesions the adenoid areas are alone involved, in the sinus pyriformis, base of the arytenoids, ventricle of Morgagni, the anterior commissure, the inter-arytenoid space, the false vocal cords, and the lower part of the epiglottis. The process in these structures is identical with that in Peyer's patches." In the non-specific form, the lesions are catarrh, erosions, and perichondritis—the resultant scar persists.

Kobler (3) calls attention to the existence of a characteristic affection of the epiglottis in typhoid." So long as the infiltration of the epiglottis exists the typhoid process is active."

McBride (4) considers that the most "characteristic condition is infiltration leading to ulceration, and the parts most liable are the under-surface of the arytenoids, and marked destructive changes may occur without corresponding subjective sensations." He also quotes Bergengruen, "that the typhoid bacillus, cannot produce suppuration, as proved by the experiments of Klemm, but that it paves the way for attacks of the staphylococcus pyogenes aureus."

Lennox Brown, (5) expresses the view that, "laryngitis occurs at a late—probably also as a secondary—manifestation of typhoid fever. In many cases the lesions depend upon the influence of decubitus. There is a strong tendency to active ulcerations, these principally occurring upon the ventricular bands,—the lymphoid elements of the larynx are not only especially prone to be attacked, but they share the same morbid changes which occur in Peyer's patches."

Shurly (6) considers "paresis of the abductor muscles the usual form. The cause is either a neuritis, temporary lesion affecting the nutrition of the ninth nerve, or pressure from some adenopathy."

J. H. Hutchison (7) concludes that "catarrhal or diphtheritic inflammation, and sometimes ulceration are most commonly found in the posterior wall of the larynx, and may involve the vocal cords."

Watson Williams (8) records one case of "acute laryngeal symptoms with dyspnea, and extensive ulceration;" and records a second case with "the posterior third of both cords, and the anterior surface of each arytenoid ulcerated." He also quotes the opinion of Lucatello, that "the laryngeal lesions of typhoid are catarrh, infiltrations, ulcerations, diphtheritis, perichondritis, and paralysis—exclusively attributable to the specific microbe of typhoid." Williams suggests that this may be an explanation of a possibility of typhoid being infectious.

The case which I have recorded, does not correspond exactly with any of the above descriptions, for the vocal cord bore the brunt of the affection. It is to be especially noticed that there was no pain, no hemorrhage, no bright congestion of the pharyngeal and laryngeal membranes, no perichondritis, and no scar remaining.

The mal-positions noted in the detailed examinations, were present prior to the onset of the fever, at least there were no lesions present at any time, which would account for them, nor were they paralytic in appearance.

If the immobility of the cords was due to paralysis, the paresis was confined to the abductors, but the appearance may have been due simply to the swelling, and rigidity of the cords and sub-cordal structures. It has entirely disappeared, and the voice although gruff, is described by the wife to be quite as good as at any time prior to the attack.

The location of the ulceration on the true vocal cord is evidently one of the rarest forms of typhoid involvement.

There are several cases in which tracheotomy was performed, but in most of these it would appear that marked perichondritis was present.

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LIGHT AND RADIANCE IN THE TREATMENT OF DISEASE.

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ARTICLE I.

THE TREATMENT OF CARCINOMATOUS GROWTHS BY ROENTGEN RAYS.

The development of the X-Ray, since its first introduction to the profession, by its distinguished discoverer, has only been in matters of minor importance. The discovery was practically complete when given to the world. But the therapeutic effects of this fluorescence have remained to be developed. Soon after the use of the tube became general, reports began to circulate, and cases were reported in which injury had been done to the patients on whom the radiography had been practiced. I began early to study these injuries, and my observations were recorded in a paper published in the *Journal* in the issue of January 6th, 1900.

Further experience during the subsequent twenty months, both in the laboratories of some of the best radiographers in England, and on the Continent, and in my own, have gone to confirm the statements made in that paper.

Having bestowed so much time in looking up the injurious effects of their powerful examination, I early began to consider how we could turn these destructive effects to therapeutic uses.

With this end in view I determined to make my first experiments in the treatment of cancer. But it is not right to advise an untried remedy in a disease where life is in jeopardy and its course so rapid as is often the case in carcinomatous infections.

This is emphasized by the fact that the most satisfactory cases for treatment by the fluorescence are those in which the glands in the neighborhood of the diseased area are not yet infected. These are the

very cases in which the knife has its best record. Hence my advice in the cases that came to me was the knife, as a cure by my treatment by the ray was then only a theory, *not a fact* as now.

It was only on refusal to have the knife used that I resorted at first to the use of the Röntgen ray in cases of carcinoma. From my experience with this method of treatment, I can now advise the use of the ray in these earlier cases, with a clear conscience. In advanced cases, I have never hesitated to use this method as it holds out the only hope we have of cure.

My first efforts were with a tube energized by electricity from the alternating current, but the results were not as satisfactory as I could have wished. My tubes were made by different makers, with special reference to this work, and were mostly soft tubes, and this is the kind I have come to use entirely for this purpose.

A change in the energizing force from the alternating current to the static machine worked by an electric motor has certainly increased the effect of the ray on the diseased tissue.

The time of exposure is a very important consideration in the treatment of this disease. At Hamburg, through the courtesy of Dr. Albers-Schönburg, I saw some skin cases under treatment. The time of exposure varied from ten to fifteen minutes; this is the general practice in Germany in treating skin diseases, particularly psoriasis, eczema and lupus. I have reduced my exposures from thirty down to fifteen and five minutes, more often the latter period.

My assistant and the parts of the patient which were not to be treated, I have found were well protected by several layers of lead foil, glued to paste-board or more flexible material, making an opening in this screen where the rays are desired to act. I have yet to see in my own hands, or those of my assistants, a case where any of the healthy tissues have been injured by treatment with an X-Ray tube.

In England I found that Prince of Radiographers, Dr. McKensie Davidson, using as a protective a mixture of red lead and plaster of paris. This makes a very cumbersome and unwieldy protective, but as he only used it to protect while making radiographs, it was not of so much consequence. Most of the metals offer resistance to the passage of the rays, hence many have been tried as screens. Aluminum was used by some in the early days of the science, as it offered many advantages on account of its lightness and pliability, but as it offers less resistance to the passage of the radiance than the glass of which the tube is made, it was abandoned because absolutely worthless as a protector.

The distance of the diseased portion of the body from the tube is also an important consideration.

In my exposures I vary the distance from twelve to thirty inches; this is altogether governed by the effect desired, and is difficult to lay down by rule. Where daily exposures are to be made, the tube should be at a greater distance from the patient, than where exposures are to be made at longer intervals. "The errors to be avoided are too long exposures, too short a distance between the tube and the patient, and improper apparatus."

The theory on which we advocate the use of a soft X-Ray tube in the treatment of carcinoma is, that their power to produce changes in tissue must be in proportion to the resistance which the cells of the tissue to be acted on offers to any destroying agent. Theoretically, the longer wave of the soft tube, as compared with the harder tube, has more destroying and disintegrating effect. It is well for us to bear in mind that but for the active cell resistance to disease germs, none of us would live many days. The phagocytes of the system when active and healthy protect us from infection and from destructive action of poisons that enter into the system, unless they enter in such vast numbers and quantities as to overwhelm these scavengers.

Carcinomatous tissue is composed largely of embryonic cells, whose molecules are unstable and can easily be destroyed, or made to take on a new arrangement. This new grouping either destroys completely these diseased cells or makes them take on healthy action, thus stamping out the disease.

Therefore, a current that is prolonged to too great a time limit, and is brought too near the patient, and is generated from an improper apparatus, may carry the effect of the X-Ray current beyond what is desired. This effect we often want where tissue is broken down, and necrosis of the parts has passed beyond the possibility of repair. If patients will come to us in the earlier stages of the disease we can in most cases work a cure.

When this method by the X-Ray is accepted as a general and safe treatment by the profession at large, fewer women will conceal the existence of a growth in the mammary gland than is now the case, as there is such an inborn dread in all of us of the use of the knife. The laity should be made to understand that there is another method of procedure in the treatment of malignant disease than by the use of the much dreaded knife. I am personally as fond of the use of the knife as any surgeon, where it is best for the patient, so I can lay down the above rule with more propriety than men who are opposed to, or, not skilled in surgery.

The following case illustrates the benefit of the X-Ray treatment in cases where there is no breaking down of tissue, and the mammary gland alone is involved, the axillary glands presenting no evidence of infection.

No. 8. Mrs. Aurille M., aged 68 years. Native of Vermont, married, has had no children, always healthy. Her grandfather died of cancer. Several months ago slight pains called attention to her right breast, which on examination proved to be somewhat enlarged. It continued to increase in size until it was twice as large as the left. She consulted me on the 22nd of January, 1901, as she heard I was using "electricity" in the treatment of cancer, and wanted my opinion. I was frank with her, and told her that the knife was the proven treatment, but that I was experimenting with the X-ray in such cases, not with electricity. She said she had come to me because she was not willing to subject herself to the knife, and wanted to try treatment by the ray even though it was in an experimental stage. The next day she took her first treatment. This was January 23d, and the exposure was 5 minutes, 24th 8 minutes, 25th 7 minutes, 26th 10 minutes, 28th 8 minutes, 29th 8 minutes, 30th 8 minutes, 31st 8 minutes. We could detect a change in the density and size of the gland by this time, and the breast felt more comfortable. February 1st, exposure 8 minutes, 2d 15 minutes, 4th 10

minutes, 5th 8 minutes, 6th 7 minutes, 7th 7 minutes, 8th 7 minutes. She was improving so rapidly, and the breast was so much reduced in size that I suggested an intermission of treatment for a week or ten days. February 16th she presented herself again and the condition of the tumor continued satisfactory. Treatment was 12 minutes, 18th 12 minutes, 19th 12 minutes, 21st 10 minutes, 22nd 10 minutes, and as she was going away for ten days on the 23d I exposed for 18 minutes. March 2nd 12 minutes, 13th 18 minutes, 28th, not having had treatment for two weeks I gave a 20 minute exposure. All the time the tumor had continued to decrease, and was nearly as small as the normal breast. As she was going to her country home for the summer on May 1st, I deemed it wise to give her a few more treatments and try to bring the right breast absolutely down to the size of the left. With this end in view I gave her the following treatments. March 30th 8 minutes, April 1st 10 minutes, 5th 10 minutes, 8 10 minutes, 10th 8 minutes, 12th 8 minutes, 16th 8 minutes, 18th 8 minutes. As the breast was practically reduced to the size of the healthy one and all disagreeable sensations had ceased I saw no further occasion for treatment, but cautioned her to report to me on the least increase of size, or return of pain in the breast. This she said she would do if there was any change during her country residence, as her city house was always open and she could come in very easily. This case I consider cured, and as it is typical, I report it very fully.

In all these cases the first effect observed is a decrease in the density of the tumor. This change in consistency governs very largely the time of exposure, for should we carry this process too far, necrosis of tissue would occur. This is a condition which we must studiously try to avoid.

When I started out with this method of treating carcinomatous growths with radiance, I had in mind the utter destruction of the diseased tissue producing a "white gangrene", and of the danger of this effect I warned my patients. Experience however has demonstrated that it is not necessary to carry the treatment to this extent even in advanced cases, as they will heal under less exposure than is necessary to produce complete destruction of the diseased area. This goes to confirm the theory that the "ray" produces a change in the molecules of the embryonic cells of the tumor. In cases that have broken down and ulcerated, the effect of the ray treatment shows itself very promptly. In these cases the exposure is not of necessity more prolonged than in milder cases, as one would naturally expect.

I have had a very interesting case where I have used a combination of the X-Ray and Finsen light. This case was a patient who had had the left breast amputated and the entire axillary plexus of glands removed, as they were involved in the disease. The extensive wound healed promptly but the cicatrix subsequently broke down and began to ulcerate. The necrosis was an inch deep. Yet under the combined influence of the ray and violet and ultra-violet rays of the Finsen apparatus, the cicatrix has completely healed.

A fungating cancer of the breast was recently brought to me for treatment, the hardened right breast was at least 7½ inches in diameter. The discharge was offensive; but after a few treatments with the X-Ray the character of the discharge changed and the odor disappeared; the fungating mass has retracted; the whole breast is softening

and the patient is relieved of all the pain and discomfort she was suffering. She says "if the treatment does nothing more than make me as comfortable as I am now, it is quite worth while."

On this class of cases I am not prepared to come to definite conclusions, but feel greatly encouraged by the results of treatment thus far.

This is a large subject, and only in its developmental stage. But I am sure we can be perfectly justified in advising our patients to use the treatment where the carcinoma is only local in its manifestations, with more expectation of success than with any treatment heretofore devised, unless it be the knife.

ON THE USE OF THE ROENTGEN RAYS IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

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Since Professor Röntgen made known his brilliant discovery, now some five years ago, I have been at work on the use of the X rays in the diagnosis of pulmonary tuberculosis. I propose bringing before you this morning very shortly some of the results attained. The questions I proposed to answer, if possible were the following viz:

1. Can the Röntgen rays show tubercle in the lung?
2. If so, at what stage of their development?
3. Can the rays detect tubercle in the lung before the physical diagnosis already at our disposal?

Now obviously the first step to be taken in the attempt to answer the first question was to obtain a skiagram of a normal chest, to study its shadows, and endeavor to differentiate between the shadows cast by structures outside the thorax from those caused by its contained organs. The next was to take a skiagram of an undoubted case of pulmonary tuberculosis and compare the one with the other.

I will now, first of all, throw on the screen a picture of a normal chest. We see at once that the pulmonary image in health is quite transparent from apex to base, with the exception of a few ill-defined shadowy lines to the right of the heart shadow. These cardiac lines are seen more or less pronounced by all skiagrams of the healthy chest, and must, therefore, be considered normal. Now, on what do they depend? Are they caused by the lower division of the longer bronchi? I think not. If we look at a skiagram of a normal lung outside the chest, we see that only the primary division of the bronchi are seen, and, in addition to this, these cardiac lines are too low in position to be caused by the bronchi. I have endeavored to clear up this point in the following way: I took a skiagram of a dead body on the *post mortem* table; I then removed the sternum, opened the pericardium, removed the heart, replaced sternum and integuments, and took another radiograph. The lines still remained. I then opened the chest, removed the lungs, replaced the sternum, and

the integuments, and again radiographed the body. The final stage I show you on the screen. You see these cardiac lines still remain, and are caused, no doubt, by the junction of the pericardium with the pleura. They are much more distinct in the dead body, of course, as they are not in constant movement by the systole and diastole of the heart as they are in a living person.

The next point you will observe is the shadow of the scapulae is absent. Their shadow only complicates matters, and is better removed. This can be done in the following way: The patient lies in the prone position on the plate, the arms being extended and hanging over the end of the couch. In this position the scapulae are turned edgewise, so to speak, and their shadow removed from the skiagram.

The next shadow I should like to call to your attention is one shown well in this skiagram, and usually seen in the more muscular subjects. It is, as you see, somewhat triangular in shape, and extends upwards and outwards towards the axilla. By the stereoscopic method these shadows are seen to be outside the chest, and are caused, no doubt, by the anterior axillary folds. They are only seen, I think, when the patient is skiagraphed in the prone position with extended arms, this position naturally rendering the axillary folds thicker. Of course, the shadow of the pericardium with contained heart in the anterior position is well seen. I need only just mention it. The shadow of the diaphragm is also well seen. And here, in passing, I will make a short digression. It is not so much the shadow of the diaphragm that is important in pulmonary tuberculosis as its movements with respiration as seen with the screen. Now, if the diaphragm be watched with the screen, we see that it does not, as physiologists tell us, become flatter with inspiration. Its curve is always maintained unaltered; it plunges up and down piston-wise, and I now come to a point of great importance in the diagnosis of pulmonary tubercle. The movement of the diaphragm on the affected side is much less than on the non-affected or less affected side, and this when the disease is limited to one apex. Why this should be so, is hard to explain, but the fact remains.

I will now throw on the screen a picture of a case of pneumothorax, showing the depression of the diaphragm by the increased pressure in the pleural cavity. If you will look again for a minute at the picture now on the screen, you will see that the healthy chest in the living person is as clear as that of the dead body with thoracic viscera removed, showing that any abnormal shadow seen in the skiagram is due to some pulmonary change—in other words, the muscles and integuments of the thorax are transparent to the rays. Not so, however, with the dead lung outside the body, which casts a very distinct shadow, although transparent, in the living condition. At present I cannot offer any explanation of this curious fact.

There is one other shadow I will mention, and that is, we occasionally see an ill-defined curve shadow in women with large mammary glands. Here again the stereoscopic method shows the shadow to be outside the thorax, and therefore cannot be confounded with shadows produced by pathological changes in the lungs.

* From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

I will now throw on the screen a well-developed case of pulmonary tuberculosis. You see at once there is a marked difference. The clear pulmonary image is obscured by flocculent shadow, punctate in parts. Now on what do these shadows depend? Are they due to tubercular consolidation or to patches of congestion of caseation or pleural adhesions or what? I have endeavored to answer these questions in the following way. On the screen before you is the skiagram of a tuberculous lung; nearly the whole of the upper lobe was caseous and breaking down. So we see that caseation throws a very dense shadow. The shadow, lower down, caused by grey and yellow tubercle, is nothing like so dense; still, as might be said that some of this shadow is due to blood congestion round the tubercular consolidation, I performed the following experiment. The lungs from a case of pulmonary tuberculosis were taken; one was soaked in water for some hours to break up the blood corpuscles, the vessels washed out until the water came away colorless. Both lungs were then skiagraphed, and I think you will agree with me that there is little or no difference between them. Again, it has been asserted that the blood next to the bones is the most opaque tissue of the body. With this assertion I cannot agree. Look, for instance, at the picture now on the screen. It represents a portion of a rib, a piece of muscle the same size, and a blood clot. My eye can detect no difference between the muscle and the blood clot—that is to say, clotted blood, which, by the bye, is more opaque than fluid blood—is more opaque to the rays than muscle. Again I took the lung and kidney which contained tubercle from the same case, and radiographed them together. The tubercle in the kidneys is distinctly seen, down to the minutest miliary tubercle which could be detected by the naked eye. Again, look at these lungs from a case of acute miliary tuberculosis. They show the tubercle scattered through their substance clearly enough.

(Fibroid, 2 Exhibits.)

Putting the above facts together, we may, I think, answer our first question by saying that the Röntgen rays can show definitely tubercle in the lung.

I will now throw rapidly on the screen some cases of undoubted pulmonary tuberculosis more or less advanced. I now come to the question of the detection of cavities in the lung. That the X rays can detect with certainty a cavity in the lung is now a fact beyond question. With reference to the size of a cavity, I would say that the rays can diagnose a cavity much smaller than can be detected by auscultation. The smallest I have yet met with is now on the screen before you. It is less than a small marble. The Röntgen rays are also of great use in judging the size of a cavity. Occasionally auscultation gives evidence of a cavity of large size, and we are surprised, on examining with X rays, to find that the cavity is a small one. This must mean that the consolidation round a cavity must conduct the sounds produced in the cavity far beyond its limits. Furthermore, it not infrequently happens that auscultation diagnoses a cavity which the rays show has no existence.

I will now pass on to the second question, viz., At what stage of development can the X rays detect tubercle; and here I am afraid we must admit that the very earliest stage in the development of the tuberculous process cannot be detected by the X rays, but this also applies to all our other methods of physical diagnosis. The first beginning of tubercle in the lung cannot be detected by this or by any other means at our disposal. There can be no doubt that the X rays are able to pick out in in shadow a very small tuberculous focus in the lung. I will give a few examples. The skiagram on the screen is from the chest of a man aged 28; he came to the out-patient room complaining of his digestion. On examining the chest there was nothing to be made out except perhaps a little weakening of the breath sounds at the right apex. I examined this patient radiographically, and had no difficulty, as you see, in diagnosing a tuberculous process at the right apex. The next case is that of a woman aged 34. In this instance there was a little prolongation of expiration, with some slight difference in the percussion note at the right apex. I was somewhat surprised, therefore, to find that there was extensive disease in the right upper lobe. The shrinking of this side of the chest is well shown, which was not detected on physical examination. The next two pictures are both from patients in whom pulmonary trouble was suspected, but which gave no evidence of its presence on stethoscope examination. The shadows, however, in each case are distinct, and later in their history the physical signs with the stethoscope became undoubted. I think, therefore, we are justified in saying that the X rays are able to diagnose really early tuberculous change in the lung. I think, also, that the Röntgen rays can detect tubercle certainly as early as the stethoscope, or even earlier, as the last two cases show. Now it may be asked how can you tell a tuberculous shadow from that of a new growth. This can be done only by the distribution of the shadow and by the history of the case. As with the stethoscope, we have to consider the history of the individual case before us, so with the X rays. Pray do not think for one minute that the X rays can diagnose tubercle off-hand; such, I am sure, is not the case. But I think that this means of detecting an early tuberculous shadow brings a little nearer the day when internal tubercle may perhaps be treated with chemical rays, as external tubercle—viz., lupus—is being treated to-day with such conspicuous success. In the future we may perhaps be able to say of pulmonary tubercle: "It comes as a shadow, so departs."

I will only detain you a few minutes longer; I have avisedly said nothing about methods of examination; I thought in an audience such as this it would be superfluous. I may say, however, that all the skiagrams I have had the honor to show you were taken with a coil giving a 14-inch spark between the terminals of the secondary coil. One word more and I have finished. I think in all cases of suspected pulmonary tubercle a skiagram should be taken. From an experience of over five years I am sure that a shadow can be detected on the photographic plate that would be quite missed on the screen.

SLOW PULSE. By Robert T. Edes, M.D., of Boston, Mass.—Concluded.

TABLE III [continued].

Cases of slow pulse, with or without paroxysms, resulting fatally, but in which no autopsies were made.

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
68	Strubling, Deutscher Med Woch 1883.	M 31	slow	Hypertrophy and dil., both ventricles.	None.		Death at stove.			
69	Peacock, Med. T. and G. 1864 p. 31.	M 33	24-30	Dyspnea on exertion. Prolonged rest between beats.	Syncope.	Cramps in legs. Traveled upward, for four years no fit. Had had rheumatic fever. Moderate drinker. Not smok. Sudden death. Valvular disease?				
70	Peacock, Med. T. and G. 1864 p. 31.	M 70	25-30	Nothing unusual.	Apoplectic form: syncope.		Syncope. Sudden death.			
71	Peacock, Med. T. and G. Jan 9th, 1864 pp. 31		20-25 For years.	Correspond. to radial. Reg., strong.	Occasional syncopes. " epileptiform.	Had led an active life. Bodily exertion syncope 7 years after or excitement in slowness first not increased frequency of feed. pulse.	Died in sudden death.			
72	Edes, See text. Case II	M 40	70-26	Interpolated beats.	Attacks of unconsciousness.	Fair gen. health. Ch. sl. resp.	Died with "cold" cough slow and irreg. pulse.			

TABLE IV.

Cases of slow pulse not resulting fatally.

73	Stokes, Dubl. Quarterly, 1846, p. 73.	M 68	28-30	Dilatation. Some irregularities of ep. pulse and imperfect contractions. Jugular pulse.	Repeated pseudo attacks not followed by paralysis.					
74	Sorbet, Gaz. des Hôp., 1881, p. 686.	M 62	28-32	sl. souffle at base.		Fatigue. Vigorous; syncope ment. after great fatigue 68-70. Went back Later vertigo, near to work and continued well.				
75	Schuster, Deutscher Med Woch 1886, No. 30.	14	Slow	Systolic murmur.		Acute rheumatism. Attacks of slow pulse. Fall of temperature. Respiration slow. Ch. Sl.	Complete recovery.			
76	Walker, Prooria Med. Monthly, 1881-82, p. 253.	M	90-5 to 14			Collapse; sunstroke? malaria? Paroxysms about every 12 hours. Pulse declined with rise of fever and vice versa.	Recovery.			
77	Foot, Med. Reporter, N. Y. 1891.	M 24	11 to 30			Mowing and drinking freely. Oppression of breathing, sigh resp. del.; loss of vision, of consciousness.	Pulse slow; 10 days Recovery.			

TABLE IV [continued].

Cases of slow pulse not resulting fatally.

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks.
78	Somerville, Practitioner, London, XXI, p. 186.		25							
79	Flint, Am. Pract. vol. 13, 1876, p. 1.	M. 52	26		Temperature slightly diminished.		Indigestion? Salt in food, not robust health. Temperature, not smoker. Business worry.			
							Felt badly after active exercise and normal cold ride.			Judging from the effects of cathartics, due to intestinal trouble.
80	Flint, Am. Pract. vol. 13, 1876, p. 1.	M. 16	48-38				In health 70-75, more frequent up to sick headache and 71. malarial. When he felt quite well, not more than 50.			Gradually became
81	Tillaux, Gaz. des Hôp. 1876		21	Decided cardiac symptoms	Syncope.		Pulse in health not known.			Wanted to leave hospital.
82	Oliva, Riv. Ven. d. Sc. Med. 1885, pp. 79.	W. 82	31	Hardness of arteries.	Stenocardiac. Epileptiform.		From 30 to 50 (age) severe headache. After 50 good health. Pale. Sudden attacks with suffocation and oppression.			Calm appearance. Sensorium normal.
83	Kinnicutt, Proc. Assoc. Phys. vol. IV	M. Middle aged.	10-30-13 7	Pulse in radials corresponded with urea heart. Mitral insufficiency.	Epileptiform seizure with slower pulse.		In active business. Fairly good health.			
84	Osler, Lancet, Feb. 27th, 1897, p. 623.		30		Vertigo and loss of consciousness.		Got better. Still has bradycardia, but many as 25 attacks vertigo not so frequent still 30.			Later has had as many as 25 attacks of vertigo and pulse still 30.
85	St. George Mivart, Lancet, Jan. 3, 1885.		20	Reg. tolerably full and firm. Impulse almost.	Epileptoid.		Heart supposed to be fatty.			
86	Huchard, Arch. Gen. 1893, p. 257, obs. I, Gaucher.	M. 65	16-20 later 60-61		Vertigo; loss of consciousness. If he stands too long bilat. convulsions.		Great eater and smoker. Chr. aortitis.			
87	Huchard, Arch. Gen. 1893, p. 257.	F. 67	11	No clear signs of arterio-sclerosis.	Loss of consciousness.					
88	Huchard, Arch. Gen. 1893, p. 257.	M. 62	80-11	General arterio-sclerosis; aortic narrowing.	Syncope and epileptic attacks.					Atheroma of aorta and other arteries
89	Huchard, Potain, Arch. Gen. 1893, p. 257.	50	20	Irregular.	Slight attacks in somnia, a little pre-convulsional distress. P. 12-16 lasting several days.		Pulse slow 6 years.			
90	Huchard, Potain, Arch. Gen. 1893, p. 257.	M. 62	15-20		Slight attacks with slight slowing of pulse (10). Extreme paleness of face.					

TABLE IV [continued].

Cases of slow pulse not resulting fatally.

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms.	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
90	Noble Brit. Med. 1876, vol. 2, p. 871.	M. 35	36		Syncope if long upright.					
92	Files See text. Case 111	M. 40	36-25	Interpolated beats at first.	Epileptiform.	In hospital when seen only once.				
93	Handfield Jones. Lancet, 1876.	M. 62	36-23		Temperature sub-normal. Unconscious spells.					
94	Handfield Jones. Lancet, 1876.		34-24	Every few seconds a distinct beat followed by a weak one.	Epilepsy; perhaps also syncope.					
95	Peacock. Med. T. and G. Jan. 10th, 1864, p. 31.		28-30	Aortic valv.	Occasional sync. or epileptiform.					
96	Delboe. Soc. Méd. Hôp. de Paris	M. 84	32		Syncope.		Usually good health. Long walk, syncope. Dyspnea like that of uremia. Great improvement under milk diet. Urine scanty, no albumen.			
97	Souriet. Gaz. des Hôp. 1881, p. 438.	M. 55	32 irregular.	Palpitation at various times.	Vertigo. A little dyspnea.		Retired captain. Great smoker. Had had profound anæmia in 1881, noted p. 55 or 60. Considered himself well except great slowness of pulse.			
98	Baranowitz. N. Y. Med. Rec., 1881, p. 670.	M.	40				Small thin man op. strang. hernia. P. 61 and 103. Later lying 12 sitting 43 pulse: standing 45			
99	Comby. Semaine Méd. 1872, p. 255.	F. 79	Slow		Vertigo.		Urine - no sugar. Slight trace albumen. Urea less than and phos. rose to 5 per diem. Phosphates diminished.			
100	Jackson. Boston M. and S. J. 1898, p. 376.	M. 53	40-20-16 Once counted 6 and in half minute, haps slight systolic soufflé.	Sounds muffled	Pale, weakness and giddiness, so that he would fall unconscious a minute or so.	Healthy looking farmer.	Felt better and pulse quicker. Hands and feet cold particularly when pulse slow.			
101	Greenhow. Med. T. and G. April 30th, 1864.	M. 32	48	Palpitation inferior. Cardiac dull. Loud diastolic murmur.			Decided improvement in health. Pulse never varied from 48.			
102	Brown. Brit. Med. J. 1879, vol. 2, p. 1020.	M. 70	42-17	Aortitis??		Syncope if assumed erect posture.	First seen in febrile attack, pulse 110, temp. 102. For months pulse did not exceed 17. Pulse gradually rose to 25, 30, 42. Allowed to take gentle exercise.			
103	Pantock. Brit. Med. J. 1879, vol. 2, p. 1020.	F. 65	46-36	Healthy and regular.						

TABLE IV [continued].

Cases of slow pulse not resulting fatally.

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels	P. M. appearances in brain and nervous system	Remarks
101	Squire, <i>Med. Record</i> , Nov. 26, 1888.	M 80	28 24-32	Hypertrophy. Arteries hard. No intermediate beat.		Ten years ago heart trouble.	Excellent health with uncommon vigor for his age. Short breathed if he makes much exertion.			
105	Prentiss, quoted without reference.	M 70	24-3		Attack of spasms.	Had had rheumatism. Pulsations diminished in frequency for a time 3 in a minute.	Much prostration but seemed improving.			
106	Mayo, <i>London Med. Gaz.</i> , vol. 1, 123-125, 1836.	M 52	34-40-27	Ventricular disease. Giddiness.	Ep. with transient giddiness. Continuation of process short.		Condition same			
107	Peaslee, N. Y. <i>Med. J.</i> , vol. 21.	M 38			Pain in occipital region.		When ceased the use of tobacco pulse rose to ordinary rate			
108	Peaslee, N. Y. <i>Med. J.</i> , vol. 21.	M 45	40		Pain in occipital region.		When ceased the use of tobacco pulse rose to ordinary rate			
109	Flint <i>Am. Pract.</i> , vol. 13	M 35	40	Negative.	Faintness; no fit	Violent fit of coughing from food in larynx; vomiting. Great prostration later of Typhoid				
110	Strübing, <i>Deutsch Med. Woch.</i> 1883, p. 4 & 5	M 24	61-68	Irregular and diastolic, some dilatation.	Temperature very slow, below normal	Soldier; blacksmith. Hard work 4 days before.	Gradual increase in frequency, recovery			
111	Schuster <i>Deutsch Med. Woch.</i> 1896, p. 484.	F		Small and arrhythmic	Temperature diminished	Another series of attacks in the morning. Pulse not so much diminished. Recovery				
112	Eyles, <i>See text Case IV.</i>	M 50	36-25	Interpolated beats		Close application to business. Walks and does light work. No vertigo. Several attacks of fainting with slight convulsions. Frequent vertigo				
113	Prentiss, <i>Tr. Am. Phys. Vol. IV</i>	M 83	36	Systolic, irregular double or treble sound		Faintness and vertigo. Now not more than momentary unconsciousness. Recently married				

TABLE IV [continued].

Cases of slow pulse not resulting fatally

No.	Reported by	Sex and Age	Pulse	Heart	Paroxysms	Origin or early symptoms	History	P. M. appearances in heart and vessels.	P. M. appearances in brain and nervous system.	Remarks
111	Worthington London Lancet 1845 vol. II	M 70	28	Feeble and irregular.	Dyspnea 3 years.	Normal pulse 70. Lived 5 years longer. Continued slow, in good health.	Died of fracture of leg. Head large, pale, thickened. Arteroma aortic and coronaries. Basilar arteries dilated.			
115	Flint Am. Pract. vol. 13, 1876, p. 1	M 43	10-20-26	No abnormal cardiac sounds.		Pulse slow probably years, weakness accelerated. In- and palpitation. Intervals 24-30. In- Epileptiform convulsions, recurred.				
116	Hewan Monthly Abstr. Med. Soc. Phila., 1871-75, p. 46		24		Never fit or fainted, ears cold well.	Studied greatly. Later gout and P. 72 then 55 8 years. Then fell slowly to 32 and 38 where it remained. Could climb mountains.				
117	Regnard Paris Theses	M 76	21-22	Murmur with 1st sound. Reg. 1st sound loudest; heart large.		Entered hospital for hydrocele. Had noticed a little oppression and less strength in legs; syncope, edema.	Left hospital.			
118	Prentiss Am. Phys. Vol. IV	F 75	35	Radial and heart correspond.	Attacks of faintness and vertigo, may have unconsciousness.	Present attack with nausea. Dizziness, faintness.	Improved.			
119	Bolton Brit. Med. J. 1871 p. 611.	F 66	Weaker beat, after strong. 28	Weaker beat, after strong.	Occasional fits and loss of consciousness.	Anxiety.	Improved on good diet.			
120	Thornton Clin. Soc. Trans. vol. 8, p. 45.	F 20	16-20	Sphyg. Double beat	Epileptiform p. puller.	Operation for; Syph. laryngitis; p. 40.	Improved. Pulse to 18.			
121	Regnard. Paris Theses	M	11-46		Loss of consciousness.					Gradual improvement, but after 12 days pulse still low
122	Norris Brit. Med. J. 70, vol. 2, p. 886.	M. 68	26	Hypertrophy. Slight mitral murmur. Edema of ankles.	Syncope.	Albuminuria				

The Philadelphia Medical Journal

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The President's Wounds.—After the first shock caused by the inhuman crime perpetrated upon President McKinley has passed, the question of paramount interest to every citizen is, what hope have we that this valuable life will be spared to the nation? In the light of surgical knowledge and experience with similar injuries, what are the chief dangers and on what ground can we place our hopes for the President's recovery?

The details received at the time of writing are not quite so full as we should like. From the information received, however, it seems that the crime was committed about 4 P. M., and about three hours after the ingestion of food. The wounds were caused by two bullets from a short-barreled revolver, fired from directly in front and at a range of about one foot.

The first shot struck the sternum at about the nipple line and was deflected, traveling just under the skin to a point immediately below the left nipple. The second bullet entered the abdomen at a point two and a half inches to the left of the median line, and at a level of about half an inch above the umbilicus. The would-be assassin and the President were standing directly in front of each other, and the weapon was held in the right hand. Arguing from the course of the first bullet, the course of the second, it seems almost certain, was from before directly backwards and from above slightly downwards. This would lead us to think that unless deflected after entering the body, which, however, is not very likely, its course would carry it through the lower anterior wall of the stomach a little to the cardiac side of the middle, through the stomach, making a wound of exit in the posterior wall a little lower than the wound of entrance. Then it would reach the posterior abdominal wall at a point near or at the left crus of the diaphragm, a little above the kidney.

The chest wound is probably not dangerous, for it seems to be merely a non-penetrating wound of the chest of a kind which, although painful and sometimes difficult to heal, is practically without mortality. One important fact which this wound shows is that the muzzle velocity of the bullet was not

very great, as evinced by the fact of its not penetrating the sternum, although fired from directly in front. This is not a favorable circumstance, for bullets of lesser velocity produce the larger and more ragged wounds.

The immediate dangers from such an abdominal wound are hemorrhage from an injury of the great vessels situated to the left of the spinal column, wound of the pancreas, which is usually immediately fatal, and injury to the spinal cord by penetration of the spinal canal by the bullet. Time has shown that all these dangers have been mercifully escaped, and now there remain only the secondary effects to be feared.

By far the greatest of these secondary dangers is peritonitis, yet there are two factors that give us hope that the President will escape this complication. These are an empty stomach at the time of injury and prompt operation by skillful hands.

The first of these is most important, as the empty stomach would, of course, cause less soiling of the general peritoneal cavity. Nevertheless there are many cases in which the contents of the stomach have extremely soiled the peritoneal cavity, in which recovery has followed operation. In fact, the stomach is less apt to contain virulent micro-organisms than any other part of the intestinal canal. The statistics of early operation for perforation of the different parts of the alimentary canal are very gratifying, and even in the perforations of typhoid fever, where there are present many factors which would lead us to fear a lethal termination, which are not present in President McKinley's case, the results have been brilliant.

The immediate operation by the skillful surgeons by whom it was done, and the time that has already elapsed, make it almost certain that there is no danger of peritonitis from the primary soiling of the peritoneum. Peritonitis might possibly arise later from leakage at the site of the repaired wounds in the stomach, either by the wounds being opened by the peristaltic movements of the stomach or by sloughing of the sutures, but this is extremely unlikely, for the same reason that prevented the primary peritonitis.

Perhaps next to peritonitis uremia is most to be

feared, together with the other dangers inseparable from an extensive operation upon a man of the President's age. These dangers are, however, minimized because of the skillful hands in which the President is placed and because of his temperate habits.

An injury to the spine can be ruled out, as it would surely have shown itself before this.

Injury to the kidney would have been shown by blood in the urine, and a retro-peritoneal or free peritoneal hemorrhage. The greatest danger here, aside from a free hemorrhage, is a secondary retro-peritoneal abscess, which would be a serious but not necessarily fatal complication.

Should the bullet be lodged in the muscles of the back it will probably give no trouble; should it do so, however, it can readily be located by the aid of the X-rays and removed.

As long ago as 1822, long before the days of aseptic surgery, there was reported the famous case of Alexis St. Martin, who was shot in the abdomen with a musket ball and received far more extensive lesions than appear to have been inflicted upon President McKinley, and yet under the care of Dr. William Beaumont the patient recovered and lived for many years, although with a gastric fistula.

There are other remote effects of the injury that may possibly interfere with the President's subsequent health, such as contraction of the cicatrices of the wounds in the stomach or adhesions between the stomach and other organs. It is, however, too soon for the discussion of these points.

In summary, the three chief dangers by which the President is threatened are peritonitis, retro-peritoneal abscess, and uremia. The first seems most important, but prompt aseptic surgery has done very much to minimize this. The second, retro-peritoneal abscess, depends on an infection of the final resting place of the bullet and, although very serious, is not necessarily fatal. The third, uremia, depends largely upon the previous state of the patient's kidneys, which is unknown to us.

So, though we cannot deny that the crime of Czolgosz has greatly imperiled the life of the Chief Executive, yet we have strong grounds for the hope that this valued life will be spared to us for many long years to come.

Medical and Sanitary Progress in the Philippine Islands.—It is a pleasure to note the progress being made by the United States Government in the Philippine Islands. As far as medical and sanitary science is concerned the Government seems to be pursuing a most enlightened policy. The same thing can be said of the Philippines that has often been said of Cuba—the advent of the American Government has been an unqualified blessing to both these regions. We do not presume to discuss politics or

policies in these columns, but we do pretend to keep an eye open for all items of medical interest. We are reminded of this subject especially by reading some acts recently passed by the United States Philippine Commission, "by authority of the President of the United States," who now lies sorely stricken by the hand of an anarchist. One of these acts is for the establishment of Government laboratories—chemical, biological, etc.—and the other is for the establishment of a board of health for the islands. Both these acts are on the most liberal and enlightened plan, and contain some features that could well be copied in some of our home cities. Thus the board of health for the Philippine Islands is by law composed almost entirely of duly qualified physicians who have taken doctors' or licentiate's degrees in medicine from reputable medical schools. These members consist of a commissioner of public health, a sanitary engineer, a chief health inspector, and a secretary, all except the engineer being qualified physicians. In addition to these are the superintendent of government laboratories, *ex officio*, and the chief surgeon of the United States Army, and the chief surgeon of the Marine Hospital Service in the Philippines, as well as the president and vice-president of the Association of Physicians in the Philippines, as honorary members. The acts are too voluminous for us to quote in full, but we may say that they are very explicit, and their intent is evidently to keep the administration of these distant islands fully in accord with advanced sanitary science. Our various pessimistic friends and moral statisticians, who are bewailing the cost of "militarism" and "imperialism," might obtain some comfort for themselves if they would keep better track of the real work which their Government is doing for civilization. Of course, it costs money—but perhaps in the end it will pay. Certainly medical science will not suffer from it.

The American Association for the Advancement of Science.—We are pleased to note that at the recent meeting of this Association at Denver a section on Experimental Medicine and Physiology was instituted. It is proper in every sense that medical science should be represented in this representative association of all the sciences. Medicine is more or less closely associated with many of the physical sciences, and it is not difficult to appreciate how mutual advantage may arise from such association in an annual national gathering. We have pointed out before in these columns that for many years the meetings of the British Association, of similar name and objects, have been the occasions of many important contributions to medical science. Moreover, the presidency of the British Association has more than once been conferred upon eminent mem-

bers of the medical profession, notably in recent years upon Sir William Turner and Sir Michael Foster. In the American Association, if we mistake not, medical science has not been quite so conspicuously represented. In this country there are so many purely medical associations that the tendency is, perhaps, for medical scientists to become somewhat too clannish. But we insist that medicine, surgery and hygiene, as among the most important of the physical sciences, should take their places along with the other sciences, in any association which aims to be truly national and representative. We trust that in the future the claims of the profession, to be among the foremost of all the scientists, will be ably maintained in the American Association for the Advancement of Science.

Relative Death Rates of Large Cities.—A bulletin of mortality statistics, issued lately by a Government bureau has attracted some attention, especially in Philadelphia, on account of a somewhat unfavorable showing for this city. The study of such statistics is useful to the sanitarian, but mere annual totals may be misleading. The details should be collected and compared. Unfortunately each city has a more or less special system of classification and arrangement, and it is not possible to pick out of the different reports data of exactly the same class. Some of the salient features may, however, be indicated. For the three cities, New York, Chicago, and Philadelphia, the only cities on the continent having more than one million inhabitants, the latest coincident reports are those for 1898, and that for Philadelphia is below the usual standard. The following figures are compiled as carefully as the official forms permit, and may be regarded as fairly accurate. The deaths in each class are reduced to the basis of one million living persons:

DEATHS PER MILLION.

	New York.	Chicago.	Philadelphia
All Cases,	18,900	15,000	19,000
Phthisis,	2,207	1,610	2,065
Pneumonia,	2,312	1,611	2,000
Suicide,	199	230	132
Cancer,	573	600	536
Old Age,	331	248	770
Measles,	186	37	187
Scarlet Fever,	201	45	90
Diphtheria,	417	415	800
Whooping Cough,	204	137	130
Typhoid Fever,	193	425	450
Bronchitis,	550	666	348
Homicide,	34	51	17
Deaths under 5 years.			
(All Cases.)	7,300	5,400	6,400

It will be seen that Philadelphia has the highest total rate, and high rate in diphtheria, typhoid fever,

and old age. Compared with Chicago the rates for phthisis and pneumonia are also high. The bad water supplies of Chicago and Philadelphia are well indicated in the typhoid rates. On the other hand, the quieter life of Philadelphia, "its slowness" perhaps some might say, is shown in the low figures for homicide and suicide. The Chicago and New York reports give figures for accidents and negligence, but it is not possible to get comparable data from the Philadelphia report.

Dercum's Disease.—We have been much interested in the thesis of Dr. Louis Vitaut on the "*Maladie de Dercum*," a copy of which has recently come to hand. Vitaut's thesis was presented to the Faculty of Medicine of Lyons for the doctorate in medicine, and has just been published in that city. This affection, it may be recalled, was first differentiated by Dr. F. X. Dercum, of Philadelphia, in a patient whom he observed in the nervous wards in the Philadelphia Hospital. Since the appearance of Dercum's original report the disease has slowly gained recognition, until now, as we learn from Vitaut's thesis, it has been described by other observers, not only in America, but also in England, France, Italy, and Germany. Altogether there have been sixteen cases reported, among the first of which was that of Dr. Frederick P. Henry, of this city.

Dercum's disease, or adiposis dolorosa, is characterized by a lipomatosis, either diffused or in tumors; by pain, especially over the nerve trunks; by anesthesia in contiguous territory, and by psychic disturbances. Of accessory symptoms; motor and sympathetic disorders are especially noteworthy. Several types are distinguishable, according as the lipomatosis is nodular or diffused. The causes are found in heredity, alcoholism, and trauma. A nervous mechanism is assigned for the pathogenesis. At autopsy the nerve trunks, the adipose tissue, and the thyroid gland have been found to be the seats of pathological changes. Vitaut asserts that the most reliable treatment has been by the use of thyroid extract. We have ourselves always inclined to regard the affection as allied with the toxemias, which exert their influence especially upon the nerve trunks, and have thought that alcohol would be found an important factor, associated with a gouty diathesis. The success achieved with the thyroid treatment, however, opens up new avenues for speculation on the subject of etiology. We congratulate Dr. Dercum, not on having invented, but on having demonstrated a new affection, which is not inappropriately christened with his name.

Hysteria from an Unusual Cause.—We think that Dr. L. E. Holmes' brief paper, which we publish this week, on some unusual effects of a snake's bite, is worth a special comment. We strongly suspect that the anesthesia and temporary paresis were hysterical in character, just as Dr. Holmes suggests. The cause was peculiarly fitted to excite hysterical symptoms; it had all the elements to induce shock and excessive fright. Of course the victim in such a case does not know at first (and may never, in fact, know except from the ultimate result) whether the offending snake is venomous or not. This great uncertainty, this period of doubt and anxiety, is an admirable preparation for hysterical manifestations. The French have noted the same thing following the bite of a dog. In fact, any cause involving shock or horror is quite capable of exciting some of the hysterical stigmata. A stroke of lightning, or a shock of electricity, has been known to do the same thing. The problem presented by such cases is to distinguish the organic from the purely functional; the material from the psychic. Dr. Holmes' case is a thoroughly illustrative one. It emphasizes in an interesting way how a patient may seem to be most alarmingly injured, from a most alarming cause, when in fact she is simply, unknown to herself, presenting some of the tableaux of the grand neurosis.

Compression in the Treatment of Heart Disease.—The justification for the employment of an apparatus to support the heart from without may be found in the various subjective symptoms which are caused by lesions producing dilatation and hypertrophy of that portion of the organ which is most intimately in contact with the thorax. And it is only in such lesions that such therapy is indicated and will do good. It is a well known fact that an hypertrophied heart causes a distension and strain upon the structures that support it, which in turn not only give rise to the various subjective difficulties, but may also objectively give rise to perceptible alterations in the large vessels. The instinctive impulse of patients with heart disease to press their hand over the precordium for relief has suggested to many investigators an artificial support. As Benedict has shown, the lung during inspiration not only presents itself on the left between the surface of the heart and the throat above, but also is, present on the left side between the apex of the heart and the diaphragm below. It follows, therefore, that an hypertrophied heart will be benefited by support the more it can be prevented from exerting injurious pressure upon its neighboring structures. Various devices have been constructed under the

direction of Abéc Hellendahl and Mendelsohn. The latest device is reported by Professor Martin Mendelsohn, of Berlin, the description of which will be found in the *Berliner klinische Wochenschrift*, August 26, 1901. It appears that such treatment, based upon well authenticated physical conditions, may well supplant in many cases the administration of drugs.

The Scribbling Paranoiac.—In his chapter on monomania, Spitzka, in his inimitable style, relates the case of a delusional lunatic who wrote a treatise in defense of polygamy, sustaining his position with voluminous quotations from ecclesiastical authors. The case is a type of its kind, although the patient, as may be judged from the subject of his treatise, was evidently a sexual pervert—an obsession which cannot be charged against all the insane. Some epochs are especially afflicted with these scribbling paranoiacs. Political and religious excitement breeds them. Pseudo-scientific zeal often possesses them. Ethical problems appeal to them. Where the facilities for getting into print are great, the literary lunatic is quick to avail himself of the chance. Unfortunately in some countries the opportunities are too easily afforded him; consequently he bursts upon the public at most unexpected times and in most inappropriate places. Such a person uses the pen or the hatchet with equal readiness. Mrs. Carrie Nation, who is also a living representative of this class, uses the hatchet.

The characteristics of the scribbling paranoiac are intense egotism and unceasing activity, associated with a passion for reform. The man to whom Spitzka refers, wished to reform the church and bored the ecclesiastical authorities with his mad schemes. Such a man has no sense of humor. The ridiculousness and impracticability of his plans, especially as emanating from such an individual as himself, never occur to his own mind in the remotest way. His writings are usually without consistency; without co-ordination; without knowledge or judgment. He is incapable of sustained effort. Real science wearies him. Philosophy and literature are closed books to him. He is immersed in the lucubrations of his own disordered intelligence.

This is one of the most extraordinary chapters in the history of psychiatry. The author of *Pilgrim's Progress* (a disordered fantasy) was the victim of insane hallucinations. The *Crusades* (a pandemic frenzy) were started by a preaching monomaniac named Peter the Hermit. We have personal knowledge of an incarcerated lunatic who is a frequent contributor to the poet's corner in one of Philadelphia's largest daily newspapers. In the asylums it is not uncommon for the attendants to collect whole

reams of manuscript, which perish for the want merely of an editor to publish them. But the most genial example of his class (although he was a reformer rather than a scribbler) was Don Quixote, who charged upon a windmill or a flock of sheep with the valor of a paladin. Finally, we all recall the Hindoo reformer, Ram Das, of whom Carlyle tells us that he had fire enough in his belly to burn up all the sins of mankind.

Mortality from Gunshot Wounds of the Abdomen.—Apropos of the President's case we submit the following:

Gunshot wounds of the stomach are usually classed with intestinal bullet wounds.

Alcock (quoted by Henry Morris in the *Internat. Ency. Surgery*, Vol. V, p. 512) gives one case of recovery out of 3,000 gunshot wounds of the stomach. This was before the days of modern surgery.

Of 110 sections for gunshot wounds of the abdomen, 62 per cent. died.—T. S. Morton (*Jour. Am. Med. Ass'n*, Jan. 4, 1900).

Of 253 cases of gunshot wounds of the abdomen operated upon, 52 per cent. died.—H. H. Grant, *Philadelphia Medical Journal*, July 22, 1899.

Of 3,475 penetrating abdominal wounds during the Civil War, 3,031, or 87.2 per cent., died. During 1898 and 1899, 81, or 70 per cent., of 116 cases died. Of 10 operated upon 9 were fatal.

Report of Surgeon General, June 30, 1900.

Correspondence.

THE CIGARETTE.

By ALEXANDER R. BECKER, M. D., of Seattle, Wash.
To the Editor of the *Philadelphia Medical Journal*:

There are few subjects upon which so much ignorant abuse has been expended during the recent centuries as Tobacco, while its lovers have gone on enjoying it in calm comfort and content and with only a mild contempt for its detractors. Most of this has died out during the recent decades, excepting on the sub-subject of Cigarettes, which have been made the butt for every sort of ridicule and vilification that prejudice and ignorance could devise, and to which but very few sensible men have taken the trouble to reply. This latter course may be well enough for a busy people so long as the sinners are to be found only in the daily press—whose penny-a-liners are pardoned much in view of their efforts to gain their daily bread, and in the State Legislatures—whose aberrations are far too patiently borne by our long-suffering people. But when physicians write to first-class medical journals with the same combined ignorance and superciliousness, and attempt to instruct others from the basis of one utterly inconclusive case it does seem time to say a few words from a scientific standpoint.

First, then, as to Tobacco—of which it is particularly true to say, in the words of the old proverb: "What is one man's meat is another man's poison"—while it is positively true that there is no article of general consumption that has brought so much of soothing comfort to the ordinary healthy and normal man, the world over, and with so little of harm, it is also true that it is harmful to an infinitesimal minority—who should leave it alone, and positively poisonous to boys and youths—to whom it should be utterly prohibited, both by parental authority and by law (although the former should be ashamed to require the assistance of the latter). But neither one of these limitations

constitutes a point against tobacco, but only against those classes who cannot use it.

All these adverse writers lay dreadful stress upon nicotine and nicotism—apparently in ignorance of the fact that the chemists have isolated more than twenty "products of combustion" and are far from unanimous in estimating their respective values and powers. But there is one practical result of very real importance from their investigations—that these "products" become more and more concentrated and powerful by being drawn through more tobacco confined in tubes—such as cigars and pipes, while the object should be to secure the free and rapid combustion of comparatively small quantities at a time. The Japanese accomplish this with their tiny pipes, which are about the size of half a small lady's thimble and flaring at that. The Turks do so less perfectly by their shallow and flaring bowls—of both narghileh and chibouque. While the German concentrates everything (in his generally wretched tobacco) in his deep pipebowl of heathholding porcelain. On the other hand, the most fastidious cigar-smokers use the smaller sizes only and then smoke but half of each. And now we come to the consideration of cigarettes—the daintiest and least harmful of all, provided the components be of the best, because they contain the minimum of tobacco to be soaked with the products of combustion before being itself consumed; for the average cigarette is less than three inches long, which leaves only two inches to be smoked—less than gr. x in even a fat, gold-tipped "Milo."

Who have been the cigarette-smokers? From the Latin colonies of this Western hemisphere the habit went to Spain and Portugal; from Asia Minor it extended through all northern Africa and Turkey and to Russia; it was carried to France by the troops returning from the Algerian conquest, and to England by those returning from the Crimea; and yet in not one of those countries has there ever been any hue and cry against it, nor have any cranks—still less physicians—arisen to call it cursed. But perhaps there has been ground for that difference—for in those "effete" countries the efforts of manufacturers, and of the governments—so far as they concerned themselves, lay in providing good and pure tobaccos and improved and unirritating wrappers; while some of the rascally manufacturers of this country vied with each other in efforts to produce the cheapest cigarettes, on which they could make enormous profits, and then dosed them with narcotic solutions—of opium, cannabis indica, cocaine—so that the smokers, once habituated, should find no comfort in other brands. The individual doses were undoubtedly very small, but quite sufficient, when frequently repeated, to form and confirm the pernicious habit, as shown by the "ashy complexion," the hebetude, and progressive mental and physical decay; conditions *never* resulting from tobacco smoke; but the unthinking public and unthinking physicians lay all the blame upon "the Cigarette," without ever suspecting the Mephisto in the little roll.

It is not strange that many people should suppose that the inhalation of smoke must be irritating to the mucous membranes of the air-passages. In fact, it is apt to be so at first, and is persistently so in some people—who should therefore avoid it; but we are emphatically creatures of habit and our mucous membranes are possessed of a very wide adaptability; and the fact that it is not injurious in that way is amply proved by the results—for cigarette smokers are not only *not* more liable to throat and lung diseases than others, but often find their air passages *less* sensitive to atmospheric changes than before.

Conclusions:—Tobacco in *all* forms ought to be absolutely prohibited to boys of less than 18 or 20; (2) Adulterations of tobacco ought to be rigidly ferreted out and punished under laws of Congress; (3) There is a small minority of men to whom tobacco is more or less harmful, and they should refrain from it—but without attempting to stretch or squeeze all the rest of mankind into their Procrustean limit. There are those who have idiosyncrasies—who cannot take opium or quinine or belladonna without harm, in whom shellfish cause urticaria, or a plate of strawberries will produce as sharp an attack of gout as a bottle of Burgundy. But shall any of these small minorities rule the great normal majority? Not in this free country—although it is here, so far more than elsewhere, that they attempt it in so many directions.

And to those physicians who speak and write unadvisedly I would only say: "Brethren, study and still study, so that you may teach out of knowledge and not prejudice."

"CUBAN ITCH" AND IMMUNITY.

By HORACE S. JONES, M. D., of Kansas City, Mo.,

That we inherit physical and mental characteristics, is an undeniable fact, though the mechanism is not understood. We also know that the tissue cells can inherit a tendency to disease, a retrograde metamorphosis; then by the same law it is not unreasonable to suppose that immunity to disease can likewise be transmitted.

Certain contagious diseases, because they effect some unknown permanent change in the entire body, render it afterward immune to the same disease; now by the introduction into the economy of germs of any of these diseases we accomplish the same result as the disease *per se*; witness the result of vaccination. The immunity resulting, will, by its effect on succeeding generations, tend, by inheritance alone, to produce immunity. "Cuban Itch" I believe to be the effect of the above mentioned causes, it being nothing more than mild smallpox. Thus vaccination and inherited immunity have so modified one contagious disease as to almost render it unrecognizable. When vaccination becomes a universal practice, smallpox will be no more.

CAUSES OF INTESTINAL OBSTRUCTION.

By A. L. BENEDICT, M. D., of Buffalo,

The writer contemplates publishing an article dealing with intestinal obstruction from the standpoint of internal medicine. In order to make the study as complete as possible, the accompanying table of causes is printed in advance, to elicit criticism. The writer will be greatly obliged for suggestions of additional causes, of subdivisions under general causes and for case-reports illustrating rare forms of obstruction. Due credit will be given for any such information and material.

1. Causes inside the bowel.
 - Fecal accumulation.
 - A. Complete obstruction.
 - B. Bowel pervious to liquids.
 - Gall stones.
 - Enteroliths.
 - Foreign bodies.
 - A. From food.
 - B. Hair balls.
 - C. Parasites.
 - D. Foreign bodies proper.
2. Causes outside the bowel.
 - Peritoneal bands.
 - Aperture in omentum, mesentery, etc.
 - Entanglement with long appendix, diverticulum, persistent vitelline duct, etc.
 - Strangulated hernia, external or internal.
 - Pressure of tumors.
 - Rotary dilatation following pressure of uterus, pelvic lymph-nodes, vaginal tumors, etc., on rectum.
3. Causes affecting bowel itself.
 - Volvulus.
 - Stricture, cancerous, syphilitic, tubercular, or following typhoid, traumatic and other ulcers.
 - Contractures due to matting together of intestinal coils.
 - Intussusception.
 - Nervous contraction.
 - A. Tonic.
 - B. Spasmodic (N. O. Werder.)
 - Tumors of bowel, including polypus and hemorrhoids of rectum.

A Rare Congenital Affection of the Hip-Joint.—In the *Centralblatt fuer Chirurgie*, (June 8, 1901, No. 23), K. Trantzscher describes an anomaly seen in a dead-born infant, breech presentation, the mother being a primipara, aged 31. Extension of the legs upon both sides was impossible, the rigidity being most marked, however, on the right. There was slight lordosis of the lumbar vertebrae, but no changes of the bones. The condition resembled coxa vara. Dissection showed a shortening of the anterior wall of the capsule of the hip-joint, the iliofemoral ligament. Trantzscher believes that the cause of the condition is atrophy from inactivity, due to the cramped breech position. [M. O.]

American News and Notes.**PHILADELPHIA, PENNSYLVANIA, ETC.**

The Craig Colony for Epileptics, which now has 620 patients, will be able to accommodate 120 more when the four buildings, now being built, are completed.

Immigrants Inspected at the Port of Philadelphia.—Total number of immigrants inspected 1,175; number passed, 1,144; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 31.

Philadelphia County Medical Society.—The North Branch of the Philadelphia County Medical Society will hold its first meeting at S. E. corner of Broad street and Columbia avenue, on Thursday evening, September 19th, at 9 o'clock. Addresses will be made by Drs. John B. Roberts, Judson Daland, Henry Beates, A. B. Hirsh, Albert M. Eaton and others. All physicians eligible for membership to the County Society are welcomed to attend the meetings.

The Reading Railway Company has opened an emergency hospital at Tamaqua, Pa.

Disease in Philadelphia.—Following is the report of the Health Officer for typhoid fever and smallpox in Philadelphia during the month of August, showing 1102 cases. Typhoid fever heads the list with 558 cases, the large number being attributed in part to the pollution of the Schuylkill from its watershed up the State by surface washings from the heavy rains. During the month 52 cases of smallpox were reported in the city. The disease is pronounced to be of a mild type. Scarlet fever caused the illness of 172 persons, 162 cases of diphtheria and 158 of consumption were reported.

For a Psycho-Physical Laboratory.—We are requested to announce that the County Medical Societies, as well as the State Medical Association of Pennsylvania have been asked to consider the resolution for a Psycho-Physical Laboratory at Washington for medico-scientific and sociological purposes. The resolution reads as follows: That we are in favor of the establishment of a Psycho-Physical Laboratory in the Department of the Interior at Washington for the practical and abnormal or pathological data, especially as found in institutions for the criminal pauper and defective classes and in hospitals and also as may be observed in schools and other institutions.

The Will of John D. Lankenau.—The principal beneficiaries are the German Hospital and the Mary J. Drexel Home, each of which it is stated would receive as residuary legatees the sum of \$600,000. The Pennsylvania Society for the Relief of Distressed Germans is bequeathed \$5000, and a like amount is given to the Lutheran Orphan Asylum. With the exception of a number of family pictures, the bulk of Mr. Lankenau's splendid collection of paintings will go to Drexel Institute. This collection is valued at \$150,000. The will provides that the Mary J. Drexel Home and the German Hospital, the principal beneficiaries, shall be limited as far as possible to the interest on the sums which are bequeathed to them. Authority to make expenditures in excess of the income is invested in the executors and an advisory committee, consisting of Edward T. Stotesbury, George C. Thomas and Thomas W. Paul, Jr.

Wills' Hospital Ophthalmic Society.—Meeting held in Philadelphia, April 22, 1901.—Dr. William Thomson in the Chair. **Suppurative Chorioiditis.** Dr. Charles A. Oliver exhibited a case of suppurative chorioiditis, the result of an infective traumatism in a three year old boy. The conditions were typical, the brunt of the uveal disturbance having been exerted upon the posterior half of the tract. It was his intention to remove the eyeball, which was blind, in order to make a series of bacteriological and histological studies as to the character of the infection and the pathological conditions of the inflamed parts.

Dr. P. N. K. Schwenk gave the details of a similar case in which the eye had been struck with a piece of wood when the patient was two years of age.

Vascular Keratitis.—Dr. McCluney Radcliffe showed an example of vascular keratitis in a nineteen year old man who had been under treatment for a long period of time. There was not any history of syphilis nor were there any

evidences of granular disease. In spite of the most careful hygiene and the best therapy, the conditions had increased until at the time of the meeting there was a large deeply saturated ulcer of several days standing situated at the site of the initial lesion.

Dr. Frank Fisher gave a most excellent example of a chronically recurrent case in a forty-five year old Negro. The corneal ulcer was crescentic and probably infectious in type.

Drs. Thomson and Oliver laid emphasis on the general treatment of such cases and spoke of the absolute necessity of determining the etiological factor in every instance. Dr. William L. Zull stated that his experience had taught him that calomel applied locally was an extremely efficient remedy. He had seen the condition shown in the present case appear as the result of excessive ingestion of sugar. Dr. Schwenk made some remarks upon the value of harmless anodynes in producing many hours of continuous sleep, thus permitting the parts to obtain undisturbed rest for long periods of time.

Gumma of the Iris.—Dr. Thomson presented a case of gumma of the iris in which in spite of negative history the symptoms rapidly subsided under specific medication, giving as it were a therapeutic proof of the diagnosis. On admission there was a moderate hypopyon and a small-sized vascular growth at the root of the iris over which the iris-tissue seemed destroyed and the adjacent sclera quite prominent. At the time of the presentation of the case, both the swelling and the hypopyon had disappeared, the eye being comfortable and quiet in spite of quite a number of posterior synechia. Vision had improved from one two-hundredths to one-tenth of normal. Dr. Thomson showed a second case which was practically similar to the other. In this one there was a distinct history of syphilis. Both occurred in Negro subjects. Dr. Oliver stated that in his experience most iris gummata appeared either at the minor or the major vascular circle. With the latter there was almost always an associated ciliary involvement, followed in marked cases by more deeply seated uveal trouble. In this type of cases vision, while not greatly affected at first, often temporarily failed to a marked degree owing to a discharge of translucent gummy material into the intraocular spaces. He considered this symptom as a good sign for rapid convalescence. In a few cases he had had the good fortune to secure such a restitution of the transparency of the media as to distinctly see the eyeground and to permanently obtain practically normal vision. In these cases there were the characteristic pictures of neuro-retinitis consecutive to uveitis. Leukocytic hypopyon he had found most frequently marked in cases in which inflammatory reaction had been extreme and in young subjects. His experience showed that the disease was extremely prevalent among the Negroes. In every case in which he had been enabled to make after-studies he had found the involved portion of the iris to be friable, discolored and thinned. His best therapeutic results had been obtained by the free use of mercury by inunctions, taking care to prevent any toxic effects. Dr. Thomson had found the plan of having the patient rub the mercury on the skin of the dorsal surface of the foot, with the wearing of a covering stocking, to be the most rapid and the most efficacious method of employment of the drug.

Dinner in Honor of Dr. John S. Miller.—Professional friends of Dr. John S. Miller, of Denver, Col., who was formerly one of the demonstrators of anatomy in the Jefferson Medical College and surgeon to St. Joseph's Hospital, in this city, tendered him a dinner. Professor Francis X. Dercum, M. D., of Jefferson Medical College, presided and acted as toastmaster, and among the toasts was a very hearty one—"To the Recovery of President McKinley." John S. Miller, A. M., M. D., was born in Philadelphia, Pa., in 1856. He was educated at the public schools, and was a law student from 1875 to 1879. He was graduated from the Jefferson Medical College in 1882 with high honors. He was elected interne to the German Hospital, and received an honorary degree of Master of Arts from La Salle College in 1886. He was assistant in the Surgical Clinic at the Jefferson Medical College, and one of the demonstrators of anatomy for ten years. In 1888 he was made surgeon to St. Joseph's Hospital, which position he held until 1899. Dr. Miller was the first Philadelphia surgeon to reach Johnstown after the great catastrophe. He opened a hospital tent for the treatment of sick and injured workmen engaged in recovering bodies and the removal of

wreckage. In 1900 Dr. Miller removed to Denver, Colorado.

Vital Statistics for Philadelphia for the week ending September 7, 1901:

Total mortality	399	Cases.	Deaths.
Inflammation of the bladder 1.			
braia 4, bronchi 2, heart 1, kidneys 19, liver 2, lungs 14, peritoneum 2, pleura 2, stomach and bowels 34, appendix 2, spine 2.			88
Marasmus 32, inanition 17, debility 2			51
Tuberculosis of the lungs			42
Apoplexy 13, paralysis 3			15
Heart-disease of 22, dropsy of 1.			
neuralgia of 1			21
Uremia 13, Bright's disease 4, diabetes 2			19
Carcinoma of the liver 3, breast 2, stomach 4, uterus 5, rectum 1.			15
Convulsions, puerperal			3
Diphtheria	42		4
Brain-disease of 1, softening of 2.			3
Typhoid fever	96		12
Old age			7
Asthma 1, burns and scalds 3, casualties 13, child birth 1, cholera infantum 16, cholera morbus 1, cirrhosis of the liver 1, cyanosis 1, diarrhea 2, drowned 17, dysentery 1, epilepsy 2, erysipelas 1, fever, malarial 1, fracture of femur 1, hemorrhage from stomach 1, hernia 1, homicide 1, measles 2, obstruction of the bowels 4, rheumatism 2, septicemia 1, smallpox 4, suffocation 2, suicide 9, sunstroke 1, tumor, uterus 1, unknown coroner case 1, whooping cough 12, wounds, gunshot 2			196

NEW JERSEY.

A Well of Sulphuric Acid.—A flowing well of sulphuric acid has been discovered in Vineland, N. J. The phenomenon was first noted after a severe electric storm during which four houses in Vineland were struck within fifteen minutes. After the storm the contents of a well were found to be acid, and a chemical analysis of the water showed the presence of sulphuric acid. The apparently accepted theory is that the lightning struck a sulphur deposit in the earth, which, upon being ignited, liberated sulphur dioxide; this in turn uniting with the moisture in the earth, formed sulphurous acid, which, upon oxidation gave rise to the sulphuric acid. It is not believed that sufficient sulphuric acid will be obtained from the well to be of commercial value.

Medical Diploma Mill Exterminated.—About a month ago Governor Voorhees was informed that the Central University of Medicine and Science, managed by John W. Norton Smith at Jersey City, was offering to sell medical diplomas for \$10 each. Now the counsel for Smith submitted to Mr. Vickers a proposition that Smith would consent to forfeit his charter on condition that no further action should be taken. This was agreed to, and Smith then surrendered himself. He was taken before Justice McCormick and gave bail in \$200, nominally to await the action of the Grand Jury on a charge of obtaining money on false pretences, but really as security that he will abide by his agreement.

NEW YORK.

Monument to Dr. Alexander J. C. Skene.—A monument will be erected in Brooklyn, N. Y., to the memory of the renowned gynecologist, Dr. Alexander J. C. Skene, at a cost of \$25,000.

Tenement Houses in Brooklyn.—In Brooklyn all houses occupied by three or more families must be registered as tenement houses. Failure to register is punishable by a fine of \$50. This regulation goes into effect on September 6.

Omega Upsilon Phi Fraternity (Medical).—The Fifth Annual Convention of the Omega Upsilon Phi Fraternity

(Medical) was held August 29 and 30, at Buffalo, N. Y. Dr. Edward M. Thompson, of New York City, was elected President; Dr. Dean O. Thompson, of Hornellsville, New York, Secretary, and Dr. George H. Minard, of Lockport, N. Y., Treasurer. A banquet was held at the Hotel Genevieve, Buffalo, on the evening of the 29th, and was a great success. The next convention will be held in New York City during September of next year.

Major William Kendall and Captain Edward L. Munson, of the Medical Department of the Army, have been ordered to represent that department at the annual meeting of the American Public Health Association, to be held at Buffalo, N. Y., from the 16th to the 20th instant.

NEW ENGLAND.

Dr. Gates B. Bullard, a physician of high standing, died September 4, 1901, at St. Johnsbury, Vt., aged 72 years. He was surgeon of the Fifteenth Vermont Regiment in the Civil War, and later Surgeon General of Vermont.

Dr. John J. Wagner, Greenwich, Conn., was injured in a runaway accident August 25, breaking his leg.

A New Building for Newport Hospital.—Mrs. Cornelius Vanderbilt will give to the Newport Hospital a new building as a memorial of Cornelius Vanderbilt. The building will enable the hospital to provide at a moderate cost private rooms for the poorer class of patients who may require such accommodation. One story will be used for this purpose and one for the out-patient department, which has been very successfully operated, as far as accommodations would permit, for some time. The building will be constructed of the same materials and on the same general plan as the buildings already in existence, except that it will be a two instead of a one-story structure.

WESTERN STATES.

The Rocky Mountain Inter-State Medical Association met in Denver September 3 and 4. This was its third annual scientific meeting. It has a membership of 170, of whom 50 were in attendance, beside a number of physicians who were not members. Papers were read upon: The Retinal Lesions of Chronic Interstitial Nephritis and Their Significance, by Edward Jackson; Carcinoma of the Breast, by D. A. Richardson; The Medico-Legal Aspect of Amnesia, with Report of Cases, by S. D. Hopkins; Resection of the Middle and Superior Ganglia of the Cervical Sympathetic for Acute Glaucoma, by Melville Black; Reports of Cases of Acute Hemorrhagic Pancreatitis, by Leonard Freeman and O. J. Pfeiffer; Acute Pancreatitis, by Carrol E. Edson; Methods and Results in Operations for Cancer of the Breast, by Chas. A. Powers; Economic Medicine, by G. P. Johnston; Diagnostic Value and Examination of Feces, by C. D. Spivak; A Report of Seventy Cases of Lobar Pneumonia, by J. N. Hall; The Chemical Treatment of Wounds, by R. Harvey Reed; How to do Clean Surgery at Small Cost, by J. S. Perkins; The Function of the Appendix, by E. P. Hershey; Report of Case of Rapid Respiration (143 per minute) in Fatal Organic Disease of the Brain, by J. T. Eskridge; Report of Case of Removal of the Stomach for Cancerous Growth, by E. S. Wright; An Operation for Spina Bifida with Report of a Case, by Leonard Freeman; So-called Mountain-Fever, by W. W. Wooding; Report of Two Unusual Cases of Multiple Neuritis in Children, E. Delehanty; Conservative Surgery of the Ovaries and Tubes, by W. W. Grant; Report of Surgical Cases, by I. B. Perkins. A number of papers were read by title, and the retiring president, C. K. Fleming, of Denver, read his address. For the ensuing year R. Harvey Reed, of Rock Springs, Wyoming, was chosen president, and Donald Campbell, of Butte, Montana, and W. R. Pike, of Provo, Utah, vice-presidents. The next annual meeting will be held at Cheyenne, Wyoming.

The American Pharmaceutical Association will open its forty-ninth annual meeting at the Southern Hotel, St. Louis, September 16 to 21, and continue its sessions daily throughout the week. H. M. Whelpley, of St. Louis, is secretary.

Embalmers Must Be Examined.—By an order of the State Board of Health embalmers in Michigan will be required to pass an examination and receive a license before they are permitted to practice their profession.

A Monument to Dr. William Beaumont.—A monument is being erected on the grounds of the old Government fort on

Mackinac Island to Dr. William Beaumont. Dr. Beaumont was born in Connecticut, and was known as one of the greatest investigators in the profession. He was appointed surgeon's mate, Sixteenth Connecticut Infantry, December 2, 1812, and later to the Eighth.

Dr. William L. Carls, of Hebron, Nebraska, has been appointed assistant physician of the Hospital for the Chronic Insane at Hastings, Nebraska, vice Dr. Woodward, resigned, and Dr. Alma J. Chapman, of Hastings, succeeds Dr. Ewing, resigned.

Prof. Paul C. Freer of the general chemical laboratory of the University of Michigan has gone to the Philippines to take charge of a branch of the Department of Health there. He has received a year's leave of absence from the university.

SOUTHERN STATES.

Dr. L. Ashton, formerly of Fredericksburg, but for some years a resident of Dallas, Texas, has been elected to the chair of theory and practice of medicine at Trinity University, of that State.

The Cocaine Habit in Roanoke, Va.—The cocaine habit is growing to such proportions in Roanoke that legislation against the sale of the drug is contemplated, although there are doubts as to the legality of such action. It is said that there are fully 500 confirmed cocaine fiends in the city.

Disease in Virginia Diminishing.—The efforts of the State Board of Health to eradicate small-pox from Virginia have been rewarded. Recent reports show that only a few cases now exist and they are restricted to five counties. Reports show that there is very little sickness in the State, the most prevailing disease being enteric fever.

MISCELLANY.

PRESIDENT McKINLEY'S CONDITION.
AT THE TIME OF GOING TO PRESS WE ARE DELIGHTED TO BE ABLE TO STATE THAT THE CONDITION OF THE PRESIDENT IS INDICATIVE OF HIS RECOVERY. THE SURGICAL ASPECT OF THE CASE CALLS FOR THE GREATEST PRAISE FOR THE PROMPTNESS AND EFFICIENCY WITH WHICH MODERN SURGICAL ART WAS PUT INTO PRACTICE. PROMINENT SURGEONS ARE ALMOST UNANIMOUS IN DECLARING THAT THE PROMPTNESS WITH WHICH THE ABDOMEN WAS OPENED, AND THE RIGID ASEPSIS WHICH WAS OBSERVED ARE RESPONSIBLE FOR THE PRESIDENT'S CONVALESCENCE.

Dental Surgeons for the Army.—Since the commencement of the great Boer War demands of a persistent character have come from the army in the field for dental men to look after the men's teeth. Toothache, we all know, is persistent, and if any pain takes all work out of a man it is that of an aching tooth. From this cause an immense number have been made absolutely useless in South Africa, and the officers of the Royal Army Medical Corps have not been able to cope with the trouble. And how could they, for they get no dental education beyond possibly teeth extraction, and every aching tooth does not demand removal. So pertinaciously has this demand been made that it seems likely to receive attention in the near future. The same complaint reached the Government of the United States from the army in Cuba and the Philippines, and, as our American cousins lead the world in dentistry, they have already acted in the matter. Sixteen dental surgeons have been named for the United States Army, and more will follow. They have not been commissioned as officers, though we see no reason why they should not be, but have entered into a three years' contract with the Surgeon General, which may be renewed.

During their service they wear the uniform of a First Lieutenant—save that the braid on the shoulder-straps is silver instead of gold.—*Ex.*

Obituary.—Dr. George W. Wells, at Richmond Hills, Long Island, September 2, aged 58 years—Dr. Gustavus Schiff, at San Francisco, Cal., September 2, 1901, aged 78 years—Dr. Gates B. Bullard, at St. Johnsbury, Vt., September 4, 1901, aged 72 years—Dr. Sydney R. Burnap, at Windsor Locks, Conn., September 3, 1901, aged 68 years—Dr. Hudson J. Pulver, at Torrington, Conn., September 3, 1901, aged 42 years—Dr. Dursulla G. Barlow-Cook, at Wilmington, Del., September 9, 1901, aged 30 years—Dr. E. P. Duval, at Annapolis, Md., September 5, 1901, aged 70 years—Dr. Jerry Burwell, at New Hartford, Conn., September 4, 1901, aged 81 years—Dr. George Lewis Staley, Jr., at Baltimore, Md., September 9, 1901, aged 44 years—Dr. Louis C. Berkemeyer, at Allentown, Pa., September 8, aged 61 years.

China is Plague-Stricken.—The Marine Hospital Service continues the publication of letters from missionaries and others in China describing the progress of the plague. Rev. Jacob Spelcher, Baptist missionary, writing from Kit Yang, says: "The plague made its first appearance at Swatow about seven years ago, and has since then spread in all directions along the coast and inland. Three years ago, in the large city of Chan Yang, 10 miles south of Swatow, it is said that over 20,000 persons died. Many villages between Canton and Lio, 70 miles inland from Swatow, have lost one-third to one-half of their inhabitants. In this benighted country nothing is done and the plague will have its run for years. I have received word that the district city of Hui Lal, about 35 miles south of Kit Yang, has had an awful visitation this year. Only one-fourth of the people are still in the city, the others having died or fled. This city was in the line of the 'trail.' Thus far the plague has gotten only 70 miles inland, so far as I can learn."

Invulnerable.—A peculiar case of head-injury is reported to *Texas Medical Gazette*, by Dr. Frank M. Ross. The patient was insane and had made several attempts on his life. In the last desperate effort to end his existence he tried to force a shoemaker's awl into his head, but it was stopped by the bone. He then held the awl in his hand and ran against a brick wall, driving it into his brain up to the handle, which broke off and fell to the floor. The instrument went straight into the frontal lobe. He was unconscious for a few hours and then consciousness returned. About a week later he began to have fever, which kept him in bed for six weeks. After this time he greatly improved and was able to go about his business. His mental trouble returned, and he insisted on having the awl taken out. An operation was performed.

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U. S. Marine Hospital Service for the 7 days ended September 5, 1901.

- J. O. CORB, passed assistant surgeon, granted 10 days extension of leave of absence—August 30, 1901.
RUPERT BLUE, passed assistant surgeon, granted leave of absence for 10 days from September 2, 1901—September 3, 1901.
J. H. OAKLEY, passed assistant surgeon, granted leave of absence for two months from September 17, 1901—August 30, 1901.
H. C. RUSSELL, assistant surgeon, to proceed to Cleveland, Ohio, and assume temporary command of service during absence of Surgeon W. J. Pettus—August 30, 1901.
H. B. PARKER, assistant surgeon, to proceed to Amite City and Abite Springs, Louisiana, for special temporary duty—August 31, 1901.
M. K. GWYN, assistant surgeon, granted leave of absence for 1 day—August 30, 1901.
B. S. WARREN, assistant surgeon, granted leave of absence for 14 days from September 14, 1901—September 5, 1901.
P. N. BARNESBY, acting assistant surgeon, granted leave of absence for 1 month from September 1, 1901—August 30, 1901.
R. E. EBERSOLE, acting assistant surgeon, granted leave of absence for 7 days from September 3, 1901—Paragraph 181, Regulations, M. H. S.

Changes in the Medical Corps of the Navy. For week ending September 7th, 1901.

- ASSISTANT SURGEON E. THOMPSON, detached from the Solace and ordered home to wait orders—Aug. 31.
MEDICAL DIRECTOR E. S. BOGERT, retired, detached from the Boston Navy Yard, September 5, and ordered home—Sept. 4.
SURGEON I. W. KITE, detached from the Monterey, upon reporting of relief, and ordered home and to wait orders—Sept. 4.

- SURGEON V. C. B. MEANS, detached from the marine recruiting rendezvous, September 2, and ordered to the Monterey as relief of Surgeon I. W. Kite, sailing from San Francisco, Cal., by army transport about October 1—Sept. 4.
SURGEON G. T. SMITH, ordered to the Amphitrite as relief of Surgeon J. M. Edgar—Sept. 4.
SURGEON J. M. EDGAR, detached from the Amphitrite, upon reporting for relief, and ordered home and to wait orders—Sept. 4.
ASSISTANT SURGEON E. O. HUNTINGTON, ordered to the Naval Hospital, New York—Sept. 4.
ASSISTANT SURGEON J. F. MURPHY, detached from the Naval Academy, upon reporting of relief, and ordered to the Indiana—Sept. 4.
ASSISTANT SURGEON T. M. GARTON, detached from the Indiana, and ordered to the Naval Academy as relief of Assistant Surgeon J. F. Murphy—Sept. 4.
MEDICAL DIRECTOR C. F. WINSLOW, ordered to the naval recruiting rendezvous, Boston, Mass., October 1—Sept. 5.
SURGEON C. J. DECKER, ordered to the marine recruiting rendezvous, San Francisco, Cal., Sept. 25, as relief of Surgeon V. C. B. Means—Sept. 5.
ASSISTANT SURGEON P. E. McDONNOLD, detached from the Naval Museum of Hygiene, Washington, D. C., Sept. 9, and ordered to the Constellation as relief of Assistant Surgeon C. A. Crawford—Sept. 5.
ASSISTANT SURGEON C. A. CRAWFORD, detached from the Constellation, upon reporting of relief, and ordered to the Naval Hospital, Chelsea, Mass., as relief of Assistant Surgeon R. R. Richardson—Sept. 5.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended September 7, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	Los Angeles	Aug. 17-24	1	
	San Francisco	Aug. 13-24	2	
KANSAS:	Wichita	Aug. 24-31	1	
LOUISIANA:	New Orleans	Aug. 24-31	1	
MASSACHUSETTS:	Boston	Aug. 24-31	6	
MINNESOTA:	Minneapolis	Aug. 17-24	5	
NEBRASKA:	Omaha	Aug. 24-31	2	
	South Omaha	Aug. 23-30	3	
NEW JERSEY:	Newark	Aug. 24-31	5	3
NEW YORK:	New York	Aug. 17-31	37	12
PENNSYLVANIA:	Philadelphia	Aug. 24-31	31	2
UTAH:	Salt Lake City	Aug. 19-24	2	
WEST VIRGINIA:	Wheeling	Aug. 18-31	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Aug. 10-17	1	
BELGIUM:	Antwerp	Aug. 3-10	1	
BRAZIL:	Rio de Janeiro	July 28-Aug. 4	42	
COLOMBIA:	Panama	Aug. 19-26	10	
FRANCE:	Paris	Aug. 3-17	19	
GREAT BRITAIN:	Dundee	Aug. 10-24	4	
	London	Aug. 10-17	13	
INDIA:	Bombay	July 30-Aug. 6	16	
	Calcutta	July 27-Aug. 3	3	
	Madras	July 27-Aug. 2	9	
ITALY:	Messina	Aug. 10-17	1	
	Naples	Aug. 10-17	119	17
MEXICO:	City of Mexico	Aug. 18-25	2	
RUSSIA:	Moscow	July 27-Aug. 10	4	
	Odessa	Aug. 3-17	2	
	Warsaw	July 27-Aug. 10	5	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	July 14-23	7	
COLOMBIA:	Bocas del Toro	Aug. 21	1	
COSTA RICA:	Port Limon	Aug. 11-18	8	
CUBA:	Gumanayagua	Aug. 17-24	1	
	Matanzas	Aug. 31	2	

CHOLERA.

INDIA:	Bombay	July 30-Aug. 6	8	
	Calcutta	July 27-Aug. 3	17	
	Madras	July 26-Aug. 2	26	
JAPAN:	Yokohama	July 20-Aug. 3	2	
STRAITS SETTLEMENTS:	Singapore	July 6-13	1	

PLAGUE.

BRAZIL:	Rio de Janeiro	July 14-23	4	
CHINA:	Hongkong	July 12-27	37	25
INDIA:	Bombay	July 30-Aug. 6	158	
	Calcutta	July 27-Aug. 3	11	

GREAT BRITAIN.

Surgeon-General W. Taylor, M. D., C. B., who has recently been appointed to the Headquarters Staff, in London, has now been appointed an honorary physician to the King.

To Investigate Dr. Koch's Theory.—King Edward has appointed a commission to investigate Prof. Koch's theory regarding the reciprocal non-transmissibility of bovine and human tuberculosis. The commission, which has been granted fullest authority and facilities and which has been urged to make a prompt report, consists of Sir Michael Foster, secretary of the Royal Society; Dr. Sims Woolhead, professor of pathology, Cambridge University; Dr. Harris Cox Martin, Prof. J. McFadyean and Prof. R. W. Boyce.

Enteric Fever in Wales.—A serious outbreak of enteric fever has occurred in Wales at Ebbwale. Several deaths have resulted. There is no isolation hospital, and medical men are experiencing much difficulty in treating the patients.

CONTINENTAL EUROPE.

Lead Poisoning in France.—French painters at Regnoble have gone on strikes on account of the great prevalence of lead poisoning. They demand the employment of zinc oxide instead of lead.

Professor Czerny of the University of Heidelberg, will shortly make an extensive tour of the United States, which will extend at least as far west as St. Louis.

German Orthopedic Society.—At the recent "Naturforscher Versammlung" in Hamburg a number of prominent German orthopedists decided to establish a German Orthopedic Association which is now in progress of organization.

General Hospital in Samara, Russia.—According to Dr. N. Senn, in the *Chicago Tribune* of September 1, as quoted in the *Journal of the American Medical Association* of September 7, the General Hospital at Samara is located in a handsome park near the western limits of the city, and consists of a number of wooden buildings, in barracks style. Each building does service for seventeen years, when it is removed and replaced by a new one. At present the hospital contains 400 patients. These patients are admitted from all parts of the Samara province and pay 20 kopeks a day. If the applicant is destitute, as is often the case, the district from which he comes pays this small charge for him. We spent half a day in the surgical section, in charge of Dr. Johannes Dsirne, a surgeon of more than a local reputation. We had the pleasure of witnessing two operations for stone in the bladder. Stone in the bladder is quite common in this section of the country, as this surgeon performs annually on an average 100 operations. Although the operating-room lacks many of the modern conveniences, the results obtained would compare well with those in our best equipped institutions, something we must attribute to the pedantic cleanliness of the operator and his assistants. The anesthetic, chloroform, was administered by a female *feldscheer* or barber surgeon, and two other women of the same grade of medical education rendered assistance. The chief assistant was a recent graduate in medicine. These barber surgeons, male and female, are expected to assist licensed physicians, but are not permitted to operate or prescribe except in cases in which the services of a regular graduate in medicine can not be secured. These barber surgeons must study their profession for four years, and the women are required to take an additional course in gynecology and obstetrics. Both patients were puny boys from the steppes of western Russia. In one case the high operation was performed; in the other the stone was removed by median perineal section after crushing. It is a fact worthy of note that according to the experience of Dr. Dsirne the peasants are almost immune against shock, ho in his large experience having only observed one case. Dr. Dsirne invariably sutures the vesical wound in performing the high operation, using two rows of fine silk sutures, excluding carefully the mucous membrane. In most cases uncomplicated by cystitis he has seen the wound heal by primary intention. If cystitis is present he drains. Dr. Dsirne is a careful, conscientious, and dexterous operator. I am glad to know that he will visit the medical institutions of Chicago some time next summer.

Appointments in Heidelberg.—Dr. Ludwig Braun and Dr. Siegfried Bettmann, both Privatdozenten have been appointed Professors at the University at Heidelberg.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

August 24, 1901.

1. Introductory Remarks by the President on the Work of the Section.
2. The Treatment of Wounded in Naval Actions.
FLEET-SURGEON GILBERT KIRKER.
3. The Disposal of Wounded in Naval Actions.
SURGEON F. H. A. CLAYTON.
4. Floating Hospitals.
INSPECTOR-GENERAL BELGRAVE NINNIS.
5. Healthfulness of Modern Warships.
STAFF-SURGEON W. E. HOME.
6. Some Remarks, by Way of Contrast, on War Surgery, Old and New. SIR WILLIAM MACCORMAC.
7. The Theory of Airborne Typhoid in Armies.
H. E. LEIGH CANNEY.
8. Medical Cadet Corps.
SURGEON-CAPTAIN J. CANTLIE.
9. The First Aid and Home Nursing Classes of the London School Board. ROBERT J. COLLIE.
10. The Röntgen Rays in Military Surgery; Experiences in South Africa. J. HALL-EDWARDS.
11. Types of Entrance and Exit Wounds as Seen in the South African Campaign.
CUTHBERT S. WALLACE.

2.—Kirker suggests that an operating room be included in the internal arrangements of every modern battleship and cruiser. It should be fitted up to meet the requirements of aseptic surgery. It should be well protected and easily accessible. He says it is not practicable to remove the wounded during action. They must shift for themselves until the battle is over or a lull occurs in the fighting. The conditions which have brought about this revolution in the treatment of the wounded are connected with the construction of modern ships and the nature of modern fighting. The duration of a modern naval action is short. The wounds are rarely attended with dangerous bleeding, as in the days of solid projectiles. There are few suitable places on board a ship where the wounded would be safer than where the bulk of the men are fighting, and during an action, as the Japanese found, surgeons are not able to do work of any value. The author mentions an "ambulance-sleigh" which he has devised for transportation of the wounded. [F. T. S.]

3.—Clayton says dressing stations for giving first aid during action should be accessible, protected, and in a position not to interfere with the fighting qualities of the ship; and the operating room and sick quarters should be so situated as to command cleanliness, roominess, ventilation, light and water. The position of the dressing station is decided by the peculiarities of the ship in question. In the dressing stations should be placed only the instruments and dressings necessary for carrying out first aid or emergency operations, with mattresses upon which the wounded may lie. It is doubtful whether sufficient space could be spared for an ideal operating room. Before an action three or more alternative spaces may be chosen for an operating room, such as the captain's cabin, ward room, and sick bay. After the battle one of them would probably be available, and into this the previously prepared operative accoutrements could be moved ready for immediate use. To prevent sepsis caused by the entrance of clothing into shell wounds, the author suggests that the crew shift before action into sterilized, or at least clean, clothing. For transportation of wounded stretchers are of little value during action except in the largest battleships, on account of the many obstructions, as ammunition-hoists, etc., and also from the scarcity of bearers. It is suggested that every officer and man be carefully trained in the ambulance drill, especial attention being paid to first aid dressings. [F. T. S.]

4.—The retention of the sick and wounded on board a modern fighting ship in war time is undesirable, unsanitary and depressing. It has been suggested that each fleet or squadron should be accompanied by one or more floating hospitals. Ninnis believes that these ships should be used for the care of the sick and the wounded only; that their

arrangements should embody all the essentials of a perfectly equipped land hospital, suitable for both medical and surgical cases, with the exception of the infectious fevers; and that the propelling power should leave ample space for the wards. Such a ship should have its decks provided with ports that may be easily opened and closed. The ship should be built of metal eased on the outside with wood, thus combining the cleanliness of metal with the non-conductibility of wood, and there should be no possibility of communication between the bilge and the wards. The wards should be absolutely without communication with each other, and each should have direct and independent air communication with the upper deck. The portion of the decks appropriated to water closets should extend across the ship, so that a through current of air could be secured. The water closets, when in use, should be absolutely shut off from this space. Platforms of such size as to accommodate a stretcher or lounge should be fitted outside the main and middle decks and the parts leading onto them should be of such size as to give easy passage to a stretcher or carrying chair. These ships should be lighted by electricity. [J. M. S.]

5.—The statistics of the Royal Navy show that iron ships are more healthy than wooden ones. This is probably due to the fact that in the former there is more space between decks, that they are dryer and that they are better lighted and ventilated. Home gives the following points that are necessary for the health of a ship: (1) Have certainly not less than 120 cubic feet of space for each man, and more than this in the tropics. (2) Have uptake ventilators from every compartment, opening as near the top as possible. These should be so constructed as to be capable of being cleaned by a brush pulled through them. (3) Cows and air-shafts are needed to be supplemented in all favorable weather by a wind sail for each hatchway and wind scoops for each port or scuttle in the side. Artificial ventilation is required for every space in which men live. (4) The ship should be warmed and kept dry by steam radiators. (5) Whenever decks are washed, the last washing should be done with a 1 to 1000 solution of perchloride of mercury or other antiseptic. The mess tables and stools should be washed in like manner. This reduces the liability of casual wounds to inflame. If the beams overhead could be sprayed with formalin solution once a week the occurrence of sore throats and other septic diseases would be diminished. The best general antiseptic on board ship, however, is plenty of fresh dry air. (6) There should be a drying room for the wet clothes and bedding of the ship's company.

[J. M. S.]

6.—The wars which compare with that in South Africa in regard to length, number of wounded, and strain upon the medical department, are the Peninsular and Crimean wars, the American Rebellion and the Franco-German war. Chloroform was first tested on a large scale during the Crimean campaign. During the Franco-German war the mortality after operation was tremendous from the various forms of infection, and a large proportion of those who died on the battlefield perished from hemorrhage. The large bullets then used inflicted most extensive damage. In the war between Russia and Turkey the first attempt was made to treat gunshot wounds of the knee antiseptically with astonishing success. The Lee-Metford and Mauser bullet inflict a small circular external wound, which soon becomes sealed with a black scab of dry blood. The exit wound is quite similar and closes in the same way. The intervening parts are but little damaged, and recovery generally takes place rapidly and without complication. The bullet seems to be aseptic, clothing is very seldom carried in with it, the track behaves more like an incised wound than a contused one, and the rapid manner in which the small external wound heals transforms the injury into a subcutaneous one. The manner in which the bullet may traverse the abdomen, thorax, cranium, the great joints and the important viscera, with but little constitutional or other disturbance, must be witnessed to be realized. Fatal primary hemorrhage is rare and traumatic aneurysms frequent. Large vessels may be wounded with but a limited amount of hemorrhage. The treatment is usually expectant, especially of those wounds involving the abdominal cavity. Formerly a gunshot fracture of the femur was a serious menace to life. Almost half the fractures of the femur in the Civil War were treated by primary amputation, and the mortality following the injury

was 50%. In the Spanish-American War, of 82 cases of gunshot of the femur, 6 were amputated, while 72 were treated conservatively. In the Civil War 1 man was killed for every $1\frac{1}{2}$ wounded, while with the Mauser bullet the proportion is 1 to $7\frac{1}{2}$. Six to eight per cent of the wounded now die, while during the Civil War the percentage was $14\frac{1}{2}$, the difference being due not only to the altered character of the injury, but to the improvements in treatment. [F. T. S.]

7.—After a study of the outbreaks of typhoid fever at the military stations in India, South Africa and Egypt, Canney concludes: (1) That the evidence of airborne typhoid recorded in Indian military experience is not established. (2) That in South Africa and Egypt the evidence is opposed to this theory. (3) That in India, South Africa and Egypt the immense weight of evidence and probability is in favor of a waterborne origin and spread. (4) That the evidence from Egypt proves that if the avenues to man by means of water be protected, all other avenues are powerless to originate and spread typhoid in large bodies of men. There is strong evidence to suppose that the same methods would bring about the same results in India, South Africa and other countries. (5) That the origin and spread of typhoid fever by means of flies and dust being theory only, it can only be discussed as such in relation to certain laboratory experiments, and that in practice it is unjustifiable to hold this theory, if it should deter, delay or hinder the adoption in armies of the most vigorous and comprehensive measures against waterborne typhoid fever. [J. M. S.]

10.—Hall Edwards speaks of his experiences in South Africa with the Röntgen rays, and gives a list of cases radiographed. [F. T. S.]

11.—An undeformed small-bore bullet entering at right angles to the surface makes a round hole slightly smaller than the bullet itself. Around this is a narrow zone about $1/6$ of an inch in breadth, from which the cuticle has been removed. These soon become covered with a scab. When the axis of a flight of a bullet is inclined at less than a right angle the skin wound is oval, and when the angle is very oblique the bullet traverses a certain tract of skin. In a ricochet bullet wound the bullet is often distorted and the wound becomes irregular and jagged, and even if not distorted it may strike the body with its side. A bullet extracted shortly after the receipt of the wound is lodged in a blood-containing cavity; later a fibrous capsule forms, and still later the fibrous capsule contracts and closely surrounds the bullet. Explosive wounds are practically always met with in connection with fractures of bones. The bullets emerge at an acute angle, thus accounting for the character of these wounds. Another form of wound is that in which the skin is blown away to a great extent. This may occur if the bullet emerges from a subcutaneous bone like the tibia, causing a crater-like wound. Sometimes the muscles and tendons are torn and extruded through the skin wound. [F. T. S.]

LANCET.

August 24, 1901.

1. An Address on the Treatment of Tuberculosis in Sanatoria. Sir JAMES CRICHTON-BROWNE.
2. How can the Tuberculin Test be Utilized for the Stamp-ing out of Bovine Tuberculosis. SHERIDAN DELEPINE.
3. Treatment of Melancholia. LEWIS C. BRUCE and H. de MAINE ALEXANDER.
4. Three Cases of Pruritus Associated with Lymphadenoma. WYNDHAM COTTLE and LEE DICKINSON.
5. Congenital Hepatic Cirrhosis with Obliteration of the Bile Ducts. G. PARKER.
6. Inunction v. Intra-muscular Injection in the Treatment of Syphilis. C. F. MARSHALL.
7. An Epidemic of Catarrhal Jaundice Probably due to the Enteric Fever Bacillus. J. W. DALGLIESH.
8. Meat Albumin Dietary in the Treatment of Tuberculosis. F. W. FORBES ROSS.
9. The Condition of the Blood in Scarlet Fever. E. PERCIVAL MACKIE.

1.—Crichton-Browne delivered an address on the treatment of tuberculosis in sanatoria before the State and

Municipal Section of the British Congress on Tuberculosis. This author states that we should use the term "cure" as meaning an arrest of the tuberculous process. Like other severe diseases, by which the human body is visited, it leaves some scars on the constitution. We are informed that the presence of a calcareous nodule or a fibrotic patch in a lung does not warrant us in assuming that virulent tubercle bacilli are lurking in such foci. A renewed outbreak of the disease may be due to a fresh infection. A fact to be remembered is, that tuberculosis frequently exists in the lungs without in the least impairing the health of the individual, who may succumb to some other malady. A large number of cases of consumption, particularly those in the more advanced stages, arrive at a stage when the condition may be correctly described as arrested. In some of these cases, the disease is not extinct, while in others a favorable termination of the disease is reached, the patient enjoying good health and attaining a ripe old age without the slightest return of the phthisical state. The author strongly emphasizes that there is pathological and clinical evidence of the curability of consumption, and that this disease at times undergoes spontaneous cure notwithstanding the varied kinds of treatment to which it has been subjected. The present system of treatment by sanatoria is founded on a scientific basis. The results which have been obtained justify its employment. The measures which may be included in this plan of treatment are, fresh air, feeding, rest, and medical regulation. These, when skillfully handled, are sufficient in a large proportion of cases to effect a cure. Sanatorial treatment has already extended the curability of consumption and, at the present time, the medical profession has accepted this method as the best within the reach of those who are suffering from consumption. The author groups consumptives into three classes. (1) The affluent, comprising those who are under the individual guidance of a skilled medical adviser, and who can provide for themselves. The sanatorial treatment is not the kind to be recommended always for the affluent. (2) The competent. The people belonging to this class of consumptives have sufficient means to care for themselves during a brief illness, but when suffering from a protracted disease, which makes great demands upon their resources, such as phthisis, they are unable to provide for themselves and must depend upon public charity. Sanatoria should be provided for this class. (3) The indigent. To this class of consumptives is included a great mass of cases occurring amongst workmen, laborers, sailors, domestic servants, and shop girls, who support themselves while in good health. When ill they become indigent in the sense that they are more or less in need of help. The author suggests that sanatoria for this class of consumptives should be directed, and governed by the county councils and they should be designated as "county sanatoria." Friendly societies and sick clubs should be also organized which should have for their object the right to demand admission of consumptives into these institutions. The author recommends certain plans for the maintenance of sanatoria. [F. J. K.]

2.—Delépine considers the question of how the tuberculin test may be utilized for the stamping out of bovine tuberculosis. This author discusses the value of this test and the experiments that have been made with it, giving an analysis exhibited by tables, of its sources of failure; the influence of age and disease on the results of this test; the data collected in relation to the examination of milk from single cows with diseased udders; and a table representing the losses caused by the slaughter of tuberculous cattle. He arrives at the following conclusions: (1) The tuberculin test is almost infallible for demonstrating the presence of tuberculosis in animals under seven years of age, provided the agent is used with sufficient care. Clinical methods are more reliable than the tuberculin test, as it is employed at the present day, to show the presence of tuberculosis in older animals. (2) It is possible to stamp out tuberculous animals from a herd by means of tuberculin and thorough disinfection in the course of a year. (3) Periodi-

cal use of tuberculin will detect the presence of accidental infection in a herd of cattle in which there has been a preliminary removal of tuberculous animals. (4) Tuberculous animals between the ages of two and three years can be disposed of without serious financial loss. (5) It is doubtful whether private efforts without State help are sufficient for the extermination of tuberculosis at the present time. (6) Immediate slaughter should be resorted to in animals in a state of advanced tuberculosis and all cows with tuberculous udders. (7) Milch cows not showing advanced tuberculosis should be isolated and they may be slaughtered, if previously they have been suitably prepared. Invariably, milk from tuberculous animals should be sterilized by boiling. (8) Valuable breeding animals not presenting an advanced state of tuberculosis or involvement of the genital organs should be isolated. For a time they may be used for breeding purposes. The calves should be isolated and be provided with sterilized milk. Satisfactory results can only be obtained by measures which provide for the removal from a district, of all tuberculous animals, for the disinfection of all cattle sheds, and for periodical tests of all animals with tuberculin.

[F. J. K.]

3.—Bruce and de Maine Alexander discuss the treatment of melancholia. These observers believe that melancholia is a disease of disordered metabolism and that the treatment should be directed so as to increase the elimination of waste products through the channels of the urinary and integumentary systems. They accomplish this end by the administration of an abundant fluid dietary. This treatment has a tendency to lower the arterial tension and assist in the elimination of waste products which are contained in the blood. The good results which these observers have had by this plan of treatment, seem to indicate that it is founded upon a sound therapeutic basis. They append a report of four cases. [F. J. K.]

4.—Cottle and Dickinson report three cases of pruritus associated with lymphodermia. (1) This case occurred in a woman 42 years of age. Her illness began in the autumn of 1899, when she noticed a swelling in the neck and complained of weakness. A year later, she took to bed. At the time when she came under the observation of the authors, she was weakened physically and depressed mentally. In the neck, axilla, and in the groin, there were enlarged glands. The physical signs also presented evidence of a glandular tumor in the mediastinum. At this time, she had irregular fever, accompanied by frequent sweating. Several blood examinations showed that there were about 3,000,000 red blood corpuscles per c. m. The number of white cells varied from 8,000 to 14,000. The lymphocytes formed about 18% of the entire number of leukocytes. The skin covering the neck, back, shoulders, and outer side of the limbs and at times the whole body, was the seat of intense irritation. Later an eruption of pemphigus appeared on the legs. The treatment consisted in the administration of Fowler's solution, and of cacodylate of soda. The patient steadily grew worse. (2) This case occurred in a female 30 years of age who had been ailing with enlarged glands and anemia, since June 1896. The enlargement first appeared at the root of the neck. During the course of her illness, she complained of intense itching of the skin, which was especially marked during the night. Pigmentation of the skin also developed, which was particularly marked on the abdomen, around the eyes, and on the flexure of the elbows. Her condition was diagnosed by Sir William Gower as subacute lymphadenitis with Addison's disease. The patient died on February 2, 1897. (3) The patient, a male, 34 years of age, in December, 1896, suffered from septic rheumatism in a very severe form. This infection involved almost every joint of the limbs, also those of the neck and jaw. In 1897, enlarged glands were found in the groins, the axillae, and the neck. An abscess developed in the left thigh and failed to heal in spite of the frequent incisions. The adenitis continued to spread. In May, 1900, the general condition was one of profound lymphadenoma. The blood examination showed

nothing beyond leukocytosis which was attributed to the suppurating wound in the thigh. Pruritus of the entire skin was present throughout the illness. The condition of the patient steadily grew worse;—fever developed, dropsy made its appearance, and the patient sank from exhaustion and inanition on June 1, 1901. The author remarks that the arsenic which was administered during the illness was not responsible for the pruritus. [F. J. K.]

5.—Parker discusses **congenital hepatic cirrhosis with obliteration of the bile-ducts**. The following cases are reported: (1) A male infant had been under the care of the author for six months when death occurred. At birth, the infant appeared strong and well. In the third week the infant developed violent vomiting, and in consequence of this he was weaned. Jaundice soon developed; the stools becoming white. Later the abdomen became distended, the jaundice increased, and the liver and the spleen were moderately enlarged. The patient on one occasion passed a little blood per rectum. The condition of the child grew worse and death occurred. A post-mortem examination was made 50 hours after death. The tissues of the body were bile stained, fat was scanty, and the heart and lungs appeared normal. The liver was heavy, weighing 11 ozs., it was deeply bile stained. The organ was smooth and while not very pliable, it was not especially hard. Connective tissue existed about the bile-ducts; biliary calculi were not found. A portion of the common bile-duct was greatly distended and contained a clear fluid. Several enlarged firm glands were found in the portal fissure, in the mesentery, and behind the peritoneum. The cavity of the gall bladder was obliterated and there was also a complete absence of a part of the common duct. The spleen was firm and enlarged. A microscopical examination of the liver showed a large amount of fibrous connective tissue surrounding the lobules and crossing them in many places. An increase in the number of small bile-ducts was also noted. There were no degenerated liver cells. Second case. At birth this infant was deeply jaundiced. The mother had previously lost six children in early infancy, all of which were deeply jaundiced at birth. The infant lived seven months, during which time he was suffering from constipation. The stools were scanty and always streaked with a yellowish brown coloring matter. At the post mortem examination enlarged liver was found, and the author states that it was reported that the bile-ducts were replaced by connective tissue. (3) This patient, a male child, first came under observation nine weeks after birth when he was deeply jaundiced. The child was suffering from drowsiness and restlessness. A syphilitic rash was found on the buttocks. The liver and spleen were both enlarged, and this jaundice had existed since birth. The stools were generally white and occasionally pale yellow. The urine contained bile. Death occurred five weeks later. At the post-mortem examination, it was ascertained that the common duct was absent. Multilobular and monolobular cirrhosis and numerous small bile-ducts were seen in the microscopical sections. The author concludes that in some of these cases there was found a complete hypertrophic biliary cirrhosis differing from that form seen in adults by the fact, that there was a secondary obliteration of the bile-ducts. [F. J. K.]

6.—Marshall compares the value of **inunction with intramuscular injection in the treatment of syphilis**. This author has tabulated a number of cases which were treated by injection and inunction, respectively. In this analysis, he designates the time the patients were under observation, the amount and the preparation used, and whether relapses occurred. He concludes that the inunction method is more reliable and best suited when rapid mercurialization is desired. The only objections to this form of treatment are dirtiness and irksomeness. The advantages claimed for the injection method are the following:—It may be practiced by the surgeon himself; secrecy, cleanliness, and uniformity of dosage may be secured. Injection of perchloride of mercury always causes pain. [F. J. K.]

7.—Dalgliess gives a report of an epidemic of **catarrhal**

jaundice which was thought to have been caused by the enteric fever bacillus. This epidemic occurred in the summer and autumn of 1900 in Bloemfontein. The author directed over a hundred cases. At the time the epidemic prevailed there was also an epidemic of enteric fever, as well as prevalence of acute dysentery. The disease developed after the British occupation of Bloemfontein and therefore it seemed to have been spread by the troops. With the increase in the frequency of enteric fever and dysentery, so did jaundice increase. The indulgence in alcoholic beverages in no way seemed to play a part in the etiology, and the diet, whether it was composed of good food or improper food stuffs, did not seem to play a part in the causation. The same may be said in regard to the hygienic surroundings of the individuals. Digestive disorders did not seem to have an influence in the causation. The young and the old, the rich and the poor were affected alike. The author emphasizes that the epidemic of jaundice increased and fell with that of enteric fever and dysentery. It was common to find families, a part of the members suffering from jaundice, and others from enteric fever and dysentery. The author suggests that the enteric fever bacillus may have been the cause of the outbreak of jaundice. [F. J. K.]

8.—Ross writes on **meat albumin in the treatment of tuberculosis**. He contends that the meat albumin can be employed in a cooked or coagulated state with just as much benefit as in a raw state. We should never lose sight of the fact that it is possible for raw meat to be contaminated with pathogenic bacteria;—tubercle bacilli or spores of anthrax bacilli. [F. J. K.]

9.—Markie gives the results of the **blood examinations in 25 cases of scarlet fever** and summarizes his observations. He found a moderate anemia constantly. The hemoglobin percentage and corpuscular percentage were in direct ratio, hence the normal individual corpuscular hemoglobin richness was not altered. A leukocytosis was found in all the cases. This increase in the number of white corpuscles, with its important bearing in regard to diagnosis and prognosis, may be compared with the leukocytosis found in other diseases, notably croupous pneumonia. [F. J. K.]

MEDICAL RECORD.

September 7, 1901.

1. The Work of the Sanitary Department of Havana; with Special References to the Repression of Yellow Fever. W. C. GORGAS.
2. A Personal Experience in Radiography. ALEXANDER B. JOHNSON.
3. Can Nasal Catarrh and Catarrhal Deafness be Cured? CAROLUS M. COBB.
4. The Need for Better Provision for the Proper Care of Cases of Delirium Tremens and Cases of Doubtful Mental Diseases. HENRY C. BALDWIN.
5. A New Continued Fever. EDGAR J. SPRATLING.

1.—W. C. Gorgas presents the general methods of work of the sanitary department of Havana, with special references to the suppression of fever. The methods of quarantine are described and a number of tables are presented, showing the satisfactory decrease in the number of cases of yellow fever. Notwithstanding the fact that conditions are favorable to the development of the disease, there being a very large non-immune population in the city, and yellow fever having been introduced into Havana on a dozen different occasions, the authorities have, so far, managed to keep it out later than they have ever done before, April 1st being the date on which it usually makes its appearance. The war against mosquitoes has been persistently carried out, and Gorgas believes that this is the proper method of fighting the disease. [T. L. C.]

2.—A. B. Johnson, of New York, gives his personal experience in radiography, in which he discusses somewhat at length the use of the fluoroscope in surgery, the technique of radiography, the development of X-rays plates, and stereoscopic radiography. This latter method depends for its value upon the well-known principle of the stereoscope, that in order to see any near object, as a solid body showing relief, and to appreciate the special relations of differ-

ent parts of the body to one or another, it is necessary to view it with both eyes. The effects produced by the stereoscope depend upon the production of two pictures, taken from two different points of view, and the separations of the points one from the other is made equal to about the distance between the visual axes of the two eyes. [T. L. C.]

3.—C. M. Cobb discusses the curability of nasal catarrh and catarrhal deafness. 9 cases are detailed in his paper, representing the various varieties clinically found. Concluding from the history of the cases given, he remarks that each case must be carefully studied and it may be a question of weeks or even months before we can ascertain the cause of the discharge; but if we bear in mind that a chronic discharge into the throat is caused in the same way as a chronic discharge in other parts of the body, and study the case in this light, we shall be in a position to treat it intelligently. He believes the so-called catarrhal disease of the upper respiratory tract, with all its attendant complications, is curable and that, while many of the cases will require much time and observation, the results obtained will amply repay for this effort. [T. L. C.]

4.—Henry C. Baldwin, of Boston, presents a paper on the need of better provision for the proper care of cases of delirium tremens and cases of doubtful mental disease. He believes the first movement tending to proper care of these unfortunate people should be made by medical men. In order to learn what custom is followed at present he sent a number of questions to various authorities in 28 cities. He states that in Massachusetts the present method of caring for these cases is unsatisfactory. Aside from the humane standpoint, the establishment of separate hospitals or of special wards in connection with general hospitals for observation cases, would cost less than the present system, and many persons who are allowed at large, would come under early observation, and their condition would be determined in time to prevent crime. According to the Attorney-General, the cost of one murder trial in Massachusetts may reach \$15,000. [T. L. C.]

5.—Edgar J. Spratling describes a new continued fever, occurring in Forsyth, Georgia. The trouble begins with malaise for three or four days. The general symptoms resembled dengue, and in a few cases may be confounded with grip. The cases were of varying severity and the temperature reached 106.5°, in many not 100°. In dengue the surroundings have but little influence; in this they were nearly all-powerful. In dengue whole families are usually affected; in this rarely more than one member. He also found that the temperature was susceptible to the action of antipyretics. The symptoms lasted from 2 to 5 days, then gave way rapidly, all discomfort disappearing; the appetite returned, the pulse fell to from 85 to 100, the respiration to 30 or 40, and the patients expressed themselves as feeling well, but weak. But the erratic fever and the scanty urine persisted for from three to ten days longer and there were frequently profuse sweats. He believes that this is a close congener of, if not actually, Malta fever. [T. L. C.]

MEDICAL NEWS.

September 7, 1901. (Vol. LXXIX, No. 10).

1. A Study of the Temperature Laws in Epilepsy Based on One Thousand Observations.

WILLIAM P. SPRATLING.

2. The Treatment of Puerperal Infection.

DAVID J. LORING.

3. Generalized Vaccinia. JOHN H. HUDDLESTON.

4. A Massage Roller for the Application of Heat or Cold, Combined with Electricity.

ROBERT COLEMAN KEMP.

5. A Consideration of Hemorrhoids. JOHN TURNER.

6. Autotoxemia. WILLIAM W. PENNELL.

1.—W. P. Spratling, in his Study of Temperature Laws in Epilepsy, based on one thousand observations, gives the following: (1) In his conclusions Bourneville says, "Isolated attacks of epilepsy augment the central temperature." The only logical inference the author can draw from this statement is that Bourneville found the temperature increased after every isolated epileptic seizure, and nothing exists in Bourneville's work on the subject to change this opinion; (2) The results of the author's observations agree in part only with those of Bourneville, the latter's work having, in his opinion, lost much of its value through failure to properly classify the types of

seizures studied and to make due allowance for certain physiological differences in temperature; (3) After making due allowance for diurnal variation the author finds that 40 per cent. would be the lowest of such cases showing increased temperature after seizures, and 70 per cent. the highest, making the general grand average of cases of all types showing increased temperature after seizures 55 per cent., the difference in the results obtained by Bourneville and by the author being 45 per cent. The views of such eminent physiologists as Dalton, Kirk, Landols and Sterling, relative to the part played by muscular activity in creating heat, must in view of the activity of the muscular system in certain cases of major epilepsy have great weight in determining the cause of heat production in these cases, wholly irrespective of any influence that might be exerted by the heat centers in the brain; (4) By the results of the author's observations he is led to believe that in many petit mal and psychic attacks in which muscular activity plays so small a part, and in which the temperature is often increased after seizures, such increase is due to a disturbance either of the heat center that is thought to exist in the cortex of the brain, or of the center or centers that observers believe have been located in the corpus striatum and optic thalamus; (5) We find that subnormal temperatures follow epileptic seizures in greater proportion after grand mal than after petit mal or psychic seizures, the proportion being 15 per cent. of the former to 10 per cent. of the latter types; and that, while the author agrees in the main with Lemolne as to the cause of such low temperatures when he says: "Certain cases are naturally anomalous in the matter of temperature, having abnormally low temperatures in health," he does not believe that this explanation is altogether sufficient, but that there will usually be found to exist in these cases some chronic disease or general asthenic condition of long standing that lowers the stamina and vitality of the individual; (6) All that has been said by Bourneville, Lemolne and others, relative to the high temperature in status epilepticus, is confirmed by the tabulated results in the 17 cases referred to in this paper; (7) The temperature in serial attacks runs uniformly higher than in isolated attacks, but not so high as in status, serial attacks occupying midway ground as to frequency, severity, temperature elevations and mortality between isolated seizures and status epilepticus; (8) As a possible factor in establishing the presence of toxins or other agencies in the body prior to and possibly causing the convulsion, an effort was made to take the temperature in some cases when the aura was of sufficient length, before the attack; but it was done in one case only, and in this the heat, beginning two hours before the fit, ran steadily up to 102° F., when the patient passed into convulsion. [T. M. T.]

2.—D. J. Loring, in planning the proper surgical treatment, always has in view: (1) The limitation of the infected area to the fullest possible extent; (2) The provision of abundant drainage for ptomaines and leucomains and other tissue debris, the result of microscopic invasion; and (3) the introduction of some antiseptic, such as iodine in the form of iodoform, which will render the infected field sterile in the shortest possible time. [T. M. T.]

3.—Generalized vaccinia, of which J. H. Huddleston collected fifty cases, was found to be produced in the following manner. Of the 50 cases, 25 are males, 14 females, and 11 with sex not stated. The ages vary from three days to 62 years; 25 are under one year and there are six adults. 12 were vaccinated with bovine virus, either direct from the animal or preserved, 20 with humanized virus, one with cow-pox and one with horse-pox, the last two by accidental inoculation. The source of the virus in the other cases is not stated. In 20 per cent., 10 cases out of 50, the case was not vaccinated in the usual way; 8 of the 10 came in contact with the virus in a vaccine vesicle on another person and the 10th ate vaccine crusts given intentionally in food. This last case was reported in 1809, and the author has met no record of any repetition of the experience. Chauveau, however, induced a generalized eruption of vaccinia on horses by giving virus by the mouth, by inhalations, and by subcutaneous inoculations, so that the record of this case may not be scouted without further information. Six of the nine who contracted vaccinia came in contact with it in ordinary daily association or by sleeping with a vaccinated person; one bathed in the same water that had been used by a vaccinated person, and two sucked a vaccine pustule on the arm of another. Four of

the 50 were revaccinated and in them the primary vaccination had not caused an eruption; the other cases were all primaries. In four cases the eruption developed before the fifth day and in 28 cases from the fifth to the fifth day after vaccination. The rest appeared later. Rarely the eruption came out on one day, usually it appeared in successive groups for about a week. One well accredited case continued to develop the eruption until the 42d day. [T. M. T.]

4.—R. J. Kemp gives various uses of the **massage roller**: (1) Alternating heat and cold, combined with electricity, can be applied to the spine, as for neurasthenic conditions, etc. A similar application could be made to the abdomen for chronic constipation. Cold can be employed for headache, heat for sciatica, muscular rheumatism, lumbago, neuritis, intercostal neuralgia, rheumatic joints, etc. Hot massage for counterirritation may be applied over the kidneys and for acute congestion and for oliguria. Electricity combined with heat has proven of even more value in these conditions, the roller being applied over the lumbar region of the cord, as well as over the kidneys. The faradic battery is connected with the instrument. This may seem a novel procedure, but clinically this method has been found to be a valuable adjunct in promoting diuresis. The addition of electricity seems to increase markedly the counterirritation and reflex stimulation, produced by the heat. The hot roller can also be employed over the thorax in acute bronchitis, etc., as a counterirritant. If it is desired to use moist heat, the part can be covered with thin flannel wrung out in boiling water and the roller then applied over this. To employ dry heat the best effects are produced by lightly skimming the surface with the instrument. It may be passed over a thin linen handkerchief, if the patient be especially sensitive. The roller filled with boiling water is of considerable value for the purpose of innunction. Ointments made of lanolin can thus readily be rubbed in, as mercurial ointment in syphilis, or ichthyol ointment in rheumatism. To avoid damage to the instrument it should be lubricated with olive oil which does not readily amalgamate with the ointment. It can be readily cleansed in boiling water. [T. M. T.]

6.—W. W. Pennell defines **autotoxemia** as a condition of the bodily health modified by the absorption of harmful substances from the intestinal or genito-urinary tracts into the blood; poisonous substances originating within the body as the result of either defective metabolism and elimination or fermentative and putrefactive processes, or both, and producing well-defined symptoms. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

September 7, 1901. (Vol. LXXIV, No. 10).

1. Modern Methods in the Management of Typhoid Fever, in Nursing, Feeding and Bathing, with Special Reference to the Private Patient. RUSSELL BELLAMY.
2. Imperative Conceptions. HUGH T. PATRICK.
3. A Study of the Temperature, Pulse, and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain. J. T. ESKRIDGE.
4. The Therapeutics of Whooping-Cough. THOMAS J. MAYS.
5. An Unusual Case of Gastric Ulcer. FRANK H. MURDOCH.

2.—H. T. Patrick gives the prognosis of **imperative conceptions** as follows: The prognosis is affected especially by three factors: (a) The character of the imperative conception; (b) the degree or intensity of the trouble, and (c) the nature or disposition of the patient. Confirmed subjects of the doubting and questioning or reasoning psychosis, the *Grübeltsucht* of the Germans, seldom recover, while the phobias may ordinarily be cured or greatly relieved. Bad cases of long standing, of any variety, are exceedingly difficult to handle and require all the niceties of neurological techniques. Like other bad habits and tics, the earlier imperative conceptions are properly treated, the better the outlook. Pronounced neurotic heredity and neuropathic disposition are most unfavorable conditions. Assuming that a certain degree of unstable equilibrium or nervous susceptibility is necessary for the development of the malady, it will at once be seen that danger of relapse is never very remote, often imminent. [T. M. T.]

4.—T. J. Mays states that **whooping-cough** is unquestionably a spasmodic affection of the pneumogastric nerves, due to the affinity of a special virus for the latter struc-

tures, and in this respect bears a certain analogy to asthma and to other spasmodic disorders of the respiratory organs. Of its contagious nature there can be no doubt. A knowledge of its pathology is, therefore, quite satisfactory, but, when we come to treat it, the practitioner must confess that there is no disease before which he stands so helpless as he does before this. At least, this has been the writer's experience, who has administered every known remedy, running through a list of such drugs as the bromides, camphor, chloral, chloroform, bromoform, quinine, antipyrine, phenacetine, carbolic acid, etc., without the slightest permanent relief. In more recent years, however, and in conformity with his belief that disorders of the pneumogastric nerves are not only responsible for all the various forms of spasmodic cough, but also play an important part in the evolution of many diseases of the lungs, the author applied counterirritants over these nerves in the region of the neck with the most signal benefit in this disease. In fact, this method is the only one that has ever given the least promise of amelioration. The practical way of applying it is as follows: Trace the pulsating carotid artery from behind the angle of the lower jaw to the clavicle on both sides of the neck, two or three times a day, until the full effects of the mustard are evident. This is almost sure to cause amelioration of the spasmodic cough. Equal parts of gum camphor, chloral hydrate, and menthol applied over this region, are also very useful. Painting the same area with tincture of iodine, twice a day, until irritation of the skin is produced, is a beneficial procedure. Finally, in very stubborn cases the hypodermic injection of silver nitrate over the vagi must be resorted to in accordance with the following plan: Lift the skin over the vagus between the thumb and forefinger of the left hand, introduce the hypodermic needle just under the elevated skin, and inject five minims of a two-and-a-half-per-cent. solution of cocaine hydrochloride. Detach the syringe from the needle and allow the latter to remain in the puncture. Wash out the syringe with water, draw a two-and-a-half per cent. solution of silver nitrate into the syringe, attach the latter to the needle, and throw in from three to six minims of the silver solution. Under the influence of this line of medication the child becomes more comfortable, the paroxysms become less frequent, the severity of the cough diminishes, and altogether the affection assumes a different character, often in the space of a day or two. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

September 5, 1901.

1. Under What Circumstances (excepting emergencies) is it Desirable to Operate upon Gall-Stones for Radical Cure or for Relief. MAURICE H. RICHARDSON.
2. Obstructive Disease of the Lower Bowel. HENRY O. MARCY.
3. The Indications for Operation in Malignant Neoplasms of the Stomach. CHARLES GREENE CUMSTON.
4. Remarks on Tuberculosis and its Treatment. DR. BARADAT.
5. The Chemical Properties of Leukocytes. EDWARD T. WILLIAMS.

1.—The arguments in favor of **removing gallstones** at the earliest favorable moment after the diagnosis has been made may be summed up as follows: (1) The operation is, as a rule, easy and safe and all stones are quickly removed. (2) The remote dangers of gallstones are either avoided or lessened. These are: serious disabilities, grave emergencies and malignant disease. (3) If the diagnosis of gallstones proves to be wrong, other lesions may be discovered and remedied, lesions perhaps more serious than those of gallstones. (4) Late operations upon gallstones are, as a rule, difficult and dangerous. Operations made imperative by progressive and lethal symptoms must be performed under great disadvantages and dangers; the gallstones are generally more inaccessible, the dissections deeper and the patient's power of resistance lessened. The arguments against early operation are: (1) There is some danger in the operation, though it is but slight. (2) The diagnosis may be wrong and the exploration unnecessary. (3) There is the possibility of hernia in the scar. (4) There is the possibility that the gallstones may recur. (5) There is the possibility of spontaneous cure. (6) There is also the possibility that, after offending enough to prove the diagnosis, the gallstones may give no further trouble. (7) The last and decisive attacks of biliary colic

may have been caused by the last remaining gallstone, exploration showing that none of them remain. Richardson believes that the arguments in favor of early operation outweigh those against such operation and he believes that as soon as the diagnosis can be made the operation should be done. [J. M. S.]

2.—Obstruction of the lower bowel may be due (1) to the changes incident to injuries of the pelvis. Such changes are usually of an acute character; although, as a result of such injuries as fracture of the coccyx, changes may take place which while they do not produce positive obstruction, still impair the function of the lower intestine. (2) In the male, to diseases of the seminal vesicles and prostate and in some of old stone in the bladder. The same may be said of chronic distension of the bladder, though in the latter class of cases such a manifestation is rare. (3) In the female, to the infectious diseases of the Fallopian tubes with the secondary conditions dependent thereon, to small cystic tumors of the ovary or broad ligament, to retroversion of the gravid uterus and uterine tumors. (4) To the accumulation of foreign matter, particularly feces. (5) To structural changes in the wall of the intestine due to malignant growth. [J. M. S.]

3.—Surgical treatment of carcinoma of the stomach is indicated not only when stenosis is present, but also as a radical cure for carcinoma itself. Cumston believes that in every case in which carcinoma of the stomach is suspected an immediate exploratory celiotomy should be advised and every neoplasm that can be removed should be excised. In order to successfully perform resection of the stomach, and in order that its results shall attain the maximum of effectiveness, the surgeon should not wait for a clinically confirmed diagnosis of carcinoma of the stomach, because an exploratory celiotomy is justified in every case in which the patient is afflicted with gastric troubles, when analysis of the gastric juice shows an absence of pepsin and the presence of lactic acid, and when medical treatment carefully conducted is incapable of increasing the body weight and retaining it at the higher figure. The contraindications for resection of the growth are the general lowered condition of the patient, visceral metastases, immobility and adhesions of the tumor and the propagation of the growth beyond the movable portions of the esophagus and duodenum. The age of the patient, the presence of some enlarged glands, the size, the anatomical position and the extent of the growth in the walls of the stomach in no way contraindicate resection. [J. M. S.]

4.—See Philadelphia Medical Journal, Vol. VIII, No. 11, Proceedings of Congress on Tuberculosis.

5.—Williams believes that instead of classifying leukocytes as basophilic, neutrophilic and oxyphilic, we should classify them as acid, when they stain with alkaline dyes, neutral when they stain with neutral dyes; and alkaline, when they stain with acid dyes. The nuclei of all 3 varieties of leukocytes stain best with alkaline dyes and are, therefore, acid. They owe this staining property to the nuclei they contain. The bodies of the normal mononuclear leukocytes are acid; the bodies of the polymorphonuclear leukocytes are neutral; and the bodies of the so-called eosinophilic leukocytes are alkaline. These reactions Williams believes are due to the presence or absence of nuclei from the cell-body of the leukocyte. He also believes that the alkaline leukocytes are dying forms. They are almost invariably the products of disease. The eosinophiles are often associated with spermine and xanthin crystals, which, as is well known, are the products of the decomposition of nuclei and it would seem rational to suppose that the eosinophiles were undergoing decomposition. The author is inclined to place all alkaline leukocytes (oxyphiles) under the designation of necrotic cells. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION September 7, 1901.

1. The Practice of Obstetrics. E. GUSTAVE ZINKE.
2. Position of the Woman During Delivery.
WM. D. PORTER.
3. The Prophylaxis and Treatment of Puerperal Sepsis.
JOHN F. MORAN.
4. The Indications and Contra-indications for the Use of the Curette in Obstetric Practice.
HENRY D. FRY.

5. A Case of Streptococcus Infection Following Labor—Operation and Recovery. WM. H. HUMISTON.
6. Remarks on Spinal Surgery, with Illustrative Cases.
ANDREW J. MCCOSH.
7. Spina Infida, or Hydrorrhachitis. PAUL F. EVE.
8. The Immediate and Remote Effects of Brain Injury.
D. S. FAIRCHILD.
9. Diabetes Mellitus in Childhood, with Report of a Case.
A. C. COTTON.
10. Albuminuria in Disease of the Kidney in Infancy and Childhood. JOHN R. RATHMELL.
11. Traumatic Affections of the Uvula.
SEYMOUR OPPENHEIMER.

1.—Zinke states that from his own personal experience, as well as from the statements of other authorities, that the present practice of obstetrics is not as satisfactory as it might be to any one class of practitioners of medicine and surgery generally, and the accoucheur especially. Antisepsis and asepsis in the management of labor are of inestimable value, but very often they cannot be properly carried out, successfully executed, or effectually met because of the patient's surroundings. Zinke prefers attending patients in labor in maternity hospitals where he can have the process carried through aseptically. [W. A. N. D.]

2.—Porter for years has been in the habit of delivering parturient women in the following position: The woman lies on her back across the bed, her hips well to the edge and on a Kelly pad so arranged as to carry the fluid into a vessel on the floor. For this purpose the small square pad is most suitable. The patient's limbs are separated and extended, and are supported by assistants, by a couple of suitably placed chairs, or over the knees of the obstetrician. This position is maintained from the end of the first stage until the termination of labor, unless the second stage be tedious. In that event the patient can resume her ordinary position in bed to be again brought into the position described before the end of the second stage. The position is not tiresome to the patient or to the physician, and can be maintained for hours without discomfort to either. He claims for this position that there is less liability of infection with the fecal bacteria, fewer examinations are necessary, there is better control of the head at the time of delivery, and consequently less danger to the perineum, the woman can be more thoroughly cleansed, the clothing and bedding are not soiled, and there is less danger of infecting the eyes or cord of the child and less risk of its aspirating fluids into the air-passages. [W. A. N. D.]

3.—Moran, in speaking of the prophylaxis and treatment of puerperal sepsis, remarks that the treatment of sepsis will depend upon the skill and judgment of the physician and the condition of the patient. It would not be justifiable to open the abdomen without some physical reason. The different forms of sepsis should be thoroughly understood, for an operation would hardly be required except in pathogenic infection. When the operation is performed early, many organs will be needlessly sacrificed, and if performed late, the mortality will be increased. When there is continued fever with increasing physical signs, the operation is permissible; without the latter general symptoms would indicate systemic infection and surgical measures would only hasten the end. As to the value of the antistreptococcal serum the results have, on the whole, been disappointing. Statistics show the mortality to be about 35%. Many of the failures may have been due to the inferior quality of the serum. It is important to determine whether the case be one of simple or mixed infection. Curative effects are claimed for only a simple streptococcus infection. [W. A. N. D.]

4.—Fry claims that the curette is a valuable instrument in the hands of the obstetrician, as well as the gynecologist. In abortion, when the cervix cannot be dilated sufficiently to pass the finger, the curette must be used as a substitute; and again when the expulsion of the product of conception is in the later months, the finger is unable to reach the fundus uteri. The indications for its employment to remove the retained products of conception and blood-clots are clear. Decomposition of the retained tissue, accompanied with a foul odor of the discharge and febrile reaction indicates the use of the curette. In streptococcal infection the curette is contraindicated, and also in infection existing in some laceration of the vulva, vagina, or cervix without involvement of the cavity of the uterus. [W. A. N. D.]

5.—Humiston reports a case of *streptococcus* infection following labor in which a vaginal section was performed and Douglas's pouch cleansed with a hot salt solution and iodoform-gauze introduced. The patient made an uninterrupted recovery. [W. A. N. D.]

6.—McCosh concludes his article on *spinal surgery*. Operations for spinal lesions have been more satisfactory than those for cerebral lesions. The reasons for this are greater accuracy in the location of the lesion and the less permanent damage which is done to the cord prior to operation. The symptoms of spinal tumor are well marked and within certain limits can be accurately located. It is impossible to assign a certain lesion to any one segment of the cord, but it is usually possible to locate a lesion to an area embraced by three spinal segments. There is no spot on the surface of the body and practically no muscle which is innervated by one nerve root alone. Anastomosis between the spinal nerves is so perfect that the sensation of any one spot and the motive power of each muscle is derived from at least two segments of the cord. In addition the afferent and efferent tracts run up in the substance of the cord for some distance, perhaps two segments, before it reaches the real nerve center in the gray matter of the cord. Consequently it is easy to be mistaken and locate the lesion lower than it really is. Tubercular masses are among the most frequent causes of pressure on the cord. Of spinal tumors the most common are the sarcomata. If the operation be useless as far as removing the growth is concerned, the agonizing pains may be relieved by division of appropriate nerve roots. At least three roots should be divided because of the free anastomosis between the sensory nerve. No case has yet been reported of recovery following the removal of an intermedullary tumor, or of a tumor from the ventral side of the cord. The higher up in the cord the tumor is situated the worse is the prognosis. The operative mortality should not be more than 10%. Operations should be done at the earliest possible moment, and no time wasted giving anti-syphilitic treatment if there be no syphilitic history. Of 51 cases of operation for tumors collected by Lloyd, about 10% died and 31% recovered. A frequent difficulty in these operations is to determine the exact position of the different spinous processes. This is especially true in the cervical region. The incision should be made as high as possible in order to secure abundant nutrition in skin normally supplied by nerves, and because of the reason already mentioned that the tumor has usually been found above the point localized by the physician. Operation should be done rapidly and ample space provided for. Support of the spinal column after operation is unnecessary. Of the methods of exposing the spinal cord, McCosh employs a vertical incision with division and separation of the muscles attached to the posterior portion of the vertebral column. The lips of this wound are widely separated and the spine and laminae removed by bone forceps. McCosh has operated six times for spinal tumor, with no deaths from operation. One patient is well at the end of more than a year, and another at the end of two months. Two died from sarcoma of other organs and one died at the end of two months from sepsis, from bed sores and cystitis. Of these six cases four were sarcomatous, one a fibroma and one tubercular. [F. T. S.]

7.—Eve advocates operation for spinal bifida, and reports a case of a child aged three months with a rapidly developing tumor in which the pedicle was small and which was operated upon. The outlines of the proposed operation are as follows: After incising and dissecting back the skin the sac is tapped and incised so as to leave two flaps, one longer than the other, being careful to avoid any nerves which may be adherent to the sac. The flaps are closely sutured so that leakage will not occur and the operation completed by suturing the skin. [F. T. S.]

8.—Fairchild concludes his article on the immediate and remote effect of brain injury by saying that violence of no great intensity, when applied to a limited area of the skull, may cause a fracture with only a momentary displacement with a rupture of a meningeal artery, or a rupture of an artery without fracture. A localizing injury which may lead to a fracture without displacement and hemorrhage, does not, as a rule, cause a serious permanent brain lesion, if early and judicious surgical treatment is employed. A fracture may occur without apparent displacement, yet the pressure on the brain exists which may cause remote results. A blow may be received on the head which may

produce an extensive laceration of the scalp, which in itself is not serious, but the fall from a height from a rapidly moving train may produce extensive contusion or laceration of the brain. The same character of injury may without fracture cause a contusion or laceration of the brain tissue or so disturb the cerebral spinal fluid as to cause immediate or remote serious results. An injury may be of such a character as to produce a localized wound of the brain that may heal with production of scar tissue which may extend and undergo cystoid or other degeneration with serious remote effects. In the absence of localizing or other definite symptoms the character of the accident, the manner in which the force is applied is of great value in reaching a conclusion as to the probable nature of the brain injury. [F. T. S.]

9.—Cotton reports a case of *diabetes mellitus*, which occurred in a girl aged six years and three months. This case was presented at the author's clinic on February 1, 1901. The family history was unimportant, as there had never been a history of diabetes, gout, tuberculosis, and syphilis. The child had had the following illnesses: Summer complaint, whooping-cough, chicken-pox and measles. The present illness began in April, 1900, when the patient was nervous and irritable. The appetite was variable, and the child began to emaciate. Some months later, it was noticed that she drank large quantities of fluids and passed much urine. In September, she was compelled to discontinue school on account of nervousness and frequent micturition. On February 1, 1901, her weight was 32 pounds, she complained of weakness, the skin was dry and the teeth were carious; the tongue red and clean, and the bowels constipated. 84 ounces of urine were passed in 24 hours. The reaction of the urine was acid, its specific gravity 1028. Albumin was present, and there was a decided reaction for sugar. The patient was given an anti-diabetic diet and pancreatic extract, and the constipation corrected with sodium salts. Careful observations as to the amount of sugar and quantity of urine were made daily. The child developed diabetic coma and died on March 11, 1901. The author concludes the article with a brief outline of the etiology and treatment of diabetes mellitus in childhood. [F. J. K.]

10.—Rathmell discusses *albuminuria* in disease of the kidney in childhood and infancy. The author states that while the presence of albumin does not necessarily indicate a serious organic lesion of the kidney, its presence should, however, command watchfulness and care on the part of the physician at all times. Albuminuria does not necessarily render the prognosis unfavorable. He classifies the causes of acute and chronic nephritis as follows: 1. Renal congestion. 2. Definite lesions of the kidney. 3. Indefinite causes. 4. Accidental causes. 5. Febrile disturbances. 6. Indefinite lesions. A report of a case of parenchymatous nephritis is given which occurred in a boy 4 years of age. The urine contained a very large amount of albumin—about 2/3 of its bulk—its specific gravity was 1040, and the shade of its color dark. The amount was copious. Edema of a decided character, involved the face, the lower and the upper extremities. The abdominal cavity was ascitic. The diet consisted of sweet milk, as long as the patient could take it, and afterwards stale bread was added. The patient was also allowed oranges and lemonade. The following laxatives were administered: Epsom's salts and cream of tartar, a solution of citrate of magnesia. A solution of lactate of strontium and Bashan's mixture were also used. The child died from uremia and pulmonary edema in about ten days. Another case of nephritis is reported which occurred in a boy five years of age. Six months after the onset of the illness, he had completely recovered. [F. J. K.]

11.—Oppenheimer mentions the rarity of injury of the uvula. The structure and mobility of the uvula render it exempt from traumatism which may affect the adjoining tissues. The causes of trauma are foreign bodies, which crush the uvula against the pharyngeal wall, minute bodies, such as a bristle, which pierce the mucous membrane, caustic materials, operative procedures on the tonsils and neighboring structures, and indirect traumatic influence such as that which results from the excessive or ill-advised efforts at vocal exercise. Edema is not as a rule well marked, and septic infection rarely follows. The symptoms are pharyngeal discomfort, constant desire to swallow, painful

deglutition and changes in the voice. Dyspnea only occurs when the tissues are enormously swollen. Cough is not commonly present. [F. T. S.]

AMERICAN MEDICINE.

September 7, 1901.

1. Correction of Occipitoposterior Positions Through Seizure of the Anterior Ear by Two Fingers in the Vagina. ROBERT L. DICKINSON.
2. Diseases of Sin. (Concluded). GEORGE M. GOULD.
3. Resections and Exsections. FERNAND HENROTIN.
4. What is True Conservatism in the Treatment of Appendicitis? MILES F. PORTER.
5. The Manifestations of Rheumatism in Children. WILLIAM FITCH CHENEY.
6. The Unusual Type of Smallpox with Fatal Termination. LOUIS LEROY.

1.—According to Dickinson the methods in vogue for rotation of the occiput forward are: (1) knee-elbow posture before labor or before the head engages; (2) lateroprone posture on the side to which the occiput points; (3) flexion, which accompanies every method; (4) pressure with two fingers on the temple; (5) seizure of the head in the hollow of the hand introduced into the vagina; (6) forceps in the ordinary application; (7) forceps reversed; (8) high manual internal rotation. He now suggests a simple method which has often proved successful, namely: seizure of the ear, and the exertion of pressure or traction to turn the head. This method is available whenever the ear is within reach. Two fingers are introduced beneath the pubic arch and the ear is caught between their tips. The palm toward the pubes gives the longer reach, and the anterior ear offers a better purchase for rotation of the occiput forward than any other simple method. [W.A.N.D.]

3.—Henrotin presents some salient points concerning the questions involved in resection of the ovaries and tubes. Salpingotomy and tubal resection is a most desirable operation, and only the most formally expressed desire for offspring on the part of the patient after explanation of the uncertainty of results will warrant their performance. Pyosalpinx always demands excision, and any tube materially damaged by any disease should be removed in its entirety. All the diseases of the ovaries adjudged to be nonmalignant can be cured, and should be treated by resection of the diseased portions only. Recent ovarian abscess can be cured more quickly, more certainly and with less danger with vaginal incision when this is practical. When the abscess is of long standing the sac should be removed, but even then some healthy ovarian tissue can almost invariably be preserved. In most diseases of the composite nature in young women when the tubes and ovaries are materially and equally involved, salpingectomy with ovarian resection is the most satisfactory operation, the uterus being retained. [W. A. N. D.]

4.—Porter says of 100 cases of appendicitis treated medically, 20 will probably terminate fatally, whereas timely operation will save 98. All patients dying of appendicitis after operation receive the verdict of "death from appendicitis," while a large number that die without operation are reported as deaths from bowel obstruction, etc. Timely diagnosis and early operation is the truly conservative treatment of appendicitis. The immediate mortality is less than 2%. The dangers of hernia, bowel obstruction, recurrence and secondary abscess are very small. [F.T.S.]

6.—W. F. Cheney discusses the manifestations of rheumatism in children, with notes of a number of cases. As to the manifestation in the joints, they are described as less severe than those which occur in adults. The swelling is less, and the redness is often missing entirely. There is a stiffness in the joints and resistance to motion, pain when used and disinclination to exercise. The symptoms are more apt to be limited to one joint and the constitutional disturbances are very slight. Temperature rarely rises to 102°. The sweats so common in adults, are not seen in children. Care must be taken to distinguish the pains from the so-called "growing pains." It is especially to be noted in connection with rheumatism in children that the endocardium is so frequently affected. Much has been said of the relation between rheumatism and chorea. In 29 cases of the author's series, 27 showed no history of rheumatism. He believes that this may be assuming that some joint manifestations really occurred previous to the chorea, or that the chorea was the first

manifestation of a rheumatic series. He records two cases showing the relation between one form of purpura and rheumatic manifestations in the joints. He mentions the subcutaneous nodules at times found in the fibrous tissue, as an occasional manifestation of rheumatism in children, and speaks of the grave significance of this. He mentions the relation of tonsillitis and rheumatism as remote, and he does not believe that it should be spoken of as a rheumatic manifestation at all. [T. L. C.]

7.—Louis Leroy reports an unusual case of smallpox with fatal termination. The patient was a colored woman of 30 years. Upon the third day of illness, an eruption appeared, until at the seventh day it was fully pustular. The secondary fever was well marked and started to decline, when upon the eighth day, all the pus in the pustules became absorbed, leaving the skin somewhat loose where the pustules had been. In no sense did it give the appearance of a rapid desiccation nor were any of the pustules present as is the case when ordinary desiccation occurs rapidly. At necropsy the skin was found to be smooth and soft, and there was no pus in any of the pustules which were opened. The heart muscle was soft and flabby, and a small antemortem clot was found in the right ventricle. [T. L. C.]

THE PRACTITIONER.

July, 1901.

1. On the International Relations in the Prevention of Tuberculosis. SIR HERMAN WEBER.
2. Should the State Undertake the Prevention and Treatment of Consumption. NATHAN RAW.
3. The Notification of Phthisis Pulmonalis. ARTHUR NEWSHOLME, M. D.
4. A Personal Experience of "Galloping Consumption." R. MANDER SMYTH.
5. Open-air Treatment of Phthisis in London. HECTOR MACKENZIE.
6. The Diagnosis of Tubercular Disease of the Lungs by Means of the Röntgen Rays. E. CLIFFORD BEALE, and HUGH WALSHAM.
7. The Early Diagnosis of Pulmonary Tuberculosis. J. J. PERKINS.
8. Tubercular Infection Through the Air-passages. ST. CLAIR THOMSON.
9. Tuberculosis in Childhood. GEORGE F. STILL, M. A.
11. The Surgical Treatment of Tubercular Disease. ALBERT CARLESS.
12. Some Tuberculous Affections of the Nervous System. FREDERICK E. BATTEN.
13. Zomotherapy in Phthisis. LEONARD ROBINSON.
14. A Case of Lupus Vulgaris of Twelve Years' Standing Treated with Urea and Cured. ARTHUR H. BUCK.
15. Ventilation of Crowded Places. THOMAS GLOVER LYON.

2.—Nathan Raw discusses the question as to whether the State should undertake the prevention and treatment of consumption. It is admitted that the disease may be completely arrested in its early stages, and even when fairly extensive, great improvement will follow treatment. In fact, the patient is in many instances able to act again as bread-winner for some considerable time. From a national standpoint the greatest attention must be directed to means of prevention rather than cure. It is estimated that over a million persons die every year from this disease in Europe, and that of this number 60,000 persons die annually in Great Britain. This writer maintains that tuberculosis should be treated as a special disease, and not on the general lines applicable to other infectious diseases, which are totally different in origin and progress. For this reason he says, it should not be included in the list of compulsorily notifiable diseases, such as smallpox, scarlet fever, and diphtheria, which run a rapid course, are highly dangerous to the community, and have a short and rapid termination. He calls attention to the recent Act of the Province of Ontario Government on the prevention and treat-

ment of the disease. The main provisions of the act are to allow any municipality of the Province to establish sanatoria for the treatment of consumption, and to raise the necessary funds for the purpose. He argues that this is precisely the step which England should take. Another grave aspect of the question must be met in a very short time, and that is, what is to become of those who are engaged in offices, workshops, and factories who are suffering from tuberculosis in its early stage? He advises the erection of large numbers of sanatoria throughout the country, and the proper housing and betterment of the hygienic conditions of the poorer classes. He discusses the economic aspect of the question. He suggests that tuberculosis should be included among the list of infectious diseases, but only to the voluntarily notifiable, and that a special code of rules and regulations should be drawn up for the guidance of health authorities. By-laws should be drawn up and strictly enforced regarding spitting in public places, and leaflets should be distributed free of charge to the public, setting forth in plain language the dangers of the disease. [T. L. C.]

3.—Arthur Newsholme contributes an article on the notification of phthisis pulmonalis. The preventability, as well as the curability, of a large portion of cases of this disease, is universally admitted. We have to deal with a disease, which, in 1899, caused a death-rate of 1,336, and including other forms of tubercular diseases, of 1,911 per million of the population. During the same year the chief acute infectious diseases were responsible for a death-rate of 1,248 per million. The importance of phthisis is increased by the fact that a large number of the loss caused by it occurs during the most useful years of life, and that it is preceded by more protracted illness. Comparing the present figures with those of a generation ago, Newsholme states it as his opinion that the present figures are now probably being under-stated and that the former were over-stated. When due allowance is made for these facts, there has, nevertheless, been a great decline in the death rate since 1861 to 1865 when it was 2,527 per million. This shows a decrease of 50%. This decline has been made use of as one of the chief arguments against the notification of phthisis and the more direct measures of prevention which would be its result. Inasmuch as the mortality of phthisis has been shown as being declining and to be declining at an increasing ratio, what further measures are necessary to be enacted against the disease? He gives these in their order of importance. 1. Improved nutrition of the population, due to better, more varied, and more abundant food. The increased consumption of meat has, he thinks, erroneously been credited with having caused increased cancer mortality. In all probability this is not the fact, but it has decreased the death-rate of consumption. 2. The improved housing of the poor, which, however much open to criticism, is better done than a generation ago. 3. The drying of the soil. He holds that the present infection is the main cause of the spreading, and that this occurs chiefly where people are most closely agglomerated, and live an indoor life, and that deficient nutrition is an important cause of the disease, and the wetness of the soil operates in a minor degree by favoring catarrhal conditions. He gives the following scheme of preventive measures, which he believes to be thoroughly practicable. A. Means of ascertaining the existence of the disease, under which he places the bacteriological diagnosis and the notification of cases, voluntary or compulsory. B. Direct preventive measures, which include laws against expectoration in places of public resort. Disinfection and cleanliness. Isolation and general sanitary improvement. C. Education of the public and of patients as to the importance of the preceding measures. As to notification, the main reasons why this is desirable are, that it enables instruction to be given to the patient and relatives as to the exact precaution required, and facilitates the removal of the insanitary conditions of home and work which may have caused the case or favored its progress. The only valid reasons that can

be urged against such notification are that the first of the above measures can be followed out by the family practitioner, with the co-operation of the family of the patient, and that the third measure named above forms part of the routine of the sanitary authorities. Against this it may be said that the information derived from compulsory notification will be more complete than that derived from voluntary notification. It would not only direct attention to insanitary houses, but also to dangerous persons, and assist the authorities in detecting sources of infection. A modified compulsory notification rendering it obligatory on every person suffering from consumption to notify any change of address would be of great value. If notification was compulsory, it would remove the difficulty which some practitioners feel in notifying the illness of their patients to a medical officer of health, when such notification is not imposed upon them as a statutory duty.

[T. L. C.]

4.—R. Mander Smyth gives his personal experience with galloping consumption. He furnishes the details of his own case and experience and the method by which he recovered. The open air, rest and at home had been the familiar and inefficient methods at first employed. The food was inadequate and the rest was not absolute. He went to Nordrach where he remained a year and returned in excellent health. He states that isolation from sympathetic friends was absolute peace and soon produced an effect on the temperature as well as upon the pulmonary germ.

[F. L. C.]

5.—Hector Mackenzie presents a paper on open-air treatment in London. When a patient is confined to bed and is treated at home or in an institution in London, he urges that an attempt should be made to secure the freest possible supply of air, that the patient should be outside the house, sheltered from the wind and receiving the maximum of sunlight. While indoors the airiest and sunniest room should be given up for his use. The room should be a very scantily furnished one, and a fire is not necessary or even desirable while the patient is confined to bed. When unable to take exercise, the recumbent position must be insisted upon, as the warmth of the body is much better maintained in this position than in any other, and a greater decrease of temperature can be endured. The patient will be perfectly warm, although in some cases hot-water bottles are useful. There is no danger in breathing cold air, providing the body itself is kept warm. The patients are, as far as possible, protected from the wet and wind by mackintoshes and tarpaulin screens. Warmth is maintained by a liberal supply of blankets, while woolen gloves and a woolen cap are worn on cold days. The return of appetite was very noticeable as well as the strength of the patients. The food supply was liberal and there was no need to urge patients to take food. Notes of three cases are given showing the excellent results of this treatment. [T. L. C.]

6.—E. Clifford Beale and Hugh Walsham treat of the diagnosis of tubercular disease of the lungs by means of the Roentgen rays. Nine excellent illustrations and points of difficulty in the interpretation of X-rays photographs are given, and the description of the various shadows which may be mistaken for tubercular deposits. They state that it is essentially in the early and doubtful cases that the assistance of Roentgen rays is most needed. They believe that the routine X-ray examination should be made in every case, as is done in their wards at Victoria Park. [T. L. C.]

7.—J. J. Perkins discusses the early diagnosis of pulmonary tuberculosis. The early diagnosis of phthisis is most necessary to the attainment of good results and must not be excluded by the problem of treatment. The acute or apparently acute onset, is far from uncommon and such cases are very apt to be wrongly diagnosed. The earlier signs of the disease must be carefully studied. The condition of the lung at the time of the tubercular invasion must be recognized. The process seems to start in the wall of the bronchus, from which have resulted small areas of lobular consolidation and tubercular nodules. No

extensive consolidation or softening of the affected lung has yet occurred, and consequently marked dullness, bronchial breathing of any extent, and rales in any abundance, the result of softening, are not to be looked for. Some diminution of resonance, however, can usually be recognized, best by tapping the clavicle lightly with the forefinger and comparing one apex with the other. The early foci of tubercle usually lie rather posterior than anterior in the apex and the supra-scapular fossae often yield more information than the front of the chest, both to percussion and other methods of examination. More aid can usually be gained from auscultation than from percussion. The expiration is prolonged, bronchial or broncho-vesicular. Either inspiration or expiration is often of the cog-wheel character. This sign, though meaning nothing, when heard widely, is of value when confined to one apex. Tactile fremitus may be increased at this stage, but auscultation of the voice is the more delicate test of the increased conduction in early consolidation. There is marked increase—best observed when the patient whispers. Conduction of the cardiac sounds, so that they are well heard at one apex, is another common and important sign of consolidation in these early stages. The presence of *tachycardia* and *hyperesthesia* should always awaken suspicion. Night sweating, even if only occasional, is a very suggestive and dangerous symptom. As a general rule *pyrexia* may be expected, though afebrile cases occur. No great rise of temperature need be looked for, a persistent evening rise to 99.5°—100.5° being quite sufficient to indicate the disease. The temperature should be taken at 4 P. M. to 6 P. M., and in cases of doubt every four hours, that no rise may elude observation. The disease may advance without expectoration being present. The use of the tuberculin and the method of its employment is discussed as a means of diagnosis. The recognition of initial *hemoptysis* on which *phthisis* so often follows, occurring in people apparently in perfect health, should awaken suspicion. *Pleurisy* is becoming to be regarded of tubercular nature, and it is often stated that only 2% of cases of *pleurisy* fail to develop pulmonary tuberculosis. [T. L. C.]

8.—St. Clair Thompson presents a paper on *tubercular infection through the air-passages*. The study of 100 autopsies naturally forms the inquiries: Why is the nose so seldom attacked by tuberculosis? How does infection reach the lungs? Why does the larynx stand midway between the two in its susceptibility? As to the first question, the microbes in their passage through the nasal chambers are entrapped in the vibrissae lining the nostrils. Others which penetrate any distance are enveloped in the sticky mucus; while the action of the ciliated epithelium promptly secures their expulsion. Phagocyte action also comes into play, and by the time the air current reaches the pharynx it is practically germ free. With these arrangements, with the trickling of tears, and the tendency of the Schneiderian membrane to resent foreign intrusion by increased *lacrymation* and sneezing, it is little wonder that tuberculous infection rarely reaches it from the atmosphere. There is no part of the whole respiratory tract which is so seldom attacked by tuberculosis as the Schneiderian membrane. The author believes that it is in the neighborhood of the *naso-pharynx*, and in the pathological conditions commonly affecting it, that we should look for the direct channels of infection of the bacillus tuberculosis. As to the character of adenoid growths, 5 to 6% show tuberculous character. Numerous observers have failed to find latent tuberculosis of the adenoids or tonsils. Discussing the possibility of absorption through the tonsils, the supposition appears possible that bacteria may continually be making their way into the tonsillar tissues, but at the moment of entering encounter conditions which terminate their existence. Primary tuberculosis of the larynx is not unknown, but is most uncommon. From his observations he draws the conclusion that we are compelled to view with a strong suspicion as a probable frequent focus of tubercular infection that ring of lymphoid tissue which surrounds the naso-

pharynx, the cross-roads where the food and air ways pass each other. There appears to be no justification for the generally accepted idea that the bacillus is inhaled directly into the pulmonary alveoli. [T. L. C.]

9.—George F. Still treats of *tuberculosis in childhood*. Among 769 autopsies on children under twelve years of age, he found tuberculous lesions in 269 cases, and in 223 of these, that is, in 23.9 per cent., the fatal result was due directly to tuberculosis. Figures indicate that nearly one-third of the child-mortality is due to tuberculosis. Statistics show that liability to tuberculosis is much more marked during the first five years of life than during the later years, and the significance of this very marked age-incidence is a matter of considerable practical importance. He discusses the question of milk infection, but states that the facts of the post-mortem room are overwhelmingly against this theory. The facts of the post-mortem room would tend that the disease in children is a lung infection and not an intestinal infection. Therefore inhalation infection must be carefully studied. He discusses the fact of measles and whooping cough with their subsequent liability to tuberculosis as two of the factors which help increase the special age incidence of tuberculosis during the first years of life. The lung affection in childhood tends to be not only a more acute process, but also more diffuse than in the adult. As to treatment first and foremost in the prevention is fresh air, through ventilation, and the spending of several hours daily in the open air. Overcrowding must be scrupulously avoided. [T. L. C.]

11.—Albert Catless contributes an article on the *surgical treatment of tubercular disease*. Tubercle is not like cancer or other malignant diseases. It is spontaneously curable and this fact must be remembered. It must be admitted, however, that such cures are usually very slow, often taking months or years, and the cure is not always permanent, nor is the patient exempt from risk during the time the cure is being accomplished. On this account the disease may become disseminated from its original locality to other parts of the body. Conservative treatment does not always lead to satisfactory results locally, deformity and functional disability to a greater or less extent being frequently present. Total extirpation of the tubercular focus is the ideal treatment, and for some lesions no other procedure need be considered, for instance in dealing with external lymphatic glands, as in the neck, should there be any hesitancy in the process of cure by general means. Ordinary operative risks such as arise from the danger of hemorrhage or sepsis, may be practically omitted, as they are extremely small. Care must be taken that the tubercular material is not set free by the manipulations during the operation. Finally, we must remember that post-operative disabilities are to be considered. As to conservative treatment, the absorption or encapsulation of tubercular foci can be effected by bringing antiseptics into such relation with the diseased material as shall hinder its progress and growth, and development of firm fibro-cicatricial tissue about it, and by modifying the fluids which soak the tissues affected, so that the bacilli do not find suitable pabulum in it, or even find therein substances inimical to their development. The author mentions the various methods employed with these ends in view. They include the injection of antiseptics, generally iodoform and the sclerogenic treatment, i. e., the injection into, and around the tissues, of 10% solution of chloride of zinc. The method of treatment by producing passive congestion is based on the fact that the bacillus tuberculosis does not thrive in parts that are soaked with the blood serum, exuded from the vessels. The plan of inducing congestion by means of an Es-march's bandage is chiefly applicable to bone and joint trouble. The intravenous injection of cinnamic acid and its salts, as well as the employment of tuberculin is mentioned. In the course of the article the treatment of chronic abscess, tubercular disease of bone, tuberculosis of the testis, the kidney, and the bladder, are discussed. [T. L. C.]

12.—Fredrick E. Batten discusses some tuberculous affections of the nervous system. He states that it is a well recognized fact that phthisis is not uncommonly the cause of death in cases of peripheral neuritis, but it is by no means so generally recognized that peripheral neuritis may occur in cases of advanced tuberculous disease of the lungs, the symptoms due to the changes in the peripheral nerves being probably overlooked or regarded as part of a general wasting disease. The question at once arises whether this is due to some toxin form or due to some concomitant condition. The discussion of this question by no means proves that the neuritis which occurs in tuberculous disease is due either to the toxin of tubercle, or that it is due to some other form of infection or to alcohol. The author states, however, that it is probably the result due to a concomitant action of some two of the poisons, considering the frequency with which alcohol is given in case of advanced phthisis. It is reasonable to suppose that this may be one of the most common causes of the condition.

[T. L. C.]

13.—Leonard Robinson presents an article on **zomotherapy** in phthisis based largely on the researches of Richet and Hélicourt. Raw meat in dogs, and probably also in man, increases the strength and excites the appetite in a very marked manner. It is a stimulant and a tonic to the nervous system. The action is to be explained by the impregnation of the nerve cells which have absorbed certain elements of the plasma. The solution of the problem is not of immediate interest to the physician, but the fact that zomotherapy is not a method of hyper-alimentation is of interest. In the muscle juice extracted from 500 grammes of meat the quantity of albuminoids, 18 grammes, is almost negligible, and cooked meat, given in large doses at which raw meat is curative seems to act as a toxic substance and rather to favor the evolution of the tubercular process. Another point of interest is the fact that the success of zomotherapy is a question of dose; success depends on a minimum ratio between the weight of the patient and the quantity of muscle juice or raw meat taken by the patient. Below this minimum limit amelioration is possible, but a cure must not be expected. A satisfactory formula of zomotherapeutic treatment is appended to this article. [T. L. C.]

14.—Arthur H. Buck reports a case of **lupus vulgaris** of 12 years standing treated with urea and cured. The patient was one who may be described as having been saturated with tubercle, and who possessed the tubercular diathesis to the large degree. His habits and diet have been opposed to the cure of any tubercular trouble, and during the process of treatment these conditions were not altered in any way. Lupus is perhaps the most intractable form of tuberculosis, especially to what are known as general or constitutional remedies. The lesion being on the surface, it was carefully watched and between April 23d and May 21st the disease seemed almost to melt away. No bad symptoms occurred even with urea 1 dr. t.d.s., but rather, the patient felt able to enjoy life for the first time for years. The treatment was begun with 30 grs. t. d., and gradually increased to a drachm. [T. L. C.]

15.—Thomas G. Lyon discusses the **ventilation of crowded places**. The recognized cause of air vitiation are decrease of oxygen, increase of carbonic acid, rise of temperature, excess in moisture, appearance of exhaled substances of unknown constitution. To effect good ventilation we must convey good air to all persons occupying a room, and must place no reliance on diffusion. This is the cardinal principle of ventilation for crowded rooms. He describes the special feature of the method devised by Mr. James Cadett and himself which is the employment of large inlets and outlets placed at opposite positions of a room. By this means the air is admitted at a low velocity, and is conveyed to and from all parts of the room. Diagrams of his system are furnished. [T. L. C.]

ANNALS OF SURGERY.

June, 1901.

1. A Loop Around the Hyoid Bone as an Aid in Narcosis during Certain Operation on the Lower Jaw and in the Mouth, and in After-Treatment. CHRISTIAN FENGER.
2. Excision of the Intact Gasserian Ganglion. WILLARD BARTLETT.
3. The Pathology of Trigeminal Neuralgia, Illustrated by the Microscopic Examination of Two Gasserian Ganglia. SIDNEY I. SCHWAB.
4. Osteoplastic Amputation of the Arm. WILLY MEYER.
5. Cases of Laceration of the Spleen and of the Kidney, followed by Recovery after Removal of the Injured Organ. SAMUEL J. MIXTER.
6. The Operative Treatment of Cirrhosis of the Liver. CHARLES H. FRAZIER.
7. Angina Ludovici. GEORGE G. ROSS.
8. Complications in Fractures Involving the Hip-Joint. JOHN E. OWENS.
9. Fracture of the Pelvis. THOMAS M. PAUL.
10. A New Knox-Tightener. HUGO EHRENFEST.
11. The Value of the X-Ray in Surgery. J. RUDIS-JICINSKY.

1.—Fenger, as the result of losing a patient from asphyxia due to sinking back of the tongue during sleep, following an extirpation of one-half the lower jaw, always leaves a loop of silk or silver wire attached to the anterior portion of the divided bone so that the nurse or patient may pull on it if dyspnea should arise. This precaution is sufficient only when the muscles extending from the hyoid bone to the maxilla are intact on one side. As the results of experiments on the cadaver he found that traction on the hyoid bone is far more effective than any other method for keeping the upper air passages open. When all the muscles running from the jaw to the tongue and hyoid bone are removed the author recommends passing a loop of silk around the body of the hyoid bone through a small longitudinal incision. The ends of the loop are left long enough to permit of manipulation by the operator or anesthetizer during the operation. At the close of the operation the loops left in place are attached to a plaster-of-Paris cast loosely covering the field of operation, with traction on the hyoid bone sufficient to prevent any sinking back of the larynx and epiglottis. The loop is allowed to remain for three or four days, until the patient is able to breathe freely with the head in any position. [F. T. S.]

2.—Bartlett reports two cases of **trifacial neuralgia** in which he removed the Gasserian ganglion intact, with a successful result in each case. The peripheral procedures for tic douloureux have proven of very doubtful benefit. Section of the sensory root, as proposed by Horsley, is scarcely less dangerous than ganglionectomy and the posterior root regenerates from the ganglion, so that we have but one course left to pursue in these operations, namely, removal of the ganglion. The indications for this operation are the involvement of more than one branch of the fifth nerve, the presence of pain in an area which receives its nerve near the latter's point of exit from the skull, paroxysms which are not the expression of constitutional or cerebral disease, and the failure of all other therapeutic measures. Bartlett's cases were operated upon by the Cushing inferior temporal method. The first patient was 60 years of age and had suffered for 17 years. All the teeth on the affected side had been extracted and the infra-orbital nerve removed. For four weeks after operation there was complete paralysis of the muscles innervated by the third, fourth and sixth nerves. This disappeared in the course of three weeks and a small ulcer of the cornea appeared, which finally healed. The second case was a woman aged 50, who for many years had been a victim of toothache on the right side. All the branches of the nerve were affected. Motor derangement of the eye was identical with that observed in the first patient, but the cornea remained intact. He quotes Tiffany, saying that "recurrence after a known removal has not been reported." Of 95 intra-cranial attacks on the trigeminus, according to Marchant and Herbert, in but 15 was the ganglion completely excised. Of 100 recent extirpations, according to Carson, but 11 resulted in death. [F. T. S.]

3.—Sidney Schwab reports on the pathology of the ganglia removed by Bartlett, and reviews the literature on the subject. He has collected the reports of 20 ganglia ex-

amined after their removal for trigeminal neuralgia. In a few cases the ganglion was found to be normal. A second group showed evidences of neuritis and degeneration. The third group consisted of two cases and showed an interstitial inflammation. The fourth group composing the largest number of reports, shows nerve cell changes of various degrees of severity, the changes being less those of a primary cell affection than a secondary one. The presence of brain sand or concretions was noted in three cases. In a very few cases changes in the blood cells were noticed. In both of the ganglia examined by Schwab the nerve cells were pathologically altered, but in neither to such a degree as to consider them primarily affected. The definite changes which are found in acute or long standing parenchymatous nerve cell affection were missed in these cases. Neuritis and atrophy were probably present in both cases in spite of the failure of the Van Gieson stain to prove their existence. Brain sand was found in the second case. He concludes that trigeminal neuralgia is not a definite disease but merely the symptom of various processes affecting the fifth nerve anywhere in its course from the periphery to the ganglion. It is probable that disease of the nerve cells does not exist as a primary parenchymatous affection. He divides neuralgic affections of the fifth nerve into two divisions; the first is an ascending neuritis beginning at the periphery and having a tendency to ascend to the ganglion; the second is an interstitial inflammation, chronic and progressive, of the ganglion itself. He places the first ganglion examined in the first and the second in the second category. A third division is possible, that is, a central neuralgia or neuritis of the sensory root, as two cases have been reported. Wherever the process is located, removal of the ganglion must be the final means of relief. The sensory root, if diseased, can only degenerate to the terminal ends of the neurons involved, and following the law of secondary degeneration the process must stop. Pathological processes in the brain itself, unless due to pressure, cause no pain, and as the Gasserian ganglion contains the cells of nutrition of the sensory root its removal will place this nerve outside of the realm of active symptomatology. [F. T. S.]

4.—Meyer reports a case of **osteoplastic amputation of the arm** at the junction of the middle and lower thirds according to the method of Hier for epithelioma of the forearm. After making the flaps the periosteum was pushed back for about a quarter of an inch and a bone flap sawed with the convexity toward the medullary cavity. As the saw approached the periosteum at the upper end of the bone flap it was removed and the remaining portion of bone broken through. The periosteum was now further stripped back from the humerus and the shaft of the bone sawed off in a curve with the convexity upward. The bone flap was now swung into place, filling the concavity in the end of the shaft and sealing the marrow cavity. It was impossible to suture the periosteum of the bone flap to the surrounding tissues because the periosteum was so easily torn. The patient secured a very good stump. Meyer describes a specially constructed bow-saw which he has devised for osteoplastic work. [F. T. S.]

5.—Mixer reports a case of **laceration of the spleen** in a man 25 years of age who was struck by the driving wheels of a locomotive. He was shocked, had vomited, and the abdomen was tender and rigid, and there was dullness in both flanks. At operation a piece of ruptured spleen was found free in the abdominal cavity. The remainder of the spleen was hanging by a few shreds of tissue and was removed without ligation, the splenic artery and vein being tied later. He reports a second case, a girl aged 10, who was run over by a heavy wagon. The abdomen was tender, and she passed a quantity of bloody urine. A lumbar incision exposed an infiltrating hemorrhage in the perinephritic tissues and a rent in the peritoneum. A portion of the kidney was found near the stomach, the remaining portion was almost completely torn from its pedicle. The vessels were ligated, the abdomen washed out, and the wound partially sutured and packed with gauze. Both cases recovered. [F. T. S.]

6.—Frazier reports a successful case of **epioplexy for cirrhosis of the liver**. The patient had been tapped five times, a large quantity of fluid being withdrawn each time. An attempt was made to perform the operation under local anesthesia but the pain was so great that ether was administered. Since the operation the patient has been tapped twice, once on the 13th day, and again on the 36th day. Since the last tapping there has been no reaccumula-

tion of fluid and the patient has gained rapidly in strength. Frazier says that but 14 cases have been reported in literature. Excluding those in which there was defective technique, an error of diagnosis, and those in which operation was contraindicated, but eight remain. Of these none died, one is living and unimproved, one living and improved, and six living and free from ascites at periods of three, four, six, 24, 24 and 26 months respectively. The cases for operation should be carefully selected. A case presenting the following conditions is a fit one for operation: (1) cirrhosis of the liver; (2) active liver cells; (3) utterly hopeless cases in which medication and paracentesis give no relief, (4) and when there are no reasonable contraindications. [F. T. S.]

7.—Ross reports two cases of **angina Ludovici**. The first case developed from a necrotic wisdom tooth. Within 12 hours the symptoms were so marked that operation became imperative. The second case suffered with tooth-ache for four days, when the submaxillary region began to swell and dyspnea asserted itself. An incision was made into the edematous sub-lingual tissue, relieving the dyspnea for a time. The next day the swelling extended upward to the zygoma and down to the mid-sternum. Under chloroform the abscess was opened by an incision through the muscles forming the floor of the mouth. During the operation the patient suddenly ceased breathing, necessitating an immediate tracheotomy. On the fifth day a secondary abscess on the right face was opened. As a result of the inflammation of the larynx aphonia resulted. Both patients recovered. [F. T. S.]

8.—Owens reports three rare complications of **hip-joint fractures**. The first was in a young adult who had fallen 22 feet, striking on his right foot. The leg was inverted and a rectal examination revealed a prominence of the floor of the acetabulum on the injured side. The skilgram revealed a fracture of the neck and of the rim of the acetabulum with a **subluxation** of the head of the femur. The second case was an old man who had sustained a fracture of the neck of the left femur. He was never able to flex the left foot upon the leg although the ankle and knee-joints were involved. This doubtless was due to a **paralysis of the external popliteal nerve** from pressure of the adhesive straps and bandage. An apparatus was devised to hold the foot up, thus facilitating his walking. The third patient was a man aged 73 with a fracture of the neck of the right thigh bone. On the 64th day after injury the symptoms of **pneumitis** appeared in the uninjured leg. When this had subsided and after the patient had been up for several days the right leg was similarly attacked. [F. T. S.]

9.—Paul reports and analyzes fifty-four cases of **fracture of the pelvis**. He emphasizes the fact that in some cases local tenderness but not mobility or crepitus is all that can be found antemortem. The cases reported show a mortality of 50 per cent. A table giving the cause, diagnosis, complication, operation and result of each case is appended. [F. T. S.]

10.—Ehrenfest describes an instrument for **tightening knots during vaginal operations** where the fingers can be used with great difficulty. It consists of two levers attached by means of a hinge resembling a glove-stretcher. On the top of each lever is a groove to admit each end of the ligature. Below the hinge is a mechanism which automatically holds fast the two threads. After tying a knot as tightly as one can with the fingers the tips of the instrument are introduced between the two ends of the ligature so that each is contained in either groove at the tip. The ends of the ligature are now pressed in the automatic mechanism below the spring and the handles of the instrument approximated. This separates the tops of the levers and so fixes the ligature. The instrument is not practicable for catgut since the fixation blocks destroy the integrity of such soft material. [F. T. S.]

11.—Ruls-Jelinsky says the X-ray shadow is treacherous and may be easily exaggerated or changed by position, so that it is necessary to have the subject in a certain definite position and have more than one skilgraph taken from different points in each case. It is also of great value to compare the picture of the injured parts to that of the normal one. Four cases are reported to demonstrate the value of the X-ray. One patient had an injury of the hip which after five years of treatment for coxalgia was demonstrated to be a dislocation of the head of the femur. Another case was diagnosed as appendicitis, later as

carcinoma of the liver, and finally as simple jaundice. She was submitted to five lengthy exposures with a negative result. The sixth one lasted 50 seconds, the plate revealing two gall stones. The diagnosis was verified by operation. The third patient had suffered from headache on the left side for six years following a sunstroke. The X-ray revealed a large, epidural clot under the parietal bone on the painful side. The clot, amounting to four ounces, was removed and recovery followed in three weeks without any complication. The last case reported was variously diagnosed as primary lateral sclerosis, acute myelitis, and spinal meningitis. On X-ray examination destruction of the bony substances of the vertebrae was demonstrated, the changes being tubercular without doubt. The pictures of the above cases are included in the report. [F. T. S.]

EDINBURG MEDICAL JOURNAL.

July, 1901. (Vol. X, No. I, N. S.)

1. The Experience of Forty-two Cases of Goiter Treated by Operation. A. MARMADUKE SHIELD.
2. The Capillary Reflux and What We Learn by Observing It. ALEXANDER HAIG.
3. The Natural and Artificial Mineral Waters of Nauheim. Their Physiological and Therapeutical Effects, and Their Employment in Disease by the Schott Methods. J. M'GREGOR ROBERTSON.
4. A Scheme for the Reorganization of the Medical Curriculum. RICHARD J. A. BERRY.
5. The Modern Treatment of Gonorrhea. GERALD DALTON.
6. The Surgical Treatment of Prolapse of the Uterus. FRED BOWREMAN JESSETT.

1.—During the past 15 years Shield has treated 42 cases of goiter surgically and a number of other cases medically. The medical treatment that he has adopted has consisted of the administration of 3 grains of potassium iodide with one minim of tincture of iodine. The usual vehicle has been the tincture of gentian and the drugs have been given after meals. Sometimes 3 minim doses of tincture of iodine have been used, but such large doses need to be carefully watched, and if signs of iodism appear they should be stopped. Thyroid extract in full doses has given good results and in one case hydriodic acid has been used. Sea air is a most important adjunct to the iodine treatment. The author believes that it is possible for small goiters to disappear entirely under this treatment and the symptoms of large, formidable goiters may be much ameliorated. He has little confidence in the efficacy of such local measures as the injections of iodine or mercury perchloride into the parenchymatous forms of goiter. Any local inflammatory action set up by these agents most seriously prejudices the chances of the patient in any needful subsequent operative proceedings. The same objections do not apply to the external application of the red iodide of mercury ointment, although no great benefit has been seen attending its use. In a considerable number of cases of goiter, medicinal treatment of the kind described quite fails to check the growth of the tumors or to diminish their size and operative treatment has to be adopted. A study of the 42 cases reported, conclusively shows that the operative treatment of goiters that are still small, and particularly if they are movable, if properly carried out, is free from any special risk. On the other hand, operations on goiters of large size, of long growth and with extensive deep connections are perilous in the extreme. Out of the 42 cases, 6 were adenomatous, 5 contained cysts and one, an exophthalmic goiter, was operated upon on account of dyspnea. There was one death from hemorrhage. The tumor in this case was enormous and showed evidences of carcinomatous change with extension to other parts. In one advanced case, the operation was abandoned on account of the important structures that were involved in the growth. There was no instance in which sepsis occurred. The majority of the adenomatous tumors were in the isthmus of the thyroid gland and diagnosed by their marked mobility. The differentiation between adenoma of the thyroid and cyst of the thyroid is very difficult, and indeed, grave consequences may result from cutting into goiters for the enucleation of supposed adenomatous tumors that do not exist. When cysts are of small size they may be opened, painted with carbolic

acid and packed with iodoform gauze. Hemorrhage is a troublesome complication that is likely to arise in such a case. The author describes briefly the steps of his operation. Like so many English surgeons he prefers chloroform for the anesthetic. He believes that the operation of the removal of one lobe of the thyroid gland with the isthmus is practically always followed by atrophy of the remaining lobe. [J. M. S.]

2.—The capillary reflux is the flowing back or reflux of the blood into the capillaries of a portion of the surface of the skin rendered anemic by pressure. Haig believes that the rate of this reflux is a measure of the quantity of uric acid in the blood because the uric acid controls the capillary circulation. In order to observe this phenomenon it is necessary to apply to a known surface, a known pressure for a definite time, and to measure very accurately the time which the blood and color take to make a complete return into the anemic area. The surface and the pressure are measured by an instrument known as a capillary dynamometer. It is necessary that the hand should be about the ordinary temperature of the body, as cold diminishes the solubility of uric acid in the blood stream, and thus increases the precipitation of the colloid that blocks the capillaries and slows the reflux. Heat, on the other hand, increases the solubility of the uric acid in the blood stream, diminishes the colloid blocking of the capillaries and quickens the reflux. Again, the hand should be at about the level of the heart, for the greater the column of blood above the anemic area the quicker will be the reflux. Similarly, a tight sleeve, a band around the arm or a thrombus in a vein will cause serious congestion and quicken the influx on the distal side of the obstruction. When the patient is in the horizontal position, the best plan is to take the reflux on the front of the chest at the level of the heart. The author has adopted 15 ounces pressure for 6 half seconds as the normal for making these tests. The quantity of uric acid in the blood is greater in the morning than it is in the evening. Therefore, the capillary reflux should be greater in the morning than it is in the evening. Blood pressure shows exactly similar fluctuations and, if the condition of the heart is known to be physiological, the blood pressure can be inferred with considerable accuracy from the capillary reflux. Large fluctuations of the capillary reflux such as that of Bright's disease, in which it is slow, and in fever, in which it is quick, may be recognized by anyone by pressure made by the point of the finger. The capillary reflux is quick in fever because the blood is cleared of uric acid; in fever with dyspnea, however, the blood is not cleared of its uric acid and the reflux is not quickened and the blood pressure is not reduced. When a patient takes a course of salicylate medication the capillary reflux is not affected so much in the morning as in the evening at first, because the solvent power of the salicylate for uric acid or its component parts is greater in the evening, when the alkalinity of the blood is least, just as it is greatest in fever when the alkalinity of the blood is greatly diminished, and is at its least in chronic conditions of debility and asthenia when the alkalinity of the blood is not all diminished. Hence, salicylates are most useful in acute conditions with high fever, but may be almost of no use in chronic conditions with debility and failure of nutrition; in these latter conditions they are not solvents of uric acid to anything like the extent that they are in acute fever with diminished alkalinity of the blood. By a study of the capillary reflux the smaller effect of an alkali may be demonstrated.

[J. M. S.]

3.—The springs of Nauheim are 6 in number, 3 used for bathing and 3 for drinking. The chief ingredients of the water of the springs used for drinking are chlorides, small quantities of iron and lithia. The bathing waters are rich in carbonic acid gas. This water is received into tanks, which are open to the air so that much of the gas escapes, and iron and lime, which are held in solution by the gas, are precipitated out. The course of baths is begun with water drawn from one of these tanks containing an amount of gas less than that present in the water direct from the springs. The arrangements permit the water to be heated and allow of the addition of any desired quantity of plain water. This is the thermal sool-bad. In the outskirts of the town there are salt works in which the common salt is crystallized out of the bathing water. The remaining dark-brown, very pungent tasting liquor, called *mutterlaug* or mother-lye, is kept for adding to the bath

to strengthen it. Some of the water is evaporated to dryness in which state it forms large, dirty-brown masses with a crystalline fracture. This is **Nauheim bath salt** and is suitable for artificial baths. Pipes are led from the springs before they reach the surface to the bath-tubs so that the water may be turned on foaming and bubbling directly from the spring in the earth. This is the effervescent or **sprudel-bad**. In one of the bath houses the tubs are so arranged that by the removal of a plug an overflow is provided at the top of the bath. When the bath is full the patient steps in and lies down while the water foams in along the floor of the bath and escapes at the top. This is the current or **strom-bad**. If a patient whose heart presents evidences of dilation with muscular failure takes a sprudel bath, at the end of a minute he is very uncomfortable, but in one minute more the look of anxiety is gone, the color is improving, the breathing is deeper and easier, the pulse is fuller and firmer. This improvement goes on until the patient is very comfortable. As soon as he steps out and is wrapped in a hot bath-sheet his skin is uniformly pink wherever it has been covered by the water. This patient, after a moderately brisk rub with the warm bath-sheet given by the bath attendant, dresses slowly and walks home to sip his bouillon and to take his midday rest. Suppose the bath to be at the temperature of 91°F., on stepping into it the immersion in cold water will contract the arterioles of the skin and this increase of peripheral resistance produces the temporary discomfort. During the rise of bloodpressure in this period of vasoconstriction there is risk of sclerosed vessels yielding, or even of cardiac shock. In practice, however, no patient is ever thus plunged into such a strong bath, and these effects are almost entirely discounted by beginning the course with baths at a higher temperature and by dilution of the water. Subsequently the strength of the bath is gradually increased. After the period of vasoconstriction the specific constituents of the water begin to act upon the skin, the vasoconstriction yields rapidly, the surface arterioles widen, the skin is everywhere flushed with a fresh tide of blood, and the patient is aware of it by the feeling of comfort and warmth that flows over him, sweeping away the chilliness of the first moment of immersion. There are 2 effects, then, of Nauheim waters: (1) the chemical action on the skin producing vasodilation, and (2) the reflex nervous action of the heart. By the first the work of the heart is lightened, by the other its ability to do work is increased. The effects of the Nauheim waters on bloodpressure are, in brief, as follows: The moment the patient steps into the bath he is affected by the temperature of the water, perhaps reinforced slightly by a constricting effect of the saline ingredients, the bloodvessels are contracted, the bloodpressure is raised, the pulse is very markedly slowed and a strain is thereby thrown on the heart. These effects are only momentary and quickly yield to the real effects of the specific ingredients of the waters. The capillaries dilate, the bloodpressure falls and the pulse rate rises slightly. But though the peripheral resistance goes on diminishing by increasing vascular dilation, the fall in bloodpressure ceases to keep pace with it and so also does the rise in pulse rate, because the later effects of cardiac stimulation begin to operate. The bath, therefore, does 2 things: (1) It effects a complete change in the distribution of the blood and thus diminishes the resistance the heart has to overcome, and (2) it stimulates the heart to more energetic contraction, while diminishing its pace. The baths are useful (1) in the diseases of general nutrition, such as scrofulosis, rachitis, chronic exudations and residuary effects of inflammation, hyperplasia of the lymph-nodes, chronic metritis, oophoritis, prostatitis, mastitis, and the like. (2) In cases of muscular weakness of the heart due to or originated by physical overstrain or the effects of prolonged overwork or the result of influenza or some similar toxic influence or cases of dilation without hypertrophy and without heart lesion. (3) In cases of valvular disease of the heart in which compensation has failed or has never been properly established. (4) In cases of cardiac neuroses. While the author does not believe that true angina and atheromatous changes in the vessels are necessarily contraindications to the treatment, he advises great caution in its application to any case of this description. (5) In cases of some other neuroses, such as tachycardia, exophthalmos and peripheral neuritis. Schott, in addition to the baths, uses the saline drinking waters and special exercises in his treatment of the patients that go to Neuheim. A description of some of these

exercises and instructions for making artificial Nauheim baths at home are included in the article, but are too detailed to be incorporated in the limits of an abstract. [J. M. S.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

May 23, 1901.

1. The Demonstration of the Presence of Sugar in the Urine. A. CIPOLLINA.
2. The Treatment of Uric Acid Diathesis. DETERMEYER and BUETTNER.
3. Further Communication Concerning the Germ of Vaccinia and Variola. M. FUNCK.
4. Pulsating Pleurisy. J. KULLMANN.

1.—Cipollina has investigated in Salkowski's laboratory the value of the methods of using the phenylhydrazin test for sugar described by Lamanna, Kowarski and Neumann (these tests were given in abstract in the *Philadelphia Medical Journal* last year). He decides that the only one that gives sufficiently delicate results is that of Neumann, and that this is sometimes negative in urines of high specific gravity containing as much as 0.5% of sugar. In general, however, it is an excellent test, but one must never consider the result negative unless no crystals have formed after one hour. As a rule they form much earlier, after a few moments, but occasionally they may appear only after about one hour. A modification of Lamanna's test proved quite as delicate as Neumann's, however, and had the advantage that special tubes are not required as they are with Neumann's method. This is carried out as follows: Five drops of pure phenylhydrazin are placed in a test tube, $\frac{1}{2}$ c.cm. glacial acetic or 1 c.cm. 50% acetic acid and 4 c.cm. of urine added. The mixture is boiled about one minute, being constantly shaken. Four or five drops of caustic soda solution (specific gravity 1.16) added, the fluid being kept acid, however, boiled again for a moment and then cooled. If by this or Neumann's method sheaves or rosettes of crystals are formed, one may say positively that sugar is present. [D. L. E.]

2.—The paper refers to the influence of a special spring water at the home of the authors on the excretion of uric acid and phosphates. The authors found that it increased the output of both substances in a gouty subject, but had no effect in healthy persons. They therefore consider the water useful in gouty diathesis. [D. L. E.]

3.—Funck replies to Podwyszozy and Mankowski (*Deutsch. Med. Woch.*, April 27th) that his complete report will soon be out and will substantiate his statements. He admits that one can readily find degenerated glands and epithelial cells in vaccine fluid, but insists that the bodies described are different, though easily confused with these. They, however, do not stain with Sudan as Scarlet Red. More complete descriptions with illustrations will soon appear in the *Centralblatt für Bacteriologie*. [D. L. E.]

4.—The case was chiefly of interest because it was one of serous pleurisy. Pulsating empyema is well known and not extremely uncommon, but apparently only two uncomplicated cases of pulsating pleurisy have heretofore been described. This case occurred in a man 40 years old. The illness had lasted three months, 2 weeks before admission 1600 c.cm. of clear fluid had been withdrawn. He had all the usual signs of a large effusion in the left thorax, the heart was pushed to the right of the sternum and on the left side of the chest one saw and felt marked pulsation. There was slight pulsation to the right of the sternum also, and a mass which pulsated strongly was seen and felt for three fingers' breadths below the left costal border. The latter was evidently produced by pressure of the diaphragm downward by the large effusion. Kullman believes that Traube's explanation is sufficient only in left-sided cases. This explanation refers the pulsation to good transmission of the heart movements through the air-free lung, the pulsation becoming more apparent when the intercostal tissues are lax. Kullman considers it important to see whether the altered character of the heart movements and the relation of the heart to the fluid in the individual case are not of still greater importance than the above factors and whether when the exudates causes marked distension, the resistance of the mediastinum does not overcome that of the thoracic wall so that in its efforts to contract the heart it is driven toward the wall of the thorax. [D. L. E.]

WIENER KLINISCHE WOCHENSCHRIFT.

June 27, 1901. (XIV Jahrgang, No. 26).

1. The Influence Upon the Fetus of Treating Syphilitic Mothers. G. RIEHL.
2. A Peculiarly Localized Arthropathy, in a Case of Syringomyelia with Genital Hypoplasia. G. HOEDDMOSER.
3. Two Cases of Tumor Thrombosis of the Inferior Vena Cava. KARL STERNBERG.

1.—Riehl has experimented upon 29 pregnant women with secondary syphilis. From a full review of the literature, it seems certain that, with recent syphilis in the mother, treatment has but a faint chance of causing the birth of a healthy child. Beside the general treatment of the mother, Riehl inserted one gram of unguentum hydrargyri in the vagina daily, keeping it in by a tampon. He begins these mercurial applications just as soon as pregnancy is even suspected. No symptoms of local irritation or of stomatitis were ever seen. Out of 33 syphilitic mothers, there occurred one abortion; three premature deliveries; two still-born infants at term; two syphilitic infants at term; and 29 normal infants at term. In all, a mortality of 12%, a morbidity of 21%. From this Riehl believes that a favorable prognosis for the coming child can be obtained by vaginal treatment of the pregnant mother. In his private practice, the results were even better. [M. O.]

2.—Hoeddmoser reports a case of syringomyelia in an imbecile of 59. The symptoms of syringomyelia first appeared in one arm 17 years ago. Now he has all the main signs of syringomyelia, and testicles the size of peas. The acromio-clavicular joint opened spontaneously, showing an upward luxation of the clavicle. This is well shown by a Röntgen photograph. It healed about a month later. In all the literature, only 95 arthropathies occurred, 29 of them in the shoulder. While they are seen as often in tabes as in syringomyelia, no case of luxation of the acromio-clavicular articulation has ever been recorded before. That this could develop was due to the influence of the syringomyelia upon the trophic nerves, causing atrophy of the muscles. Then the luxated end of the clavicle led to perforation by pressure. The congenital hypoplasia of the testicles may help to account for the occurrence of syringomyelia, as gliosis is prone to appear in subjects with anomalies of development. [M. O.]

3.—Sternberg reports two cases of tumors occluding the inferior vena cava, which he found in performing autopsies upon old women aged respectively 60 and 70 years. In the first case, a suprarenal epithelioma filled the entire vein and reached to the right heart; in the second a carcinoma of the liver had grown through the hepatic and portal veins into the right side of the heart. A few similar cases were found in the literature. Few metastases occur, generally into the lungs only.

[M. O.]

JOURNAL DES PRATICIENS.

July 6, 1901. (15me. Année, No. 27).

1. The Treatment of Neurasthenia. MAURICE DE FLEURY.
2. The Society for Sanitary and Moral Prophylaxis. ALFRED FOURNIER.

1.—Will be abstracted when concluded.

2.—There has lately been formed in France a society directed against alcoholism, tuberculosis, and syphilis. That such an association was needed to combat the ravages of syphilis is shown by its frequency (13 to 18%), its gravity, both for the individual and society, and the insufficiency of the actual prophylaxis. This society hopes to assemble progressive men in all professions to examine into the subject, to present the question to the public, its dangers and their solutions, to acquire a moral power by which they might impress their opinions upon the government, and to prepare for the future dispensaries, schools, asylums, etc. to combat both syphilis and its main cause, prostitution. The means of action of the society will be moral or religious; administrative, for the regulation of prostitution; and medical, for the prophylaxis and treatment. Fournier believes that a special dispensary should be established where case-histories are kept and medicine is given gratis, where the poor sees the physician alone just as the rich man visits him in his office. [M. O.]

June 21, 1901. (15me. Année, No. 25).

1. The Three Hypertensions. HENRI HUCHARD.

1.—Huchard discusses clinically and therapeutically the three hypertensions, arterial, pulmonary and portal hypertensions. Increase in the arterial tension, from the cardiac impulse, is shown physiologically by excitation of the cardiac nerves, and clinically by ventricular weakness. The main cause of the increased tension, however, is increased tonicity of the arteries, which is in turn due to increased resistance in the peripheral circulation. Heart trouble which begins in the heart generally shows hypotension, while that which commences in the arteries causes hypertension. For the latter condition, Huchard advises hypotensive treatment, in the condition described as presclerosis, in angina pectoris, stenocardia, uremia, gout, interstitial nephritis, etc., all heart conditions of arterial origin. The great cause of these conditions is excessive meat diet. Erythrol tetranitrate will be found of great use in these affections, with massage, and a diet of milk and vegetables. Organotherapy may eventually be of aid in treating these diseases. Pulmonary hypertension exists with mitral disease, especially stenosis of the mitral valve. Aortic and pulmonary hypertension may be present together, causing arrhythmic palpitation. Then the same hypotensive treatment used for arterial hypertension will prove effectual. Portal hypertension begins in the veins, and is found physiologically with anemia, arterial hypotension, and toxic symptoms. Clinically the condition occurs with phlephlebitis, atrophic cirrhosis of the liver, uncompensated heart lesions, etc. It may be acute, subacute, or chronic. It is occasionally noted at the menopause, and may cause hemorrhages and obesity. Abdominal massage, and a diet of milk and vegetables constitute the treatment. Digitalis and theobromin may aid. These conditions of hypertension may co-exist; then the prognosis becomes serious. Each one of them must be well treated, and quickly, especially the last, to prevent the development of arteriosclerosis, and heart lesions, later. The best means of treatment is the hypotensive method, states Huchard. [M. O.]

REVUE DE CHIRURGIE.

July, 1901. (21me. Année, No. 7).

1. Perforating Wounds of the Abdomen. EUGENE VINCENT.
2. Trephining for Ancient Injuries of the Skull. MAURICE PERAIRE.
3. Vascular Tears in Fracture of the Clavicle. E. GALLOIS and P. PIOLLET.
4. The Study of Antrectomy. OLIVIER LENOIR.
5. The Accidents Attending the Eruption of the Wisdom Tooth. MOTY.
6. Scapulo-humeral Arthrodesis. BOTHEZAT.

1.—Vincent believes that no absolute rule can be formulated for the surgical treatment of penetrating wounds of the abdomen. He advises the expectant treatment, when the wound is due to fire-arms; when due to the kick of a horse, laparotomy is best at once; if due to pointed instruments, wait for signs of hemorrhage, torn intestine, etc., before operating; if due to instruments with sharp blades, exploratory laparotomy will generally be indicated. Besides, whenever internal hemorrhage is suspected, laparotomy should be performed immediately. Vincent reports three cases. In the first, a knife entered the stomach. The incision was enlarged and the stomach wound sutured. The second patient fell from a tree, landing on a stake, 45 cm. which, breaking off, entered the iliac fossa. This was removed and ice was applied. Three days later an incision was made in the lumbar region, a sero-sanguineous collection evacuated, touched with the thermo-cautery, and the sinus allowed to heal. A month later he was well. In the last case, an omental hernia followed the penetrating abdominal wound. The omentum was resected after ligation, and returned into the abdomen, the ligature ends serving as drainage. From these results, Vincent advises the expectant treatment always. For as soon as any bad sign appears, laparotomy can be done. [M. O.]

2.—Peraire reports two cases in which he trephined, for injuries to the skull received 7 and 12 years before. In the first case, headache, fever, insomnia, loss of memory, inability to work, nausea, vomiting, and weakness of the legs persisted from the time his head had been struck. An

abscess was discovered by trephining, evacuated, and recovery followed. In the second case a revolver bullet had remained for twelve years in the brain. Then a circumscribed meningo-encephalitis developed about it. Though the bullet was shown by Röntgen photographs, the point for trephining was found by the symptoms. The bullet was removed and he recovered. [M. O.]

3.—Will be abstracted when concluded.

4.—Will be abstracted when concluded.

5.—A series of morbid phenomena may be observed before, with, or after the eruption of the wisdom tooth. These accidents appear about the twentieth year, and consist of pain, edema of the gums, enlargement of the parotid, infiltration, abscess formation, persistent fistulae inflammation of the dental canal, trismus, and symptoms of paralysis. The mild form is common, and is only diagnosed after the appearance of the tooth. In the severe form, epithelial debris from the tooth remains included in the alveolus. Symptoms are marked, and the pus formed is offensive. No necrosis occurs, however. It may be acute, or may become chronic. The diagnosis is easy, tumors alone having to be differentiated. If the tooth remains in the gum, a dermoid cyst may develop. Or the tooth may become carious, without ever appearing, and will then form an infected abscess, with necrosis. Very grave cases may somewhat resemble thrombosis of the jugular vein, without the cerebral symptoms. Odd cases have been observed, with osteomyelitis, osteitis, etc. The eruption of the wisdom tooth in the upper jaw is always less severe than in the lower jaw. If the accidents are mild, the treatment is mild. When the accidents are severe, the tooth must be extracted, and the abscesses, fistulae, etc. treated. The extraction of these large teeth, with their double roots may be very difficult. Even when the tooth is not visible, it must be found and extracted. Beside gargles, sublimate compresses, etc., incision of the abscess, irrigation, curettage, drainage, etc. will be necessary. All these phenomena are due to epithelial inclusion; and as the dental canal is invaded the accidents become more severe. Extraction of the tooth is always advised. [M. O.]

6.—Scapulo-humeral arthrodesis for paralytic luxation of the shoulder was first performed by Albert in 1879. Paralytic luxation of the shoulder passes through four stages, a prodromal stage, with fever; a stage of paralysis, total or partial; a stage of partial recovery; and the final stage of the paralysis remaining. Atrophy of the muscles follows, and the luxation develops. Surgical treatment is needed to improve the condition. This is always the same, whether the cause be cerebral, spinal, or peripheral. The paralyzed arm is smaller and shorter than the healthy arm; the shoulder is higher than the well shoulder. The condition exists in five clinical forms: affecting the deltoid alone, or with the external rotators; the deltoid; the external rotators, and the triceps; all the muscles of the arm and the supinator longus; all the muscles of the arm and forearm; and total paraplegia. Electrical reactions are wanting. Surgery offers apparatus and operations for this condition. Apparatus, however, does little good, and is a great inconvenience. The most important operation is scapulo-humeral arthrodesis, which causes ankylosis with the head of the humerus fixed in the glenoid cavity of the scapula. The movements of the scapula are then used to move the arm. Thus abduction, flexion, and extension become possible. Scapulo-humeral arthrodesis is indicated when the paralysis will not yield to medical treatment, and when the muscles of the scapula, elbow and hand are normal. The first condition will be shown by electricity, for investigation and treatment, and by the age of the paralysis. If the muscles of the elbow are also paralyzed, arthrodesis of the elbow can be performed. The technique of the operation is simple. The incision is made anteriorly, the articulation opened, and the glenoid cavity cleaned; the head of the humerus is placed in it, and the wound closed. Muscles which were cut, are sutured. The arm is put into plaster for two months, and massage and electricity employed. Bothezat reports in detail five cases, three his own, with his own technique. Acute anterior poliomyelitis in infancy caused them all. The results were excellent. Movements were made possible and the progress of the muscular atrophy was stopped. Solid osseous ankylosis follows arthrodesis. [M. O.]

Special Article.

PROFESSIONAL OPINIONS OF PROMINENT SURGEONS REGARDING THE PRESIDENT'S WOUNDS.

In view of the absorbing interest, to both the profession and the public, of the President's case, we have obtained the following opinions from well known surgeons on its strictly scientific aspect. It is gratifying to note that there is practical unanimity of opinion on all the grave questions involved:

Dr. John B. Deaver stated that from the nature of the bulletins by which only he could be guided, he believed that the President will recover. He expressed his opinion as follows: "I think that more cases similar to the President's would be followed by recovery, if prompt surgical treatment at the hands of men with the capability of the President's surgeons were instituted. The greatest risk to which the President was exposed, barring hemorrhage, was that of infection of the peritoneal cavity. It is in these cases where procrastination, dilly dallying, the fear of assuming too much responsibility, in short, not having the courage of one's convictions, are responsible too often, I regret to say, when the surgeon finally prepares to repair the damaged tissue. If it is ever indicated to apply the expression "he who hesitates is lost," it is in cases of wound of the abdomen. We are not justified in questioning whether the wound is of a penetrating or of a non-penetrating character. In this day of aseptic clean surgery the immediate action to mechanically correct the damage done is the "*sine qua non*." The promptness with which incision into the abdominal cavity was made, revealing the injured viscus and the extent of the injury, the repair of the same followed by a flushing with sterile salt solution, and the immediate closure of the abdominal cavity, is putting into practice modern surgical art. The results in the President's case demonstrate the value of asepsis and not anti-sepsis.

Dr. J. B. Roberts stated: "From the information given by the newspapers, I believe that the President received a wound which would have been followed by rapidly fatal septic peritonitis, had early operation not been performed. It has been a source of much satisfaction that he has had the services of such well known and justly distinguished surgeons."

Dr. Joseph Price stated, "It is fortunate that a hospital in readiness and with the best modern appointments should have been in the immediate vicinity of the accident, and that prompt abdominal surgery was employed by from two to three of the best men in the country, all of whom have had excellent results in a prolonged practice, and all of whom have performed very complicated and successful work. It is also fortunate that the surgical ability of Buffalo was at home. Most of these operations result disastrously on account of the delay in waiting until the next morning. In this case the surgeons promptly sought perforation, cleaned and closed it, and determined the fact that other important viscera were not injured. There having been no hemorrhage from wounded vessels, probably settled the fact that the ball was innocent and buried in muscle, and therefore no attempt was made to seek or to remove it. As there is no evidence of splenic, renal or spinal injury, we could expect but one result in the hands of such men. The pulse of the President was rapid and the temperature a little high, which would, however, be explained by the extent and nature of the injury in a man of the President's age. The delay caused by sending to adjoining cities or educational centres for surgeons, commonly results disastrously. Promptitude was of paramount importance in this case as it is in similar ones. Again, the surgeons were prompted by their large and varied experiences and were not in the slightest degree influenced by the opinions of Sir William McCormac and Mr. Treves, as to the non-interference in gun shot wounds in the abdomen. Drainage was not necessary in this case. There had been no vomiting, the stomach was empty at the time

of perforation, and if the peritoneum was contaminated at all, the toilet was perfect. In the great work of Dr. Dalton, of St. Louis, about all the operations were performed in general hospitals, but were as prompt as possible. Early interference exceptionally results in death unless some injury be overlooked. Overlooking a perforation of the bladder, bowel or some other important organ is quite common. A few years ago my brother, Dr. M. Price, removed the right kidney for a gunshot wound involving both kidney and liver, hemorrhage having been quite copious from both organs. The kidney was removed and the liver wound carefully drained. In this case drainage was important; had it not been practiced, the results would probably have been disastrous and fatal. Drainage in the President's case was not indicated and would have delayed his convalescence had it been instituted. Large numbers of old soldiers carry large musket or rifle bullets in their muscles or in their bones. I know of three soldiers who are carrying bullets in the mastoid portions of their temporal bones or in the deep structures of their ears, all useful men. In Garfield's case there was an injury to his spinal cord and column as well as injury to large vessels resulting in aneurysmal complications. The injuries in the two President's cases are not at all similar. One could and was repaired by skilled hands, the other could not be repaired.

Dr. R. C. Norris stated, "Following with interest the course of the President's convalescence, the anxiety on account of his pulse particularly has largely disappeared now in view of the fact that symptoms of peritonitis have not developed, and at this day we can feel practically assured that it will not develop. Ability to take food by the mouth, free action of the bowels, his returning strength, cheerful disposition, ability to sleep, together with a steady improvement in his pulse and temperature warrant us to believe that his convalescence is assured. The medical profession should feel especially proud of this triumph of modern surgery, and while the greatest praise should be awarded to all the physicians associated in the management of the President's illness, the prompt and skillful work of Dr. Mann should not be lost sight of as the important factor in rescuing the President from certain death. It is of interest to note the rare good judgment displayed by Dr. Mann in not employing the gauze drain."

Dr. Orville Horwitz stated, "The promptness with which the President was treated saved his life. The fact that the surgeons treated him like any other patient with a similar wound and the skill employed speaks well for American surgery. That there has been no peritonitis shows the value of aseptic closure of the wound. I believe that the surgeons displayed excellent judgment in not continuing their search for the other bullet as no viscera other than the stomach were injured."

Dr. Henry R. Wharton stated, "Following the history of the President's case from the bulletins published by his physicians, I am led to believe that a favorable termination is likely. At present the moderate elevation of the temperature and pulse rate might point to the development of a superficial abscess but does not point to the development of peritonitis. It is probable, by this time, that the perforating wounds in the walls of the stomach, which were promptly closed by sutures, are healed and will cause no further disturbance. The bullet which is supposed to be buried in the muscles of the back is not likely to give rise to serious trouble. The favorable outlook of the case up to the present time seems to be largely due to the modern methods of surgical treatment carried out by the very competent staff of surgeons under whose care the President has been."

Dr. William B. Coley, of New York, stated, "The President's case furnishes new and striking proof of the soundness of the American method of treatment of gun-shot wounds of the abdomen. The brilliant successes of Kocher and Bull in 1883 and 1884 first brought the operation into prominence. American surgeons were the first to accept their teachings, while as late as 1890 two of the leading French surgeons made a vigorous attack upon what they termed the American method of treating shot wounds of the abdomen, and still advocate the old *laissez faire* policy. The same year, I made an analysis of one hundred and sixty-five cases treated by operation, the majority by American surgeons. This analysis showed a mortality of only sixty-seven and two-tenths per cent., in place of the mortality of about ninety per cent. by the old methods. Of twenty-four cases of wounds of the stomach, there were six recoveries. In

forty-eight fatal cases, death was due to peritonitis. In twenty-five cases the average time of death in the fatal cases was twenty-six hours after operation. In only one case did death occur after five days, and this was a case of wounds of stomach, liver and kidney. The enormous importance of early operation is shown by the fact that, of the cases operated upon during the first twelve hours, forty-three and six-tenths recovered, while only twenty-two and seven tenths recovered of those operated upon during the second twelve hours. The fact that the President was operated upon almost immediately after the injury by a very skillful surgeon, combined with the most important fact that the stomach was practically empty, renders the prognosis most hopeful. The fact that he has already progressed favorably for five days, makes the hope of recovery almost a certainty. The further experiences of the last decade, based upon a much larger number of cases treated by operation, confirms the conclusions that I drew in 1890. These were, first, exploratory incision in the region of the wound to see if it be penetrating; second, if penetrating, immediate median laparotomy; third, signs of peritonitis, if present, while lessening the chances of recovery, do not contraindicate operation."

Dr. Christian Fenger, of Chicago, stated, "It is a satisfaction that this life, so precious to us and to the whole civilized world, has been saved by a foundation laid by two of our own immortals. It was the labors of Senn and the late Charles T. Parker that revolutionized the treatment of internal wounds. A perfectly typical and I might say, ideal handling of the President's case was made possible by the exposition hospital facilities and by the mental superiority of the august patient who put himself unreservedly into the hands of able men who did not hesitate an instant to assume the responsibility of prompt action on the lines of most advanced knowledge of rational, intelligent surgery. The masterly technique of Mann, the efficient assistance and counsel of Mynter and Reswell Park, also masters in abdominal surgery, the splendid handling of the anesthetic by Wasdin, the after treatment, so ably conducted by these gentlemen and Rixey, contributed to a result for which not only the nation, but the whole world, is at this moment profoundly thankful. The enormous burden of responsibility that had to be borne was much lightened by the wise counsel and assistance of McBurney. Of inestimable value to all concerned was the clearheadedness of Secretary Cortelyou, who, without hesitation, which in this case would have been fatal, made it possible to save the President's life by prompt decisive action. Irrespective of this happy result, we have to congratulate ourselves that this celebrated case has been handled throughout in so masterly a way, that it will stand forever as an example of perfect, scientific surgery."

Dr. Arpad G. Gerster, of New York City, stated, "The President will recover. His recovery will be due to the prompt assent he gave to the energetic proposal of his medical advisers, and last, but not least, to the excellent surgery practiced on him. The surgeons that are saving the life of President McKinley could probably have done the same for Garfield, because they knew and practiced the same methods in 1881 they are employing so successfully to-day, but they were young men then and the gray hairs at the head of the profession did not practice modern surgery."

THE PRESIDENT'S CONDITION.

FRIDAY NOON, SEPTEMBER 13, 1901.

An unfavorable change having unfortunately developed in President McKinley's condition just as we are about to go to press renders the prognosis very dubious. The opinions quoted above however are so instructive, and teach so much from a purely surgical standpoint that they are well worth recording. It is still to be hoped that the skill of the attending physicians may preserve the life of the Chief Executive of the Nation.

Society Reports.

CANADIAN MEDICAL ASSOCIATION.

Reported by

DR. GEORGE ELLIOTT,

Our Special Correspondent

The 34th Annual Meeting of "The Canadian Medical Association" opened at Winnipeg, Manitoba, on the morning of the 28th of August and continued for the two following days. There were in attendance over 175 members from all parts of the Dominion, the second largest gathering in the history of the Association; and the meeting itself has been pronounced the most successful of any yet held under the auspices of this Association. There were several visiting doctors from the United States.

Dr. H. H. Chown of Winnipeg, the President, occupied the chair, while Dr. N. F. G. Starr of Toronto, discharged the duties of Secretary.

In the absence of Chief Justice Killan Dr. J. H. O'Donnell, one of the oldest practitioners in the West, delivered the address of welcome. He referred to the conditions present in 1869 when Winnipeg was an outpost of civilization, and gave interesting references to Drs. Cowan, Curtis J. Bld., Dr. Beddom, and Dr. Bund who were already in the West when Dr. O'Donnell moved there in 1869. His address was very much appreciated by the members of the Association.

Dr. R. W. Powell of Ottawa, the past President of the Association, then introduced Dr. H. H. Chown, the President-elect, to the Association.

Dr. Chown on rising to reply was received with hearty cheers, testifying to the high esteem in which he is held by his fellow-practitioners through the Dominion. He briefly thanked the Association for the honor they had conferred upon him at the meeting in Ottawa one year ago.

Dr. Starr, the Secretary, presented his Annual Report. It referred to the meeting at Ottawa last year, to the attendance of 153 members, which was an increase over former meetings in that city, to Dominion Registration and to the formation of a Physicians' Protective Association.

Dr. Edebohl of New York and Dr. Sutton of Pittsburg were welcomed to the Convention and requested to participate in the discussions.

The Question of Medical Defence.—This was introduced by Dr. Russell Thomas of Lennoxville, Que., who had been delegated by the St. Francis District Association. He made a strong plea for the formation of a Medical Defence Union and thought that all were agreed of the necessity for such. He supported his contentions by citing two or three cases already well-known to medical practitioners in Canada and after showing that such Defence Unions were a success in England he concluded by outlining the plan of medical defence already in vogue and supported by the St. Francis District Medical Association which he was authorized and prepared to hand over to the Canadian Medical Association. The discussion of this important matter was deferred until later on in the session.

Address in Medicine.—"The Question of Medical Education."—Dr. J. H. Jones of Winnipeg delivered this address. In opening his remarks he referred to the unsolved problems of medical education, the importance of which were especially manifest in view of the establishment of a Dominion Medical Board. Uniform or equivalent curricula, he thought, would greatly facilitate paving the way for the accomplishment of this object. He thought that the great aim of the Canadian Medical Association should be to create a Dominion Medical Board upon such a sound and enduring basis that the qualifications could be registered in every province of the Dominion. They should not only be Canadian but Imperial, capable of registration in Great and Greater Britain. There should be no special education for the profession of medicine, and the defect in the pre-

liminary education of medical students should be corrected. The standard is not high enough. Many students came into the medical colleges, their minds totally unprepared, undisciplined, not competent to engage in the different studies of a profession with advantage. Dr. Jones would not eliminate Latin but would go a step farther and advocate, a more general knowledge of Greek, as Greek was *par excellence* the language of science. He quoted from two eminent authorities, who favor the retaining of "Classical Education" as training for professional studies. —Dr. Alexander Hill, a member of our own profession who is Master of Downing College, Cambridge and Professor Jebb of Berlin. He referred to medical matriculation examinations and deplored the lamentable defects in the English paper, the most neglected subject in our primary schools. From an experience of many years as an examiner at the University of Manitoba Dr. Jones has concluded that the teaching of English takes a very subordinate position in our schools. The defect was a universal one; and it was obvious that if English should become a prominent subject of medical matriculation examination every student ought to be able to express his thoughts coherently and intelligently. The didactic lecture came in for adverse criticism, and defects and useless wastes of time, which could be more profitably employed, were pointed out. Persistent work in the dissecting room under the guidance of an experienced demonstrator, who will describe, discuss, and constantly orally examine the student is a rational and effective method of teaching anatomy. Medical jurisprudence and sanitary science were not properly taught.

Dr. Jones supported the "case" method of teaching; and from personal experience he favors the English system of clinical clerkships and dresserships as the most feasible, practical and thorough for the development of medical teachings. He referred to the question of Dominion Registration and pointed out two serious objections to Dr. Roddick's Bill—first, the great number of the representatives of the Council, entailing expenses beyond, at least, our immediate resources; and second, the fact that one of the contracting parties to Dominion Registration may secede and the elaborate fabric, the work of many years, tumble to the ground. The able paper of Dr. Jones was received with much gratification by the Association.

Dr. R. B. Nevitt, Dean of the Woman's Medical College, Toronto, in moving a vote of thanks to Dr. Jones for his able paper, stated that he had placed his finger on the weak point of Medical Education. Dr. S. J. Tunstall of Vancouver, seconded the motion for the vote of thanks and also congratulated Dr. Jones for the excellent manner in which he presented his subject.

Dominion Registration.—Dr. T. G. Roddick of Montreal, who has so long and so ably advocated this much-to-be-desired measure, delivered a stirring address on the subject, ably reviewing the subject of Inter-Provincial Registration from the time of its inception to the introduction of his Bill at the last Session of the House of Commons. The special committee appointed on this subject had not yet reported, so the discussion was postponed until that committee had a chance to meet and report later on in the session. Dr. Roddick now seems to hold to the opinion that the suggestion of Dr. Britton of Toronto, representation by population, for Ontario at least, would be advisable.

Infectious Pneumonia.—Dr. W. S. Muir, Truro, Nova Scotia, read this paper. He reported four cases all of which had occurred between the 1st and the 13th of April of this year, in the same house and in the same family. The first occurred in a child of ten years, the disease terminating by crisis on the 6th day, the child making a good recovery. A sister, aged 14 years, contracted the disease; terminated by crisis on the 9th day, but followed two days after by left-sided pleuro-pneumonia. This proved fatal. The 3d occurred in a sister, 15 years of age, beginning with a pain on the left side and terminated on the

10th day by crisis and recovery. Number four developed pneumonia but recovery was quick, the patient being about in two weeks. There was no influenza in the town at the time. Dr. Muir spoke of the organism of pneumonia, its cultivation and its detection.

FIRST DAY—AFTERNOON SESSION.

President's Address.—As this was the first time that the Canadian Medical Association had met in Manitoba, Dr. Chown referred briefly to the future of that important province. Although less than 10% of the arable land was under cultivation, Manitoba's farmers would this year have a crop estimated at 85,000,000 bushels of grain. He then referred to the work performed in Winnipeg for the purpose of making that city a healthy one, and in spite of the level nature of the land, an excellent system of sewers had been introduced through all the streets; and efficient arrangements had been made for regular flushing of the sewers by means of tilting basins at the upper end of each main sewer. As Winnipeg has two rivers at her door, the problem of removing sewage was easily and safely solved. Dr. Chown then referred to the water supply and said that the people of Winnipeg enjoyed as pure water as could be found in the world. An examination of the city water would show, that there were in it only nine to thirty colonies of Bacteria. The water is taken from an artesian well seventeen feet in diameter and forty-eight feet deep, and although they have been pumping for months a supply of from two million to three million gallons per day, there is not the slightest evidence of any diminution of the amount flowing in. The well is supposed to tap an underground passage which runs from Lake Manitoba, and as this lake is 130 miles long the supply is inexhaustible. The underlying rock formation in that section of Manitoba is a magnesia limestone and, consequently, the water contains a large amount of the carbonate of lime and of magnesia and is too hard for satisfactory use in boilers and hot-water appliances. This is overcome by using Clarke's method of softening by precipitation of these carbonates through the action of lime water; and the softening plant is unique on this side of the Atlantic. Dr. Chown then referred to the question of tuberculosis and thought that Koch's tentative denial of the oneness of tuberculosis of man and tuberculosis of cattle still needs the proof of non-infectibility from cattle to man. He instanced cases of young farmers free from tuberculous taint, living in newly-built houses harboring no bacilli and separated by long distances from their neighbors, in whom tuberculosis constantly makes its appearance; and we have here an experiment on a wide scale, and if you can eliminate heredity, house infection and contagion from other causes, to what cause can you describe the origin of these outbreaks? Medical education, the plan of the Dominion Registration as introduced by Dr. Reddick, malaria fever, proprietary drugs, the progress in surgery and the future of bacteriology and hematology were subjects ably dealt with; and in concluding, Dr. Chown felt that a duty rests upon the medical profession to get at the true cause of all forms of disease and rescue the public from both the honest fanatic and the ignorant pretender by doing not only all what these claim, but doing more and doing it better.

Sir James Grant of Ottawa, moved a vote of thanks to the President and characterized the address as extremely interesting and instructive. Dr. J. L. Bray of Chatham seconded the motion.

Epidemic Cerebro-Spinal Meningitis.—Dr. James McKenty, Gretna, Manitoba, presented this paper, which gave an account of an epidemic occurring in North Dakota during the winter and spring of 1893. It occurred within an area extending fifty miles from east to west and twenty miles from north to south and was comparatively definitely limited. About 70 persons were seriously ill and almost as many others suffered from mild manifestations of the disease. Of the seventy cases twenty-five ended fatally, —a mortality of about 35%. In the practice of Dr. McKenty there occurred some thirty cases, a brief record of

twenty-two of these being kept. The average age was seventeen years; the youngest fifteen months; the oldest thirty-eight years. The duration of the illness extended from twelve hours to fifteen weeks. No post-mortem was made in any case. Dr. McKenty then described in detail the clinical aspects of several cases.

Splenic Anemia, with Case.—Dr. A. J. Macdonnell, Winnipeg, contributed this paper with the history of the case. This was an exceedingly rare disease. In 1898 the number of cases recorded did not exceed thirty, but since that time fifty additional cases have been reported. R. N., aged 27 years, born and lived all his life in Manitoba; family history good; environment good; has never had malaria; habits and mode of life good; positively never had syphilis. The present illness began in August 1899. Felt heavy on the right side with a feeling of fullness and weight. In January 1900 gave up work on account of muscular weakness. There was no vomiting. The patient consulted Dr. Macdonnell in March 1900, walking into his office with considerable difficulty. There was no enlargement of lymphatic glands. Enlargement of the stomach could never be percussed or palpated. Liver dullness was practically normal. There was no jaundice or pain in the liver region. The patient succumbed to the disease but no post-mortem was held. Another case, occurring in a patient aged seventeen, was reported. Dr. Bell made a blood-count in this case which at different times ranged 3,540,000, then 3,600,000, then 3,400,000, with 7,602 white-bloodcells. In this case all the other organs were normal. And there seemed to be no pre-disposing cause in this case. Dr. Macdonnell stated that only ten autopsies had been made on people dying from this disease. He referred to the conditions found post-mortem in these cases. The treatment was stated to be rest, diet, and vigorous doses of arsenic. The mortality is set down at 20%. As far as operation is concerned, physicians will not be satisfied until it is clear that the patient recovers from the operation as well as from the disease. If we are sure of our diagnosis, then surgical intervention is deemed advisable.

Physical Development.—Dr. J. N. Hutchinsen of Winnipeg, read a carefully prepared paper on Physical Development. The paper did not deal with anything new but called attention to and emphasized certain facts of considerable importance. He considered that children were sent to school at too early an age and as a result there was danger of brain over-work. He insisted upon the necessity of having healthy parents, and deplored the system of education which develops the mind at the expense of the body. He was an advocate of periodical lectures by duly qualified physicians to separate classes of boys and girls on the subject of sex; but the primary responsibility in this matter, he placed upon the parents. There would be real progress in the prevention of tuberculosis when people, the subject of the disease, recognize that they should not marry. The paper which was listened to with close attention closed with a reference to the problems of these unfortunates who are neither mentally nor physically qualified for the duties of life.

Report of Cases Treated with Super-Heated Dry Air.—Dr. W. H. Pepler of Toronto, introduced this subject in a paper which cited his experience and observations in the treatment of certain cases by this plan or process. He briefly described the apparatus and the method of treatment. It only takes twenty minutes to reach a heat of 300 degrees F. The average duration of the application of the heat is forty-five minutes. The physiological and therapeutical effects noticed were referred to, as dilatation of blood-vessels, etc. He administers the treatment one hour after meal time with due regard that there shall be as little as possible excitement and exertion. He has not seen any ill-effects from the treatment. He first gave notes of the case of a patient, a man aged thirty-five years, who had suffered for some time from varicose ulcer of the right leg, with considerable pain. This patient had a treatment of thirty-five minutes duration and was able to walk

home with very little discomfort. After three times, in ten days, the ulcer was very much reduced in size. The second case was a patient twenty-two years of age who had been troubled with rheumatism for two years past. A temperature of 320 degrees was employed with good satisfaction. Several other cases of rheumatism and eczema were reported. The treatment in each case proved highly satisfactory, patients never complaining of any discomfort and all expressing satisfaction with the treatment. Dr. Pepler subjects a considerable portion of the patient's body from a temperature of 280 to 320 degrees F. The results are often not apparent for some time after treatment.

Dr. McAdam of Battleford, asked Dr. Pepler if he had ever tried the treatment with high temperature, where he had any doubts of the condition of the heart.

Dr. MacDonald of Brandon, referred to a case which came under his observation in which there was heart trouble. Perspiration occurred freely but with no effect in a depressing way upon the circulation. Treatment in this case was continued for two weeks but he had never determined that there had been any effect upon the heart although there was a small heart-lesion at the time.

Dr. Pepler in reply; he could not speak personally as to any deleterious results from weak heart. Of course there were many cases reported where heart trouble was present. He personally had never noticed any heart or head symptoms in his case. He thought, with care, there would be no bad results.

Orthopedic Treatment of Deformities and Disabilities Resulting from Diseases of the Nervous System, with Special Reference to Tendon Transposition, by Dr. B. E. McKenzie of Toronto. He spoke of disabilities and deformities resulting from paralysis, some of which were commonly regarded as hopeless; but the conditions of a great majority of them were remediable and should receive a considerable amount of attention. He was at some pains to explain the respective motion of joints particularly the ankle joint and knee joint, especially calling attention to the normal conditions of equilibrium, and then showed how the muscles of some of the groups at times become paralyzed and the balance and equilibrium thereby destroyed. Mechanical treatment was often necessary and often efficacious as well; massage and electricity had their respective places but he made particular reference to the method of treatment that had been in vogue for twenty years and had been introduced on this continent by Dr. Parsh of Philadelphia. He went carefully into an explanation as to how muscles can be transferred from their usual point of action and then he gave an account of several cases in which he had successfully accomplished this. In his opinion amputation of a limb because of apparent disability should seldom or never be resorted to.

In answer to Dr. McAdam, Dr. McKenzie disapproved of jackets in treatment of curvature of the spine.

Dr. Clarence Starr, Toronto, stated the subject was of great interest to him as he was interested pretty largely upon the same lines of surgery. Dr. McKenzie has indicated a large number of cases of paralysis which can be wonderfully helped by operative procedures.

Dr. Starr thought that Dr. Bowlby of Boston, deserved a great deal of credit for the work he has performed in this connection.

Dr. H. B. Small of Ottawa, referred to a case Dr. McKenzie had operated on. In this case, previous to operation, the boy had great difficulty in arising from the sitting posture, and when walking he had to rest every few yards. After the operation he was very much improved and when Dr. Small last saw him about a week ago he could walk very easily, and never had to support himself. The improvement during the last four or five weeks was especially very marked.

SECOND DAY—MORNING SESSION.

Mild Smallpox.—Drs. G. A. Kennedy, McLeod, Alberta, presented this paper. It dealt with the recent outbreak

of the disease in the Northwest Territory, an outbreak which was wide-spread and which had existed for sometime before its true nature was recognized. Dr. Patterson, Quarantine Officer for the Dominion Government was satisfied that there had been 1,500 cases. A noteworthy fact was that the greatest number of cases occurred among the French Halfbreeds, who had never been vaccinated, and further, Indians on reserves had not suffered to any great extent as annual vaccination is the rule. Not one case was seen or heard of among Galicians, Doukhobors or Roumanians, which was due to the fact that compulsory vaccination was the rule in their youth and then they had been re-vaccinated on their recent passage across the Atlantic and at Halifax. Fifty per cent. of all cases were extremely mild in character; forty per cent. were cases of typical varioloid; ten per cent. were severe, almost confluent. The mortality was slight, only thirteen deaths occurring; the disease prevailed fully as much amongst adults as amongst children.

Dr. Muir, Truro, Nova Scotia, discussed the merits of the different vaccines on the market and the paper was further discussed by Dr. MacDonald of Brandon, Dr. Inglis of Winnipeg, Dr. D. H. Wilson of Vancouver, and Dr. Montzambert of Ottawa. The latter considered it he would unfortunate if the impression went abroad that any doubt existed in the minds of the members of The Canadian Medical Association as to the true nature of the disease which had been epidemic for some years. He considered the facts presented in Dr. Kennedy's paper relating to Doukhobors and Galicians were perhaps the most valuable portion of it. At the close of this discussion the following resolution was moved by Dr. R. S. Thornton, seconded by Dr. J. L. Bray and unanimously adopted:—"Resolved that in view of the general prevalence of smallpox throughout the continent this Association desires to urge upon the profession and the public generally the necessity of vaccination and re-vaccination."

Chronic Ulceration of the Stomach, Simulating Cancerous Disease. Relation of a case of Gastro-Enterostomy with Murphy Button, Recovery, by Dr. J. F. W. Ross, Toronto. This occurred in a woman twenty years of age, the condition of whose stomach had been bad for three years. She was a nurse in the Training School of a Hospital and her gastric condition grew gradually worse and worse. Dr. Ross was asked to see the patient by Dr. E. B. O'Reilly, Hamilton, in December, 1899. He found her emaciated with the opium habit already formed. In January, 1900, he again saw her with Dr. Griffin of Hamilton. At this time rectal alimentation was being persevered in with considerable benefit. In March, 1900, she was discharged from the Hospital and remained well for two weeks. As soon as food passed into the stomach great rigidity of the right rectus muscle was noted. When the patient came under Dr. Ross's attention she weighed 75 lbs. As malignant disease of the stomach is rare at this age of life, it was difficult to diagnose the tumor as such, and the symptoms pointed to the pyloric end of the stomach. It was not possible to say whether cancerous or not. The symptoms pointed to the presence of ulcer but the thickening easily made out led to the belief that malignant disease had been grafted on to the ulceration. Some dilatation also could be made out, but the rhythmic muscle waves so characteristic of pyloric obstruction could not be found; but a large growth was found at the pyloric end. The case was looked upon as hopeless and decision was arrived at not to remove the growth but to give temporary relief by gastro-enterostomy. This was done and the patient made an uninterrupted convalescence. Eleven months after the operation the patient weighed 140 lbs. and looked the picture of health. On examination of the abdomen no mass could be felt and the patient was not suffering from any gastric symptoms at all. Dr. Ross then went into the literature on the subject, quoting Ragge, Sydney Martia, Monihan, and Mayo Robson.

Dr. Laphorn Smith, Montreal, began the discussion stating that, the case was especially interesting to him but rather from the general practitioner's point of view. He believes that no case of cancer of the stomach ever begins as cancer of the stomach. First there is some sort of irritation of the mucous membrane. This irritation finally becomes a chronic ulcer and upon this the germ of cancer is engrafted, or whatever it is which is the essential constituent of the cancerous process.

Dr. Martin, Montreal, discussed the importance of the examination of the stomach contents in these cases.

Dr. Bruce, Toronto, stated that he had an experience with a case a year ago which corresponds closely to the one Dr. Ross has reported. His patient was thirty-eight years old.

Dr. Gilbert Gordon of Toronto thought we should look at these cases from the standpoint of the physician as well as from the standpoint of the surgeon.

Dr. Howitt of Guelph, stated that the second case of ulceration of the stomach upon which he operated was one of acute perforation.

Dr. Ross thanked them for the reception they had given his paper.

Some Forms of Hyperacidity and their Treatment.—Dr. C. F. Martin, of Montreal, presented notes of some interest judging from the results of systematic examination of the gastric contents. The unfortunate general employment of the term dyspepsia is responsible for the disregard of this condition. In the case of organic disease producing excessive secretion the diagnosis is often difficult. He gave the history of two cases in illustration, the second being in an individual forty-five years of age, who gave the usual history of having been ill for six months. There was no obstruction of the pylorus, but simple dilatation, and the diagnosis was hyperchlorhydria with simple dilatation of the stomach. He also referred to the medical treatment following gastro-enterostomy.

Dr. Maedonnell of Winnipeg discussed this paper.

Medical Defence.—The report of the Committee on Medical Defence was here presented by W. S. Muir, of Truro, Nova Scotia. It reported favorably on the formation of a Medical Union, and the organization thereof was immediately perfected. It will be known as the Medical Protective Association, will be incorporated, and will have for its object the protection of the character and interests of medical practitioners in Canada. It will further promote honorable practice, will aid in suppressing or prosecuting unauthorized practitioners and will seek to advise and defend or assist in defending members in cases where proceedings involving questions of professional principle or otherwise are brought against them and other like matters. Dr. R. W. Powell of Ottawa, was elected President; Dr. McKinnon of Ottawa, Secretary, and Dr. James Grant, Jr., of Ottawa, Treasurer.

Report of Committee on Dominion Registration.—It is proposed to secure an amendment to the B. M. A. Act, or, to take advantage of section 91 of that Act, and under it obtain legislation from the Dominion Parliament, by which the profession in Canada might form a Dominion Council and which could be supplemented by legislation by the various provinces recognizing any certificate of standing issued by the Dominion Council as entitling a holder to practice in such provinces. Dr. Muir approved Registration and spoke for the Province of Nova Scotia. Dr. Jones voiced the sentiments of the profession for Manitoba. Drs. A. A. McDonald, J. L. Bray, endorsed the scheme for Ontario. Dr. Russell Thomas spoke for Quebec. Dr. Christie said that New Brunswick was in favor of Dominion Registration. Dr. Lafferty said the Northwest Territories were favorable.

(To be Continued.)

British Congress On Tuberculosis

Continued from 396.

Remarks on Tuberculosis and its Treatment.—By Dr. Baradat, Cannes (French Riviera). In the case of tuberculosis, as in that of every infectious disease, two factors must be taken into consideration. The first of these is the infectious agent, the morphological and biological characters of which are so well known nowadays; the second is the soil which the agent has developed itself in, and whose characteristics are either acquired or hereditary. All rational medication must, to be complete and really efficacious, apply to these two factors, and take into account all the elements which arise in a given case. For, as Lendet says, tuberculosis presents, in its varied manifestations, special idiosyncrasies, differing absolutely from one individual to another. Under these conditions only can we hope to be victorious over this dread disease. As a matter of fact, a review of the new methods of treatment employed in dealing with tuberculosis reveals to us the fact that, although these methods are, without doubt, of real value, they are only efficacious against certain given systems, and possess no influence over the whole of the phenomena which are to be overcome; certainly, they have special indications, but they are insufficient, because their field of action is but a limited one. Amongst these indications, the comparative effects of which we shall examine later on, some are destined to improve and to strengthen the soil, others, on the contrary, are specific agents; they give rise to the diapedesis of the white globules, thus multiplying the means of defence with which the organism is provided in its struggle against the bacilli.

A thoroughly rational treatment should take both factors into account, that is to say, the medication employed should act in two ways, both as a dynamogenetic agent and as a specific. One is generally inclined to look upon each new method of treating as one that will immediately effect a radical cure of this terrible disease, without taking into account either the infectious agent and its toxins, or the soil on which these latter react.

We must oppose this tendency, and attempt a true, careful and impartial appreciation of the new medications.

Let us, for instance, take the case of an anemic patient: the Koch bacillus has invaded his organism, but still remains latent; if we leave this patient to himself his anemia will increase, his digestive activity will diminish, his strength dwindle away, and assimilation will be reduced to a minimum; there will be, as has truthfully been said, a failure of the whole organism.

What must be done to meet such a case?

Firstly, the organism must be strengthened, nutrition favored; it is here that a use is found for medications tending to produce these effects, such as arsenic in its more easily assimilable forms (cacodylates), tannin, iodine, cod liver oil, salt lotions, alcohol frictions, sea baths, a hygienic treatment.

By these means the bacilli will be kept under, their action neutralized, and as long as an equilibrium is maintained between the means of defence and the attack, the patient will live.

But a fatal time will come when the bacilli will gain the upper hand, and this under the influence of varied causes, to which an organism already infected will have to pay a large tribute, such as physiological troubles, grief, repeated bronchitis, influenza, measles, scarlatina, and, especially in the case of young subjects, intense physical and intellectual strain—too much bicycling, too much fast living, an excess of emulation and rivalry in examinations and competitions.

So that this treatment of the soil, if we may be allowed this expression, which seemed at first so efficacious, had but an ephemeral effect; enough had not been accomplished, the disease should have been attacked in its very essence, the bacilli and their toxins destroyed.

It is the same with all medications in the case of tuberculosis, and I should willingly call them partial medications.

Let us consider those that address themselves to the soil, the constitution of the subject.

Firstly, we hold that a hygienic treatment should be the basis, the indispensable foundation-stone of every medication; without it, they will all fail.

As Professor Letulle so picturesquely puts it, the patient must be "centrifuged," he must be taken away from large towns, from the centres where diseased persons are collected; he must be given the pure, fresh, invigorating air of the seaside or of the mountains; he must have in profusion sunlight, an agent as salutary to man as it is destructive to microbes.

In our opinion, this hygienic treatment will best be realized by means of *free sanatoria*, Landouzy's home sanatoria, such as we find them scattered, in the shape of villas, along our sun-bathed Mediterranean shores. There all the required conditions, not only hygienic, but moral and inspiring as well, can be fulfilled.

In private sanatoria for the rich, the culinary arrangements for such a large number of people are necessarily unsatisfactory, the cooking is less carefully attended to, the dishes less carefully prepared, and less adapted to the question of individual wants, to stomachs often fatigued and upset. As a matter of fact, the question of food is of vital importance in the treatment of a disease in which superalimentation plays such an important part.

The private sanatorium should be reserved for the impulsive, for those who are incapable of energy and self-direction.

Besides, how many of these sanatoria are carelessly conducted! How many paying sanatoria are under the control of commercial managers, who allow alcohol in all its forms to be freely distributed! who close their eyes to promiscuities which are dangerous, often immoral and always harmful to patients who must carefully husband their strength?

On the contrary, we willingly acknowledge the usefulness of the sanatorium destined to the poor. In their case, hygienic discipline will always be maintained, for there will be no reason for unbending the perspective of rapid gains and big dividends; on the other hand, the poor will always find at a sanatorium better feeding than at home.

As for medical treatment, much has been said of cacodylate of sodium.

We shall not attempt a complete study of this substance. The most important thing for us is to be thoroughly acquainted with its real value. Its action and its efficiency must be measured by the light of the experience of numerous observers, and of our own. Its promoters were wrong, in our opinion, to call cacodylate of sodium a specific agent against tuberculosis. As against the numerous favorable observations, and which we do not doubt in the least, of Messrs. A. Gauthier, Renaut, Letulle and others, we have to set off many others, equally unimpeachable, and where the results on tuberculosis have been nil.

In the course of our practice, we currently employ cacodylate of sodium; its effects have proved excellent in cases of anemia, of ganglionic and lymphatic persons, of chlorosis. In such cases, we have observed a regular revival of the physiological functions, an increase of appetite, a resorption of ganglia. On the contrary, we have obtained less favorable results in cases of ulcerous and cavitory tuberculosis.

Hurlureau, in a recent and thoroughly complete study on cacodylate, has come to the same conclusion. "As for tuberculosis," he says, "I regret to have to say that, contrary to the opinion of Professor Gauthier, it is in this disease that cacodylate has given me the least favorable results. Out of twenty-nine cases of tuberculosis, I have only once obtained a really favorable effect, and that was but temporary."

Cacodylate will be specially useful for the predisposed, for those incipient cases which were so difficult to diagnose, and which we have now learned to recognize.*

As for the vanadates, they have not fulfilled the expectations formed of them; but this is partly due to the difficulty experienced in obtaining thoroughly determined products.

The same must be said of certain artificial serums, which must be classed among the soil strengtheners, and are wanting in bactericidal powers, or rather in the power of exciting diapedesis and phagocytosis.

We now come to the raw meat treatment.

The experimental researches of Richet and Héricourt have proved that raw meat juice acts, not as a strengthening agent, but as an antitoxin. This antitoxin would neutralize the effects of the tuberculous toxin.

This juice is the muscular plasma, obtained either by the press or by congelation followed by rapid thawing of the muscular tissue.

The following is the method I have adopted at Cannes in the case of patients whom I submit to this treatment: the daily quantity of mashed meat is 800 grs. (28 ozs. about); the patient takes as much as he can, the rest of the meat is pressed, in order that the juice may be extracted.

The plasma must be taken immediately after having been prepared, otherwise one risks swallowing a putrefied and toxic substance.

Although this method has given me excellent results, I consider it difficult to put into every day practice.

It possesses many inconveniences; for one thing, it is not within everybody's reach; it is costly in preparation, and requires 800 to 1500 grs. of meat daily; it is supported with difficulty by many patients; it requires constant supervision, for this meat juice soon putrefies and becomes toxic. Injected under the skin of an animal, it causes death in a few minutes.

Experiments with this anti-tuberculous plasma have been made in the laboratory of Messrs. Richet and Héricourt. These attempts at hypodermic injection of an immunizing and even curative liquid led us to read once more the already old but very incomplete works on the bactericidal or antitoxic properties of the blood of animals that are refractory, or seemingly refractory, to tuberculosis.

The medical literature of 1890 to 1895 show us how this question has been strenuously discussed and deeply criticized.

However, from these works we glean the following fact: that the blood of certain animals confers on other animals immunity from tuberculosis, and may even cure this disease. "As far back as 1888," says Professor Bouchard, in writing to Mr. Bertin, one of the promoters of anti-tuberculosis sero-therapy, "I expressed the idea that vaccines were destined to play a part, not only in the prophylaxis, but also in the treatment of this disease."

For my own part, I have no hesitation in attaching myself to the method of anti-tuberculous sero-therapy introduced, at about the same time, in 1889, by Richet and Héricourt, and by Bertin and Picq, for I think that therein lies the solution, so long sought, of the problem of the cure of tuberculosis.

Naturally, with this medication just as with any other, we must not wait for the patient to be emaciated, to present digestive troubles and cachexia before treating him.

For, we insist on this point, tuberculosis is not consumption. A consumptive or phthisical person is one in whose case the Koch bacillus, after having terminated its progressive career, has slowly brought on the suppurative destruction of the cells attacked, and in this mass of destroyed matter, you will find all the processes provoked by the staphylo-, the strepto-, and the pneumococcus, working together with the Koch bacillus.

In this case, you have phthisis, consumption, the hectic fever which brings on a fatal issue; imagine that, by some means, you could at this period destroy the bacilli of tuberculosis, your patient would still succumb to the strepto-, the staphylo-, and the pneumococcus.

*For instance, Landouzy, Grancher, Sanchez have revealed to us the delicate stethoscopic signs of the period of germination; Bard and Paisans have showed us the importance of the cardiac rhythm, of tachycardia; Roussel and Bolx that of the scapulo-thoracic amyotopia; Bouchard, Beclere, Kelsch, Maragliano have taught us the radioscopic signs of incipient tuberculosis; Arloing Mongour, Courmont have established on a sure basis the early diagnosis of tuberculosis by sero-diagnosis by agglutination; Albert Robin and Binet give us the same certitude by the analysis of the respiratory chemism; Sirot and Pinc by the observations of the effects produced by injections of artificial serum; Gaube (of Gers) by the study of the demineralisation of the tissues.

As a matter of fact, says Landouzy, it is this idea of helping those who are in the incipient stage, at a time when the germs of secondary infection have not yet attacked them, that has led medical men to make use of "the immunizing agents that are anti-toxic or bactericidal owing to their strengthening action on phagocytosis."

This science of sero-therapy, which we owe entirely to the French school, has been perfected by Pasteur's most renowned disciples, by Drs. Ducheaux, Itoux, Granicher, No-card, Metschnikoff, Verslin, Calmette, Leroux, Charrin, Marmorek, Dolnet, and many others, among whom we must mention Bertin and Picq, who were, together with Hiebet and Héricourt, the promoters of modern sero-therapy.

The use of natural serum has given me unexpected results in serious cases of tuberculosis, and I have always been surprised to find that this method of treatment is not better known; natural serum seems to me to fulfill all the required conditions, for it is both dynamic and bactericidal.

As we know, in the case of tuberculosis, the bacillus acts as a destructive force, but its action is strengthened by that of other destructive forces due to the soil. In one case it will be anemia, in another heredity, in another influenza, or intellectual or physical strain.

So, with these generalities, what are the characters required of a therapeutic agent against tuberculosis? We admit the stimulating and regenerative properties of the general tonics, cacodylates, phosphates, cod liver oil, etc.; we will even allow the antitoxic property of meat juice, but has anyone the right to say that each of these agents fulfills the two conditions necessary to the cure of tuberculosis? Certainly not, for they are either simply stimulating and strengthening, or simply antitoxic. Bertin and Picq's serum (goat's serum) seems to me, on the other hand, to be at the same time tonic, antitoxic, and bactericidal; it is the one we make use of.

As a matter of fact, daily experience tends to prove that every serum is dynamogenetic, and therefore a general strengthening agent.

This is proved daily by the use of artificial serum in the case of serious hemorrhage, of anemia subsequent to chronic diseases, of traumatic shock consecutive to operations. In taking into account, however, the comparative value of the two serums, natural and artificial, we find that a very small quantity of the former produces an intense therapeutic effect, whilst the same effect can only be obtained by employing a double or even triple dose of artificial serum. There is here a *quid divinum*, due evidently to the intimate composition of natural serum. No one nowadays denies the dynamogenetic action of serum—it is a recognized fact.

All we have to do is to repeat this action as often as required in order to maintain to a remarkable degree the resistance and vitality of the patient.

Whilst awaiting experiments destined to throw light on the still obscure question of the mode of action of serums, we give preference to the theory propounded by Metschnikoff, who looks upon them, not as antitoxic, but as stimulating agents of phagocytosis, in other words, as *stimulus*, provokers of organic resistance.

Therefore, as we admit that the microbial destruction and the arrest of infection are due to phagocytosis, the aim of our therapy must be to increase the activity of the phagocytes, in order that they may the more easily accomplish their mission. Moreover, the happy results that we have obtained this winter by means of sero-therapy lead us to believe that this is the real and only effective method of realizing the cure of tuberculosis, especially in its early stages, now that the means of diagnosis which we possess permit us to discover the very earliest symptoms of incipient tuberculosis.

This treatment is absolutely innocuous and easily applied; one hypodermic injection of two cubic centimetres every other day. In some cases, however, in the case of nerve patients especially, I have observed after each injection an exaggeration of cellular activity, showing itself in the shape of fever, erythema, and dyspnea; in such cases I administer the serum internally. But, in order to obtain the same tonic and stimulating effects, I have to increase the dose, and administer ten cubic centimetres instead of two, as in the case of hypodermic injections.

These results agree with those obtained by Grasset,

who concludes by saying that the administration of serum internally is the method of choice, because it is free from danger and gives rise to no accidents. Nevertheless, even with Bertin's serum, we are of opinion that the cacodylate medication should be employed as a precious adjuvant in most cases on the same level as tannin, iodine, and cod liver oil.

Devitalized Air Toxemia a Prime Cause of Tuberculosis. By Dr. Charles Denison, Denver, Colorado. Under the this head it is intended to discuss the *degenerative effects of deficient ventilation*, and to show how, through the devitalization of the air, by its loss of vitality, due probably to a change in its normal electrical state, a dyscrasia (in persons breathing it) is created, which gradually drifts into degeneration of tissue, the so-called "soil" of tuberculosis. The Richardson experiment is discussed, and the need is emphasized of further experimentation on this line in order to throw more light upon this important matter. The prevailing idea among medical men that the tuberculosis germ is the only cause, to the exclusion of as important predisposing causes, is criticized. The question of "soil" is now even more important than that of "seed," in order to successfully combat this dyscrasic disease. Man, under our present civilization, is very generally tainted with a dyscrasia which goes back to this devitalized air toxemia for its cause. The fault is the disproportion of breathing-space and sun influence to the needs of man in sleeping, living, and working rooms. The *deficient ventilation curve*, upon which the most civilized peoples are living, will, by illustration, be contrasted with the *normal life curve*, which should represent the longer and uncontaminated lives of a people living under natural conditions. *Out-door life* is thus suggested as the *key note* to this congress. The need of education along these lines will be emphasized, and plans for legislative control, through yet to be enacted laws, will be suggested.

The Role of the Nasal Fossae in the Prophylaxis and Treatment of Pulmonary Tuberculosis. By Dr. Maurice Mignon, Nice. When we consider the question of the prophylaxis of tuberculosis, we must recognize the fact that contagion takes place chiefly through the air. Air is the vehicle by which the microbes invade the organism far more frequently than foods, which can be sterilized by cooking. When the air is still infective, in spite of the use of spittoons, in spite of the practice of disinfection, in spite of every precaution intended to prevent the spread of the disease, the nasal fossae are still capable of arresting the danger that threatens us. The microbes that enter with the air are, in a large measure, arrested by the cilia of the nasal vestibule and by the very extensive and very irregular surface of the mucous membrane. One may thus recognize the bactericidal function of the nasal mucus, although it has been questioned by some authors. Clinical experience teaches, indeed, that the nasal fossae are much more resistant to tuberculosis than the rest of the respiratory tract, and even than the bucco-pharyngeal cavity. Insufficient nasal permeability (nasal obstruction from malformations or septal ridges, from hypertrophic or congestive rhinitis, from cysts, vegetations, adenoids, etc.), should therefore be reckoned among the dangers of tuberculous infection. From the point of view of treatment the state of the nasal fossae is of equal importance. As the nose allows more air to enter than the mouth, nasal insufficiency results in deficient oxidation of the blood, and everyone knows how necessary oxygen is to the tuberculous. Entering by the mouth the air brings with it harmful microbes, which, accompanied by dust, favor the malady. Moreover, this air, insufficient and injurious, is unmodified, either in temperature or in pressure; it provokes bucco-pharyngeal, laryngeal and tracheo-bronchial inflammations which impede the action of treatment. It is therefore absolutely necessary that we should be satisfied that patients presenting themselves for examination (especially those disposed to tuberculosis, and those who are themselves tuberculous) are not suffering from any cause of nasal insufficiency. If any defect is present it should be remedied, and we should enjoin the patients to breathe solely by the nose as soon as they are able, for in this habit often plays a part. Instruction on the latter point should be included in the general advice which one makes a point of disseminating amongst all classes of the population.

Original Articles.

THE ETIOLOGY AND EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

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of Toronto, Canada.

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It is not a thing to be wondered at that this subject of tuberculosis should be receiving, as it always has done, so much attention from the members of our great profession all the world over. For does not this dread scourge claim as its toll, year by year, about one-fifth of those who go down to death, more than all the other infectious diseases put together. Not satisfied with this, it insists, too, that its victims be taken in great part, at that time, when it is most sweet to live and most hard to die. The most important causes of this disease as found in the lungs and its early detection I desire to treat of in this paper. I feel rather relieved that at the present juncture I need have nothing to say as to the part played by tubercle in meat or milk, for we must all be agreed that as far as pulmonary tuberculosis, at least, is concerned the tubercle bacillus received into the system by the ingesta must play a very unimportant part in its etiology. The direct inheritance of the disease must also be very rare indeed. The only direct cause worth while troubling ourselves about is the inhalation of dried sputum beladen with this tubercle bacillus. This is practically the only source of pulmonary tuberculosis.

But there are other causes which we speak of as predisposing causes all important to us, for by removing, as we are able, these causes we will so cripple our enemy, so remove him from his base of supplies that he will be forced to quit the open field and content himself with the meanest kind of guerilla warfare. What are these causes?

1. Insufficient ventilation and sunlight.
2. Insanitary condition of dwellings, work shops and factories.
3. Density of population.
4. Occupation.
5. Alcoholism.
6. Previous attacks of certain diseases.

Insufficient Ventilation and Sunlight.

With regard to these bacilli it is certainly true that they "Love darkness rather than light," I suppose. "Because their deeds are evil." However, we are certain if we could drive them out of their favorite haunts of darkness and dirt, soon their virulency and aggressiveness would be much diminished.

Insanitary Conditions.

We all know that this is eminently a dirt disease. It should therefore, be placed among the commonly known seven zymotic diseases. Dr. Henry J. Bowditch, as long as fifty years ago, pointed out the close relationship existing between moisture and consumption, and says that "residence near a damp

soil, whether due to inherent dampness or that from percolation from adjacent soils is one of the chief causes of consumption in Massachusetts, and probably elsewhere." He states also, that consumption can be checked in its career or perhaps prevented by observing this law. These statements were made thirty ears before the discovery of the bacillus by the great and noble Koch, and although it is not now believed that the bacilli can breed in the soil and thus impregnate soil air and be drawn into the respiratory air and thus infect man, yet the truth of the statement has never been gainsayed that dampness and dirt are important predisposing causes to pulmonary tuberculosis. In this connection allow me to quote the words of Professor P. Brouardel, of Paris, taken from his paper read at the great conference on tuberculosis held in London a few weeks ago. He says: "Before the scientists I have just mentioned had actually made known their discoveries you English people had already begun the struggle. Convinced by observation that tuberculosis thrived in dark and damp dwellings, in 1836, nearly seventy years ago, you passed a law providing for the construction of healthy houses. And since that date your zeal has not abated. You have with admirable perseverance passed more than ten acts of Parliament; you have rendered salubrious the dwellings of the poor; the workshop, the town and the whole kingdom. This effort has been described by the name of the Queen, who presided over its direction, "The Victorian Era." No greater homage could be paid to Her Most Gracious Majesty, and in the name of all my countrymen I unite with my English colleagues in adopting this characteristic name for the crusade that was undertaken and for the success obtained. You have diminished mortality in England from tuberculosis by forty per cent. Yours is the honor. It will be ours to follow in your steps."

Density of Population.

It is a matter of common observation that this disease is not only more prevalent but more rapidly fatal in those communities where people are huddled together necessarily in conditions of poverty. I copy here a table by Dr. J. B. Russell to the Philosophical Society of Glasgow taken from the Hygiene of Transmissible Diseases by Abbott, which shows the truth of the above as found in Glasgow.

Table showing death rate per 100,000 from certain houses:

	1 and 2 roomed houses	3 and 4 rooms	5 rooms and upward
Zymotic disease,	478	246	114
Acute diseases of lungs including consumption	985	689	328
Nervous diseases and diseases of nutrition	480	235	91

It is gratifying to see that efforts are everywhere being made to eradicate this plague. In Canada—it hurts me to say it—we are woefully behind in this respect. The attention of our Governments and our wealthy men should be persistently directed to this great need. Although the public doubtless is grateful for millions spent on public libraries in their interests, yet it does seem to me that some millions spent in providing means to be used to prevent the spread of this awful plague by which undoubtedly

* Read at the meeting of the Canadian Medical Association at Winnipeg, Aug. 1901, and published synchronously with its appearance in the *Canada Lancet*.

hundreds of lives would be annually saved from infection, would yield a more satisfactory interest on investment than that spent to endow public libraries, or even that spent for payment of fees of a nation's prospective university students.

Occupation.

No doubt occupation bears an important relationship to the causation of pulmonary tuberculosis, but there is no doubt but that the occupation itself is less a causative factor than the condition of the surroundings under which the occupation is carried on.

With regard to alcohol as an etiological factor in tuberculosis I quote again from Professor Brouardel in the *British Medical Journal*. He says: "Unhealthy dwellings cause other disasters. Dark and crowded as they are, cleanliness is difficult if not impossible to preserve. They are not pleasant to pass the time in, and the workman stays in his home as little as possible. He eats there and sleeps there, but the rest of his time is spent in the public house. Sir John Simon was right in saying 'the wretched lodging is the purveyor of the public house.'" And we can add to it that the public house is the purveyor of tuberculosis. In fact, alcoholism is the most potent factor in propagating tuberculosis. The strongest man, who has once taken to drink, is powerless against it.

Previous Attacks of Disease.

The dread disease greatly strengthens its position in its warfare against mankind by the favorable alliances it has succeeded in making, alliances with such diseases as la grippe, pneumonia, pleurisy or bronchitis. An attack by one of these affections does frequently act as an etiological factor in tuberculosis. Or to continue the metaphor that he is unable to resist the onslaught of the relentless tubercle.

The Early Diagnosis of Pulmonary Tuberculosis.

Writers on this subject are in the habit of dividing this disease into stages. We therefore see it divided into a first, second and third stage. We speak also of a pre-tubercular stage, the stage before there is any expectation and generally before the bacilli can be found in the sputum. It is very evident that these stages cannot be well defined. The degree of advancement in each stage differing according to the examiner. This, I have no doubt, accounts largely for the discrepancies found in statistics as to cures in the different stages. Over and over again I am forced to make up my mind as to this question. Has this patient, who is trusting himself to me, the tubercle bacillus in his lung or has he not? If he have, and I being at the time a little hurried or perhaps a little wearied, tell him after a very cursory examination that he has a little cold, but that it is just in his tubes, and that his lungs are all right, then I have done my patient a great wrong. He goes away relieved, but in a few months, not being well, consults some other man who tells him that he has consumption. We may not be able to make a diagnosis on our first examination, but before we allow the patient out of our hands we should do our best to ascertain his condition. The means at our disposal for this purpose are:

First.—The ascertaining of the presence of certain symptoms indicating the tuberculous condition.

Second.—The patient and careful study of the thorax for those symptoms pointing to the same.

Third.—The examination by the Röntgen ray.

Fourth.—The use of the tuberculin test.

Fifth.—The microscopic examination of the sputum.

I will first consider the value of a careful study of the existing symptoms, not because I consider them so important as the physical signs in aiding us to make our diagnosis, but because on account of their presence the patient is, for the most part, first led to seek our advice.

In discussing this question I do not purpose to take into consideration those symptoms or signs so evident during the later stages of the disease, but only those which I have found to be of use in making a diagnosis before, if possible, the tubercle bacillus can be found in the sputum. Our patient is before us. The question of inherited tendencies or the most important question of exposure to infection should be considered.

The presence of cough is in my experience the most common danger signal. Generally a short, hacking cough noticed especially if the patient is about to speak or after full inspiration. It may be the common "clearing of the throat." It may be bronchial. A cough persistent with morning expectoration, bronchial in character, I have found frequently to become tubercular in origin and I believe frequently is. The cough may simply be due to a bad cold; it may follow an attack of pneumonia or gripe. In these cases we must satisfy ourselves that the condition is not tubercular in origin or that it has not become so. There are, of course, other causes for cough, but a persistent cough should make us suspicious.

Hemoptysis.

As we all know, the spitting of bright blood, while not a very common symptom in incipient tuberculosis, is a very certain one and often a very early one.

Giving a case of bloodspitting, whether in mouthfuls of bright blood or as tinged sputum in which we can exclude laryngeal disease and chronic heart disease by examination of the larynx and heart, and pneumonia and carcinoma by the nature of the expectoration, and one hundred to one the case is tubercular.

Temperature.

A slight elevation of temperature, an elevation of 1 or 1½ degrees occurring between three o'clock and four o'clock in the afternoon, and this continuing for some time, is a symptom that should claim our attention. Should the temperature go up a little higher after a slight exercise and perhaps disappear with a two weeks' rest in bed, we are still more convinced that it is due to tubercular influence. An increased pulse rate we expect with this rise in temperature, which increase persists frequently when the temperature is normal.

Pain.

Sometimes the first symptom complained of is a pain in the upper part or less frequently in the side of the chest. Probably pleuritic in character. The absence of pain, in so many of these cases, is one of nature's delinquencies, and like many another failure in duty results in dire consequences. Gastric

disturbances taken with other symptoms are important.

Physical Signs.

Our attention having been directed by the symptoms to the threatened condition of our patient; we proceed to examine his chest. He, or she, must be stripped to the waist, placed in a good light (I prefer to have him standing before me where he can be moved about at will). I think it important that a regular order should always be adhered to in making this examination. Repetition tends to perfection. If there is one thing more than another which I should like to emphasize it is this, the importance of taking plenty of time with this examination. I have been surprised when going over a chest again and again with a class of students, to find how signs gradually become clearer, and when once detected (like bacilli under a microscope) they were plainly observed. The order generally observed is, I think, the best, namely, examination by inspection, palpation, percussion, and auscultation.

Inspection.

Examination by this method does not give us much information at this very early stage. When, however, the disease has progressed somewhat the information gained in this way is most valuable. Yet inspection tells us something of interest to us even now. The long, narrow chest, oblique ribs, prominent clavicles, acute epigastric angle-winged scapulae, will indicate a pre-disposition to tuberculosis. Should the patient have suffered much from pain there may be noticed over the affected part a diminished expansion.

Palpation.

By this method we may perhaps distinguish the nature of the pain, if there has existed any. Should there be any considerable infiltration, and that near the surface of the lung, we may be able to notice an increased tactile fremitus.

Percussion.

With great care and light percussion a tuberculous nodule or even a small infiltrated mass may cause a slightly dull and high pitched percussion note over the affected part, but what I have found more useful at this stage is a more resonant and prolonged note in the neighborhood of the dulness.

Auscultation.

It is, I think, to this means of examination that we will have to trust for our most reliable early diagnostic signs. And the first sign I would notice is that of impaired breathing, a most markedly enfeebled inspiratory sound over the affected part, at the same time there may be, if not, there will be later an increased expiratory sound, and later still the regular harsh bronchial breathing. Here also the increased voice sound is a most valuable sign. Bronchophony I have often found very early. Whispering pectoriloquy likewise. It is well to examine at first the patient breathing naturally, afterwards by more forced breathing. There is one other sign which I should like to mention; though rare, it is when present, very striking, and often early, that is, a markedly interrupted breathing, cog-wheeled respiration. Every part of the thoracic wall where the lung can be reached should be carefully gone over,

and here I should like to emphasize the importance of examining particularly the inter and supra scapular regions as well as the clavicular regions for evidences of disease. While it is not possible to have a standard of normality for chest sounds owing to the different relationship in different persons, yet, taking into consideration the thickness of the wall in each case we should have some idea of what would be normal in that particular case. Then we can use to great advantage the rapid comparison of one part with a corresponding one on the opposite side of the thorax. If the phonendoscope is being used for the purpose of testing the voice sounds, on account of the sensitiveness of this instrument we will be led into error should we forget that on account of the greater number and greater size of the bronchi on the right side the voice sounds are normally increased.

The Roentgen Ray.

This as a means of diagnosis is certainly valuable, and as a confirmatory sign specially so, and in many cases it will in skilled hands discover the enemy. Dr. Francis H. Williams, of Boston, has done most useful work in this connection. In the *Medical Record*, May 13th, 1899, he states that in five cases he discovered by the X-Ray changes in the lung before they could be detected by physical signs. The *Philadelphia Medical Journal* reports six cases examined by Dr. Williams, in which he claims that the diagnosis was made more certain by the use of the X-Ray. It is a method quite free from risk and should be used where practicable. My own experience has been limited in this method of examination, but where I have used it, it has not disappointed me. This month, by the kind assistance of Dr. John McMaster, at the Toronto General Hospital, I examined five patients by the X-Ray. In two of these, where there was but little doubt, the haziness over the parts affected and the limited excursion of the diaphragm were marked.

In one case where there was some doubt the diagnosis was not made plainer.

In the other two it was most helpful as an aid to diagnosis.

The last three cases were in the pre-tubercular stage.

The Tuberculin Test.

This test for diagnostic purposes alone is when used in suitable cases the most certain of all tests, with the exception of the discovery of the germ by the microscope. Advanced cases appear to be non-reactive. The reaction is imperfect also where sarcoma, carcinoma or syphilis exists. And, moreover, it has been pointed out by Trudeau and others that a reaction occurs sometimes in the apparently healthy. In how many of these there may have been latent tuberculosis it would be impossible to say. But what seems to me to exclude from general use this valuable diagnostic test is this, that still many able men aver that the use of this test is dangerous to the patient; that it often kindles the smouldering embers of a dangerous fire.

Microscopical Examination.

The discovery of the tubercle bacillus by the microscope is the one absolutely certain sign that we possess of the existence of pulmonary tuberculosis.

and where any expectoration can be secured, if only a little in the morning, this should be given to a skilled microscopist for examination. But, I would feel inclined to disagree with Professor Llewellyn P. Barbour when he stated in a most excellent paper published in the *Medical Record* of June, 1896, "That if after several attempts by one skilled in the procedure no bacilli are found phthisis may be excluded." This statement was made in 1896. I think all agree now that the disease can be diagnosed in most cases before the bacilli can be found. I would also hope to believe, and do believe, that the statement made by Dr. Barbour in the same paper that not more than one in twenty first-stage cases are recognized, is not true now, and that similar statements made by Dr. Ambler in the *New York Medical Journal* of 1898 are also now not true. We must not trust to one symptom alone. Neither must we be satisfied by one examination alone, but we must spare neither trouble, time nor expense to prevent our patient the loss of months which will in all likelihood mean to him the loss of his life. The study of symptoms and signs must go together, and while I believe that the stethoscope or some allied instrument is the most useful instrument we have for this purpose, yet we must not forget that there is truth in the statement which has been so well put in *American Medicine*, August 3d, of this year: "The absence of audible evidence of internal lesions is a remarkable fact in many cases of even advanced tuberculosis and physical signs may come and go in a way that baffles explanation and discourages the investigator."

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THE EMPLOYMENT OF THE RECUPERATIVE POWER OF THE HEART AS AN ESTIMATE OF ITS FUNCTIONAL ABILITY.

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Among the many transformations that take place in the course of development of modern medicine, the most remarkable of all is, that diagnosis more and more directs itself toward ascertaining, not, as has been the custom, the altered condition of an organ, but rather its altered functional power. This is done with a good reason. For the highest mission of clinical medicine is always to preserve or increase the functional power of individual organs or groups of organs, for it cannot, or very slightly, influence tissue changes as has long been its unfulfilled hope. By this very fact surgical therapy and internal therapy are most vividly differentiated, in that one directs its power toward the bodily material of the organism, and influences it by depriving the body of dispensable substances, while internal therapy operates only functionally with stimuli, and with powers invested in various vehicles, that only affect the function and not the substratum of the organism.

Clinical medicine must also adapt its therapeutic mission to its diagnostic one and particularly so in

the case of the heart. With the most accurate demonstration of anatomical changes we still have no knowledge whatever as to how far these changes influence the power of the heart; for it is only the latter which is of importance in maintaining circulatory power, and not the actual condition of the heart itself. The physician to whom a patient with heart disease presents himself, is confronted with the task to so regulate the demands that are made from the heart of the patient in the future, that the cardiac power which is present may be able to sufficiently maintain the circulation; and he will only be able to fulfill this task when he is enabled in every case and at every time to recognize and estimate the functional power of the organ. Clinically many attempts have been made to establish such a functional diagnosis. Recently, as is well known, the patients have been instructed to perform many exertions during the examination, such as climbing stairs, bending the knees, running backward and forward, and many others, in order that it may be seen how, with these exercises, the cardiac function is affected, keeping in view what has been learned by experience, that the weaker the heart the more actively does it react to such stimuli. But an exact estimation can never be obtained. A further experiment was then made by ascertaining the degree of cardiac power which resulted from an accurate amount of imposed work causing acceleration of the heart's action; neither Christ (1) nor Staehelin (2) could find any generally definite relation between the amount of work performed and the cardiac acceleration. Kraus (3) then employed the amount of fatigue caused by accurate doses of work as an estimate of the individual constitution; those experimented upon performed a maximum amount of work up to the point of exhaustion; and the "economic gain" was determined according to the degree of work performed, thus leading up to the inference as to the total constitutional power of the individual and then that of his heart. But in this case there was always selected, as an indicator, the exhaustion of the whole organism, and not the beginning of cardiac fatigue, which is by no means a feasible estimate for determining the power of the heart; for a diagnostic method, which demands complete exhaustion from the patient, can only be available for physiologists, and not for physicians; and, furthermore, it is very difficult, if not impossible, in cases of progressive exertion, to accurately determine the moment at which the "fatigue" occurs. Especially true is this of the heart, for if the conception of the term "fatigue" is stretched in that we assume in other organs it occurs until these refuse to further perform their functions, it certainly is not applicable in the case of the heart; it is, therefore, purely arbitrariness to claim that a certain degree of cardiac acceleration, dyspnea or disturbing symptoms, should be considered as indicators for complete cardiac fatigue. Fatigue is not

1. H. Christ, Ueber den Einfluss der Muskelarbeit auf die Herzthätigkeit. Inaug.-Dissert. Basel, 1891.

2. August Staehelin, Ueber den Einfluss der Muskelarbeit auf die Herzthätigkeit mit besonderer Berücksichtigung des Erholungsvorganges und der Gewohnung des Herzens an eine bestimmte Arbeit. Deutsches Arch. f. klin. Med. Bd. 59, Leipzig, 1897.

3. Friedrich Kraus, Die Ermüdung als ein Mass der Constitution. Cassel, 1899.

available for a functional diagnosis of the heart, and is a dangerous procedure for the patient.

I would like to briefly report the results of experiments which I have performed, and established facts resulting therefrom, and in which an entirely new experimental phase was employed as an estimate of functional diagnosis of the heart, a procedure which will be found to be suitably available, not only in the case of the heart, but for entire functional diagnosis. This is, namely, "recuperation."

As the most important point of these investigations I desire to emphasize the statement that every cell, every organ, every organism, is the better able to thoroughly exert its functional power, the more it is enabled to replace the material which has been consumed during its function. Of course, upon this depend congenital differences of constitution, which cause variations in functional capacity, according to whether the individuals be vigorous or weak; and in addition, there must also be considered the difference that exists in the acquired demands of youthful and aged organs. It is easily comprehended that every cell in a living organism stores up energy which it again gives up under the influence of stimuli; but it will always remain an enigma why the energy which is stored up by the muscle cell, when it becomes unloaded and transformed into living power should give rise to mechanical service, why the energy garnered in the glandular cell should be endowed with specific mechanical power, why the energy taken up by the ganglion cell should result in a sensory or physical expression, and why all the various cells of the organism around which the same stream of nutritive substance flows, should exert a selective affinity for the particular material, needed to replace that which has been consumed. Thus every active cell in the organism represents to a certain degree a transformer, which collects within itself energies which, according to the peculiarities of each particular cell, are again transformed and given up; the qualitative and specific transformation occurring in these processes must be considered by us as due to a congenital peculiarity of the economy. The quantitative phenomenon, on the other hand, the amount of transformation corresponds with the amount of material replaced, and is equivalent to the degree of functional recuperation. The more invariably and the more completely an organ replaces its consumed energies with new materials, the more thorough is its functional power; the two great conceptions of modern therapy, exercise and rest, have, I believe, a far-reaching significance for this subject. The exercise causes the replacement of material to the fullest extent, while the rest gradually increases the replacement of material but always within natural limits.

The replenishment of a consumed substance, not only albumin, but also oxygen, is performed by the heart during its periods of rest between the individual muscle contractions; that is, during the diastole. Therefore, every retardation of the cardiac function affects most the diastole and least the systole; and with the length of the diastole the opportunities for nourishing the heart increase. That this really occurs during diastole can be ex-

perimentally proven. A heart which has been artificially slowed for a time by stimulating the pneumogastric nerve and, in consequence, has its diastolic periods lengthened, becomes much more functionally active than if such artificial retardation had not taken place. The great importance of the pneumogastric nerve can therefore be seen by the increase of the diastolic period of rest and the cardiac recuperation caused by it. As increased demands upon the heart cause it to show its over-exertion by an increased activity, and as its exhaustion and lowered nutrition are signified by a subnormal number of pulse beats, so does also the return to the normal number of pulse beats show that the increased consumption of material has been replaced and that a complete recuperation has occurred. This can be shown. If such great demands are made from a heart that, even after their removal, the increased cardiac activity persists, the frequency of the heart, provided the work is again renewed, will far exceed that occurring when the first work was imposed—a sign that the heart had not yet been in a state of normal activity, and that its consumed material had not yet been entirely replaced. In order to employ for diagnostic purposes the sign of complete cardiac recuperation, as evidenced by the return of heart frequency to normal, it will be necessary to definitely determine the normal functional activity of the heart by its normal beats; a starting point for such an investigation, however, cannot be selected *ad libitum*, as the functional power of the heart is influenced by too great a variety of factors. In every case the absolute heart frequency must to a certain extent be ascertained as a starting point, and, if possible, with the individual entirely exempt from all secondary stimuli; and this normal number of heart beats can be best ascertained during the night rest, as during that time there can be eliminated all the stimuli which generally affect the heart, either from without or within the body. Under certain conditions the number of pulse beats during the night may be taken as a starting point; but ordinarily it will suffice to ascertain the number of pulse beats with the patient in a recumbent position. This subject has been more closely investigated by Schapiro (1), Hasenfeld (2) Minassian (3), Graüpner (4), and Langowoy (5), who found that there is a marked difference in the frequency of the pulse whether the individual is standing or is in a recumbent position, and that this relationship is particularly conformable to the normal heart. Every individual in a state of cardiac sufficiency, if changed from a vertical position to a horizontal one, shows a well-pro-

1. O. Schapiro. Klinische Untersuchungen ueber den Einfluss der Koerperlage und die Compression der peripheren Gefaesse auf das Herz. Wratsch, 1881. No. 10, 11, 13, 30.

2. O. Schapiro. Ueber den Einfluss des Blutdruckes auf die Herzthätigkeit bei gesunden Menschen, sowie auch bei einigen krankhaften Veraenderungen. Dissertation. St. Petersburg, 1881.

3. Hasenfeld. Ueber die Pulsfrequenz der Herzkranken in verschiedener Koerperlage. Orvosi hetlap. Die Heilkunde, 1897. Heft 1.

4. Minassian. Einfluss der Koerperlage auf die Herzthätigkeit. Inaugural-Dissertation. Basel, 1895.

5. S. Ch. Graepner. Die Stoerungen des Kreislaufes und ihre Behandlung. Mit Baedern und Gymnastik (Nauheimer Methode). Berlin, 1898.

6. A. P. Langowoy. Ueber den Einfluss der Koerperlage auf die Frequenz der Herzcontractionen. Deutsches Archiv fuer klinische Medicin. Bd. LXVIII.

nounced slowing of the heart-beat not less than from ten to twelve beats per minute, a retardation which persists as long as the horizontal position is retained. This is also the case with a pathological heart, although quantitatively less marked, independent of the nature of its lesions, as long as it remains in a state of sufficiency; if, on the other hand, insufficiency is threatening, or has more or less already taken place, there will occur, as we have been able to show in a great number of heart lesions, a slowing of the pulse while the patient is in the recumbent position; and in cases of marked insufficiency with rupture of compensation the decrease in pulse beats even ceases to be present. In such cases the pulse shows the same number of beats both with the patient in a vertical and horizontal position, and should more intense rupture of compensation occur, the pulse beats even increase in frequency with the patient in a horizontal posture.

Of these different number of pulse beats, the number with the patient in a recumbent position is the normal one; as varied as are the number of pulse beats in the vertical position in individuals without heart disease, as well as in those with cardiac lesions but without ruptured compensation, we nevertheless always find, even if not absolutely definitely, a pulse frequency with the patients in the recumbent position, which fluctuates so little that it may be considered as the normal. This normal number of pulse beats is peculiar to each individual and gives a starting point for the functional tests of the heart as based upon its power of recuperation. For this normal number signifies that the replenishment of material in the heart has completely taken place and that the heart is enabled to completely maintain its individual functional activity. A heart which, after the elimination of all external influences that tend to accelerate its action, immediately returns to its normal number of beats, shows thereby that at that moment the previously consumed material has been entirely and thoroughly replaced.

The problem then presented itself, to ascertain up to what degree a healthy heart is able to replace the consumed substance; that is, up to what degree of performed work it is again able to return to its normal number of beats; and, furthermore, how this recuperation, this replenishment of material, conducts itself when still greater demands of equalization are imposed upon the heart. The large number of experiments in this direction were performed by means of Gärtner's ergostats, all the individuals experimented upon working uniformly and for the same length of time. The apparatus was so arranged that by every turn it represented one, two, three or more Kg., of work performed each turn occupying one second. As has already been determined, the number of pulse beats was always counted with the individual in a recumbent position; with the last turn of the crank the individuals experimented upon lied down horizontally or flat upon a couch placed next to them, and upon which the normal number of pulse beats had been previously ascertained. The experiments were invariably again repeated, and sometimes even three times; only those

results which agreed with each other were taken into consideration, although they almost as a rule tallied, showing that we had to deal with conformable results.

As far as the replacement of the consumed material by the heart is concerned, the following laws became established as a consequence of the experiments: (1) If a moderate amount of work is performed by an individual with a healthy heart and equivalent to between 100 and 200 Kg., the increase of pulse frequency occurring during the performance of this work immediately ceases when work is stopped, and again returns to the normal number. (2) If a greater amount of work is performed by an individual with a normal heart equivalent to between 200 and 500 Kg., the pulse frequency also becomes less, not immediately after the cessation of the work, but nevertheless within a short time, and may even sink to below the normal, only then to return again to normal in two to three minutes. (3) If a still greater amount of work is performed by a person with a normal heart in amounts averaging over 500 Kg., the heart does not return to normal, but persists in its increased frequency; the amount of acceleration and the time of its persistence is dependent upon the amount of work performed; but frequently later on, and after some time, the heart returns to normal after it has, in most cases, but not always, passed through a short period of subnormal frequency.

The replacement of expended material takes place as follows: Every heart may immediately replenish an increase in its consumption of material, but only up to a certain degree. This degree varies extremely in each individual; in a heart with only slight functional power it is quite little, but in a vigorous normal heart, this power is quite marked. Every heart, however, has the power up to a certain degree of imposed work to immediately replace the material that has been consumed in the preceding systole, so that when the increased imposition of work ceases, recuperation at once takes place, and with the individual in the horizontal position, the heart immediately resumes its normal number of beats.

If, on the other hand, the demands made upon the heart exceed the amount that can normally be performed by that organ, another estimate can thereby be established, which is applicable for every heart; for with the increased amount of work the consumption of substance is not entirely replaced during the diastolic periods of rest, although equalized to a greater part. Invariably after such a procedure it is observed that the frequency of the heart sinks to below normal, but only for a brief period, that is, for about one, two, or three minutes only, to again assume the normal condition. In addition, where there is an increased amount of work imposed upon the heart, that organ possesses the power, after cessation of the work, to equalize within a short time the deficit of consumed material, which still exists; and this equalization is accomplished by the heart in that its frequency of beats sinks below normal, the diastolic periods becoming, in consequence, increased; in a short time recuperation becomes definitely established and normal conditions are again reached. That this subnormal number

of beats is an expression on the part of the heart that an entire replacement of consumed material and complete recuperation have not yet entirely taken place, may be shown by the fact that an amount of work equal to that originally performed, while a subnormal number of heart beats were still present, causes a much more marked increase in the pulse frequency than during recuperation.

If a still greater amount of work is imposed upon the heart, and one which far exceeds the amount under which the heart can immediately replace the consumed material, the heart will retain its increased frequency for a more or less amount of time after the imposed work has ceased. In this case the demands upon the functional power of the organ have been so great that even after the cessation of the external work, the resistance in the capillary system still continues, so that even after external influences have been removed, the heart is still in a state of over-exertion. Only when the increased powers of resistance still present become gradually equalized does the cardiac acceleration cease, the diastolic periods gradually becoming longer and the heart more and more becomes enabled to replace lost material which in this case of over-exertion makes very exacting demands at the expense of cellular materials. Should the heart no longer be able to bring about this equalization, we have under the acute expression of this phenomenon "heart disease due to over-exertion" and when as a consequence a chronic faulty relationship in the functional activity of the heart occurs we have the typical dilatations, which are the expressions of the final yielding of the heart substance, which has been shattered to such an extent that it can never be entirely replaced. Here, as the heart frequency decreases, there is more and more a replacement of material and not rarely the heart beats finally sink below normal, and thus recuperation for the heart is acquired.

These three phases of replenishment can be recognized in every heart as the amount of work imposed upon it becomes greater; and the functional activity of every heart is proportionately greater, the longer the intervals between each of these phases. The greater the number of Kgs. that a heart can master and then again return to its normal number of beats, the greater is its functional power, all things of course being equal, such as the size of the body and general constitution. The latter factors can, however, not always be embraced in definite numbers; the average estimate of a large series of experiments upon individuals with healthy hearts, as I have tabulated and shall report later, show, that under an external work of about 300 Kg. recuperation takes place even during the work; and in these persons the second amount of work required for a transitory decrease in heart beats to result, amounted to 500 Kg. before the normal number was again reached. But how different is the functional power in individuals with heart disease, even if unimportant objective symptoms are present, as for instance in juvenile cardiac disturbances or slight valvular lesions in a state of compensation, where, according to the clinical appearance the heart is in a state of complete functional service. In such cases

an external work of even 25 to 50 Kg. will suffice in order to bring about an acceleration of the heart beat, which only again returns to normal after a long time. These figures only should serve as examples and in no way the normal; for relative values in these cases are more important than absolute ones, if systematic investigations of the recuperative power are made on the same patient.

And this is not very difficult; the investigations require the employment of an ergostat, and whoever has many cases of heart disease to treat ought to be able to include this instrument among his diagnostic apparatuses. The difference in pulse frequency with the patient in a horizontal and vertical position, an examination which should never be omitted, is in the first place of value from a functional standpoint; this difference in the pulse frequency whether it is slight or entirely disappears in itself indicates with great accuracy an impending insufficiency.

If we test the functional activity of the heart in our patients in the manner herein delineated, we will have a simple and accurate auxiliary method for observing and following up the conditions of their hearts; not the anatomical condition, which is of but little importance for therapeutic and prophylactic purposes, but the condition of the functional activity of the organ. Thus we will also increase our therapeutic knowledge; for I know of no way by which the physician may accomplish more in the treatment of heart disease, than when he is still empowered to ascertain and cope with the cardiac condition of his patients, and to apply this knowledge to their treatment, care and habits.

THE PRINCIPLES OF TREATMENT OF TUBERCULOUS LARYNGITIS.*

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The statistics of the pathological department of the Brompton Consumption Hospital show that the larynx is affected in over fifty per cent. of the cases which succumb to pulmonary tuberculosis. As 70,000 persons die annually in the United Kingdom from this disease, at least 35,000 of them would have claimed our help in diminishing their sufferings from tuberculosis of the larynx. The statistics of averages warrant us in saying that there are in this country at least 75,000 who require our aid in arresting or easing the progress of tuberculosis of the larynx. The widespread character of this disease is therefore in itself a claim upon our attention; and when we remember the long drawn-out sufferings which may accompany it, and the youth of the majority of its victims, our humanity is keenly stimulated on their behalf.

The moment seems opportune for briefly reviewing the principles which may guide us in the treatment of tuberculosis of the larynx, for not only must we re-adjust older views to the modern light which has come upon the scene, but such an occasion as the present congress rarely occurs for supplementing the experience of the laryngologist by that of the

* From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

general physician and the pathologist. That this review is very necessary has been impressed upon me by the perusal of a large number of the most recent text-books on laryngology, few of which contain any reference to the treatment of laryngeal tuberculosis by modern hygienic methods. The frame of mind of many laryngologists is reflected in a recent paper by Dr. Johann Sendziak, in which he makes mention of the "rational—that is, the surgical—treatment"*** of this disease, as if any method of treatment short of surgical was not worthy of being denominated as reasonable, and as if hygiene and rest were of no avail, and the *vis medicatrix naturae* a myth.

Our principles of treatment are guided by clinical experience, but, when available, are based on pathological knowledge. The pathology of tuberculous laryngitis is rendered difficult by the complexity of the anatomical arrangement of the larynx. The varieties in the structure of the mucous membrane and submucosa, the functions it performs, the proximity of tendons, ligaments, muscles, cartilages and joints, the disposition of lymphatics and vessels, the occasional movements required in deglutition and the constant rhythmic action of the vocal cords in respiration, are all points which have to be taken into consideration. While the morbid histology of tuberculosis can be so readily studied in the larynx that Virchow recommended it as one of the best opportunities for observing the process, yet the complicated nature of the larynx renders an investigation of the anatomical conditions an equally important part of our task.

Tuberculous affections of the larynx have been classified under four categories:

- (a) Superficial ulceration commencing from the surface;
- (b) Infiltration, followed by
- (c) Ulceration; and
- (d) Tumor formation, or tuberculoma.

This classification is of course somewhat arbitrary. It is seldom that two or more of these forms are not combined when a case first presents itself. As there is little doubt that in the large majority of cases infiltration precedes every other process, it is deserving of particular study as to its situation. It commences in the subepithelial layer, and when it takes place in regions where the mucous membrane is closely adherent to deeper tissue, and particularly to cartilage—as in the epiglottis, vocal processes, and arytenoids—it is very apt to spread to deeper parts, leading to perichondritis and necrosis of cartilage. Although the mucous membrane of the vocal cords is closely attached to the underlying tissue, the absence of subjacent cartilage renders infection of this part of the larynx a less rapidly destructive process. On the ventricular bands there is still less danger of immediate spread to adjacent cartilage.

Of all the various situations in the larynx the most frequently attacked is that of the arytenoids and the neighboring inter-arytenoid space. Lake found this part affected twice as often as the vocal cords, and

three times as often as the epiglottis and ventricular bands.*

In the early stages of such cases the vocal cords not only show a want of tension, but careful inspection will show that their movements are impaired both in adduction and in abduction. This tendency to remain in the natural cadaveric position (i. e., the position of rest), the inter-arytenoid thickening, and the consequent dysphonia or aphonia, have inclined W. Fowler to look upon tubercular laryngitis as chiefly a joint disease. He supports his view by the record of between forty and fifty autopsies of tubercular laryngitis, and as his knowledge as a laryngologist helped to render these examinations very complete, I think the results deserve careful consideration. "In every case," he writes, "the greatest seat of the mischief was in the immediate neighborhood of the crico-arytenoid joint, and the joint itself was always implicated. The deepest part of the ulcer, when ulceration existed, was always immediately in front of the joint, and the joint not only communicated with the floor of the ulcer, but was also more or less disorganized. In many cases the arytenoid was a loose piece of dead cartilage."**

The pathology of laryngeal tuberculosis requires still further study, but in any case we seem warranted in assuming that, as in other parts of the body the first process is one of infiltration. Universal clinical experience and pathological observations concord in establishing the fact that in a large majority of cases this infiltration first takes place in or about the arytenoid joints. Other parts are occasionally attacked primarily; the epiglottis less frequently than any other.

Leaving now for a moment the pathological aspect of the subject, let us consider it from the result of treatment. Writing in 1880, Morell Mackenzie observed, "It is not certain that any cases ever recover" (p. 383), and he states that he only knew of four in which he had reason to believe that the disease was entirely arrested.***

This view has been somewhat modified in the succeeding twenty-one years by the work of Moritz Schmidt, Krause, Heryng and others. Their work has, unfortunately, diverted attention too exclusively to the possibility of exterminating the disease from the larynx by knife and caustic. Recoveries have, indeed, been claimed under various treatments, but we must remember that arrest will take place in the larynx as elsewhere without any local treatment whatever. When reaction and resistance of neighboring tissues are sufficiently vigorous, the advance of infection is checked by the fibroid change, which is the natural and desirable process of cure. In many cases the recovery is deceptive; partial cicatrization of an ulcer may take place in one part, or retrogression of an infiltration occur in the region visible in the mirror, while the process may be spreading in the depths of the tissues, or in such parts as the ventricles of Morgagni and the subglottic region. Besides, the foreshortened image what we see in the mirror is a very unsatisfactory picture

* Laryngeal Phthisis, London, 1901.

** "Intercolonial Medical Journal of Australasia," October 20, 1898.

*** "Diseases of the throat and nose," vol. i., p. 383.

of the posterior laryngeal wall—the most important region in tuberculosis—and is always inadequate as regards the parts lying below the cords. Every one who performs a laryngo-fissure, or opens a larynx on the *post-mortem* table, is prepared to find disease invariably more extensive than it appeared in the laryngoscope.

But what remains to us of all the various methods of local treatment which have from time to time been vaunted as curative of laryngeal tuberculosis? Their very number is eloquent of their inefficiency, and although some cases may have recovered under treatment, and many may have been locally relieved, yet we need hardly stop to consider whether the various sprays, pigments, insufflations, submucous injections, or intratracheal injections, had more than an alleviative effect, or whether, in the majority of cases, the irritation and reaction they produced did not far counterbalance any possibility of good.

None of the numerous methods which have from time to time secured some attention have ever appeared to me sufficiently rational to make them worthy of an extended trial. On the other hand, their disadvantages and uncertainties were only too apparent. I have therefore been compelled to appeal to the experience of others on this matter, and in doing so will only refer to what we may term the lactic acid and the surgical methods of treatment.

Applications of lactic acid to the tuberculous larynx have obtained such a vogue in the last ten or twelve years that the method has been applied *à tort et à travers*, practitioners in many cases persevering with it while the patient was being prevented, through its effects, from improving generally, or even steadily deteriorating in health. In many cases I have known of its being applied over unbroken mucous membrane, covering deep infiltrations, or evident perichondritis, the surgeon apparently not stopping to ask himself how this superficial caustic could affect these deep processes, or do more than distress the patient and hurry on the progress of the disease. And now Freudenthal, who used it freely, states frankly that "it ought to be dispensed with as antiquated and barbarous torture of the patients."*

In 1899 Freudenthal subjected twenty-nine cases to surgical treatment without being able to record one single cure.** He then treated his cases of tuberculous laryngitis without curettage, and after a year's observations he wrote: "I believe my patients are just as well and perhaps better off than they would have been with the operation."***

The extensive and trustworthy experience of Jonathan Wright has led him to the following statement: "The permanent radical cure of the local lesion of tubercular laryngitis is not materially hastened by the various methods of treatment in any but an insignificant number of cases."

That a certain number of apparently permanent cures have been effected is undoubted. I have myself verified such a case both before and after treatment, which was shown by Dr. Lack to the Laryngological Society of London,**** but the chief point to realize is that even the most enthusiastic sup-

porters of surgical treatment of tuberculous laryngitis admit themselves that the majority of cases are unsuitable even for attempting operative measures. We must also remember that in this small minority of cases the method is painful and distressing; it cannot but react unfavorably on any general condition; and the result is extremely doubtful.

It seems to me that the treatment of the last decade has been based too exclusively on the bacillus as the one and only etiological factor, and that due regard has not been given to more general considerations.

In indicating the slight and unsatisfactory results which have been gained from the direct treatment of laryngeal tuberculosis I must be understood as only deprecating much of the treatment in so far as it has been regarded as affecting a local cure. Where the progress of the disease—in the lungs and in the larynx—is not stimulated by local interference then many measures are available for symptomatic treatment, and we are well equipped nowadays for soothing laryngeal irritation and cough, easing pain, facilitating swallowing, and thus contributing to the general treatment and the possibility of cure.

We must look elsewhere at present than to surgical measures for a prospect of progress in the treatment of tuberculosis of the larynx. This progress is ready to hand in making an earlier diagnosis of local infection. The present is hardly the occasion, even if time permitted, for me to enlarge on the symptoms of the early diagnosis of laryngeal tuberculosis. Besides, the most detailed description of the laryngoscopic appearances could hardly portray a condition which would be recognized by any but an expert, so slight are the early changes and so variously are they combined. "In general," says Grünwald, "it may be said that it is impossible to teach anyone theoretically how to make a diagnosis from the picture in any given case, because, in order to arrive at a decision, one must first learn the development of many successive pictures by long personal observation. Not the picture of to-day, but that of yesterday, and that of to-morrow, must decide for or against laryngeal tuberculosis."* But it is not only from the laryngoscopic appearances that a diagnosis of early tubercular infiltration, or of even pre-tubercular laryngitis, can be made. We must make a careful and thorough examination of the entire body, and pay careful attention to such symptoms as anemia, anorexia, dyspepsia, loss of weight and strength, hurried pulse, and evening rise of temperature. The previous history of the patient, particularly in regard to hemoptysis and pleurisy, must be taken into consideration, and the family history should not be forgotten. There are many other indications of early tuberculosis, and these, together with the indications for the employment of tuberculin as a diagnostic test, I must at present leave out of consideration. In this way evidence can often be obtained which will complete the diagnosis of a laryngeal condition which might otherwise be treated as a simple catarrh. In the absence of positive confirmatory symptoms and of other adequate explanation of laryngeal symptoms, we must treat suspicious cases by measures that we know now will avert a condition which, once

* Journ. of the Amer. Med. Assocn., 16 March, 1901.

** Philadelphia Med. Journ., 25 March, 1899.

*** Medical News, New York, 19 Jan., 1901.

**** Trans. Laryngol. Soc., London.

*Atlas and Abstract of the Larynx, 1898.

well established, is almost always incurable. In doing this we are but working along the lines and making the same plea for early diagnosis which has been so forcibly advanced in recent years in the subject of pulmonary tuberculosis.

Once the early diagnosis is made the treatment is exactly the same as that now employed in pulmonary phthisis—the sanatorium treatment in what should practically be the open air, with rest, hygienic surroundings, and good food. To this must be added, more or less, strict insistence on voice rest. This is found to be beneficial in many cases, even when the larynx is not affected. It must be much more so in laryngeal cases, when we realize that in the majority of instances the focus starts near or in the crico-arytenoid joints.

The treatment of catarrhal or obstructive affections of the nose and throat, and of any intercurrent conditions of the larynx, must, of course, receive careful and suitable treatment, and it is, therefore, very desirable that those in medical charge of sanatoria should be skilled in practical laryngoscopy. But the important principle to bear in mind is *primum non nocere*, for even a clumsy examination of the throat may produce more irritation and harm than any treatment can counterbalance.

Briefly recapitulated, the principles to bear in mind in tuberculosis of the larynx are as follows:

1. Pathology and clinical experience show that in the majority of cases the focus of infection is near or in the crico-arytenoid joint.
2. Many cases only present themselves at a stage when the possibility of effecting a cure by local measures is quite untenable.
3. The principle of *primum non nocere*, should be constantly kept before us, as many measures which have been tried in this affection have only distressed the patient and hastened the disease.
4. In the light of present knowledge and therapeutic resources, the most rational principle is to attempt to make an early diagnosis of the disease while in an incipient stage. Any persistent or suspicious laryngeal catarrh should be treated seriously on even a presumptive diagnosis.
5. Once diagnosed, the patient should be treated on the principles laid down in the modern method of sanatorium treatment.
6. Symptomatic treatment should be directed to any irritative, catarrhal or obstructive condition of the air passages.
7. In addition, silence should be enjoined, the disuse of the voice being proportionate to the degree in which the focus of infiltration approaches or interferes with the arytenoid joint.
8. In cases where the situation or extent of disease do not warrant an expectation of complete arrest of the process, treatment should be symptomatic, and in many such cases the sanatorium treatment is uncalled for.

The Duration of Life of the Plague Bacillus in Cultures.—N. K. Schults (*Archiv Biologischesch Nauk*, Vol. VIII, No. 4) found that the bacillus of plague may retain its vitality and virulence on culture media for a period of 4 years. During this time the organism becomes shortened, due to the contraction of the protoplasm, and may assume the form of small, round granules, but takes on an active vegetative growth as soon as favorable conditions present themselves. [A. R.]

THE TREATMENT OF TUBERCULOSIS WITH UREA.*

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It is, I take it, generally granted that the most important factors in dealing with any cure for tuberculosis are susceptibility and immunity.

Jenner first recognized the importance of the immunity of a portion of the community to a particular disease, and eventually his labors have procured the immunity of the rest from that disease.

It was not, however, till comparatively recently that the importance of his work was understood.

All the great workers in this direction, whilst studying susceptibility and immunity, have tended to be drawn in one direction, and that is the preparation of antitoxins, by means of the injection of which into the human body we can either render such immune to, or modify an attack already begun, by the germ peculiar to each disease.

These antitoxins have been prepared from the growth of the different organisms concerned, under various conditions, and the result is that the chemical substances which have been injected into the tissue of those to be protected are powerful alkaloids or toxalbumins differing chemically from any combinations hitherto demonstrated in our organizations.

Now this class of antitoxins have so far proved of greater value in acute specific fevers, such as diphtheria, smallpox, typhoid and bubonic plague, than has the corresponding antitoxin in tuberculosis. But tuberculosis differs in many other respects from acute specific fevers. The former is a chronic disease, the latter are acute.

The tubercle bacillus is one of the family of organisms which are termed infective granulomata, the latter belong to a class which produce their toxic effects in the body without the formation of new growth around them.

The tubercle bacillus has an exceedingly wide distribution, that of the others is, comparatively speaking, extremely limited.

Every one of us has been exposed, some constantly, to infection by tubercle, but comparatively few have developed the disease; whereas of those who, being unprotected either by a special antitoxin or by a previous attack, are exposed to active infection by any of the acute specific fevers, I presume it is safe to say that the great majority would develop such.

In other words, by far the greater proportion of mankind provide a fit soil for the growth of the germs of acute specific fevers, whereas a small minority only are capable of harboring and developing in their tissues the tubercle bacillus.

The majority of us, therefore, possess in our systems some vito-chemical combination or condition which renders us immune to any ordinary dose of infection by the tubercle bacillus, and it follows that that combination or condition must be actively hostile to the bacillus, for we are all exposed to the infection.

This substance, or condition, therefore, whatever it may be, in contradistinction to the antitoxins,

* From advance sheets furnished by our representative at the Congress on Tuberculosis London.

must be such as is neither harmful nor foreign to the human organism. It most probably exists in some in a greater degree than in others; but in any case, if we could induce in the tissues of the susceptible some difference in metabolism so that this substance or condition was introduced into or manufactured in their systems, there can be no manner of doubt but that we should rid the human race of tuberculosis.

It was by the observation that in his experience the gouty were particularly immune to tubercle that induced Dr. Harper, of Nottingham, to prescribe pure urea to the tuberculous with a view to increasing the amount of urea and uric acid in their systems, and it is because of the enormous importance that I believe attaches to this treatment that I am reading this paper.

Dr. Harper has published two papers full of interest in the *Lancet* this year (March 9th and June 15th), in which he mentions many cases of phthisis which, being apparently incurable, have recovered. I would draw attention to the fact that Dr. Harper was induced to try this treatment by the observation of the peculiar immunity of a small part of the community, namely, the gouty, to tuberculosis; in other words, for reasons similar to those which induced Jenner to try vaccination for smallpox.

I think it is an extremely interesting fact to note that urea, in the shape of urine, has been taken from time immemorial as a medicine, and that the natives of India are at present using it in this way.

On the books of the Calcutta Zoological Gardens is an item, in the receipts, of £60 annually paid for the urine of the rhinoceros, which I am informed, by the gentleman who told me of this fact, the natives buy and take internally in cases of lung disease.

Does urea benefit cases of tuberculosis; if so, how and why?

It is extremely hard to convince anyone of the value of a drug who has not tried it himself, but from the extraordinary results I have myself seen I have not the slightest doubt in answering the first question with a decided affirmative as regards some cases.

As the treatment is still on trial and in its infancy, the answer to the second must necessarily be uncertain. The following facts, however, will, I believe, be found to have a bearing on the case.

Urea is one of the end products of nitrogenous metabolism, *i. e.*, of the oxidization or reduction of proteid matter, and the medium in which most of the nitrogen excreted from the body is carried away in the urine. Its chemical formula is $\text{CO}(\text{NH}_2)_2$, and it is isomeric with cyanate of ammonium $(\text{NH}_4)\text{CNO}$, from which it can be prepared synthetically.

Urea is formed, according to our latest knowledge, in the spleen, lymph and secreting glands, but principally by the liver. It is excreted by the kidneys.

Urea has lately been produced from proteid material in the chemical laboratory, but by processes which cannot be the same as those which go on in the body.

The original source of the nitrogenous matter, which eventually supplies urea, is, of course, the proteids consumed as foods.

"These proteids are the most important sub-

stances," to quote Dr. Halliburton, "that occur in animal or vegetable organisms. None of the phenomena of life occur without their presence;" and yet we do not know their exact constitutional formula, nor, indeed, do we know whether they exist as such in living protoplasm, "though they are always obtained by subjecting living structures to analytical processes."

"All that we know with certainty is that many different substances may be obtained by the decomposition of proteids. How they are built up into the proteid molecule is unknown. The decompositions that occur in the body are, moreover, different from those which can be made to occur in the chemical laboratory, hence the conclusion that living protoplasm differs somewhat from the non-living proteid matter obtainable from it."

With this state of uncertainty it is evidently impossible at present to understand precisely why and how urea can act beneficially in tuberculosis, or what changes exactly take place on its re-entrance into the body. Again we can only deal with facts.

Urea contains nitrogen, as do these all important proteid matters.

During the period of growth and development less nitrogen is eliminated from the body than during the decline of life. The balance of nitrogen, therefore, with absorption at one end of the scale and elimination at the other, plays an important part in the cell activity and vito-chemical constitution of the body. If we can prove that urea splits up during the process of absorption, and that its nitrogen is assimilated, it can only be assimilated in the metabolism of protoplasm. We shall then have established the curious fact that an apparently waste product, the result of a process of reduction by oxidization of protoplasm, on being passed through the mill, so to speak, a second time, assists in building up tissues similar to those from which it was originally derived. The proof that urea was decomposed in the process of absorption and assimilation, and that its nitrogen is wholly or in part retained in the body, can only be ascertained with certainty by elaborate processes of analysis.

With the general practitioner this is, as a rule, impossible, owing to lack of experience, time, and apparatus. But more experiments, including estimation of total nitrogen eliminated, will be necessary before definite statements can be made. Dr. Harper mentions in his paper that the urea in most cases is not increased. In appeal a few notes on this subject which I have obtained, from which it will be seen that the urea is more often below normal than above. For the estimation of the uric acid I have to express my best thanks to Mr. Gomess, of South Kensington, and for the urea to Mr. Tweedy, of the Sussex County Hospital.

Dose Urea.	Average Total Urine	Average Urea.	Uric Acid.	Age of Patient.
1 30 grs. t.i.d.	41 oz.	21 per cent	01 per cent	32
2 40 " "	50 "	11.9 "	before taking urea	55
3 1 dr "	43 "	16 "	after " " "	36
4 20 gr "	33 "	15 "	" " "	12
5 10 " "	Uncertain.	25 "	" " "	25
6 30 " "	" "	7 "	" " "	18
7 20 " "	35 oz	22 "	" " "	12
8 25 " "	36 "	25 "	" " "	15

Mr. Gomess has also very kindly worked out the total amount of nitrogen in the first two cases with the following result:

1st. By Kjeldahl's method 5 c.c. urine=37.8 c.c. Nitrogen.

2nd. By Kjeldahl's method 5 c.c. urine=36.4 c.c. Nitrogen.

Total amount of nitrogen in 45 ozs. urine in first case equals 8640 c.c., and in 50 ozs. urine in second equals 9245 c.c. Mr. Gomess adds, "My own opinion, is, if I may judge from above figures, that the nitrogen eliminated in the urine is much less than the amount given in the form of urea."

The percentage of nitrogen in urea to that in flesh is as 46 2-3 to 16. It will be seen that the nitrogen taken in the food has to be added to that taken in the urea, and it seems plain that the extra nitrogen has not been excreted in the urine, at all events in the two cases quoted above.

A short description of some cases which I have treated in this way is as follows:

CASE 1.

Man, aged thirty-six. Was deserted as an infant, and suffered from tuberculous disease of left ankle and both elbow joints during childhood.

Amputation was performed below the knee for the ankle joint disease, and double arthrectomy of elbows at age of ten to eleven.

Twelve years ago lupus commenced in nostrils and spread with some rapidity to face and forehead. In spite of various treatment the disease progressed, and the following was the condition when on the 26th of March last I commenced treatment with urea.

One large ulcer occupied an area, around which I will trace an imaginary line commencing at the centre of hair of forehead to a point half an inch above the outer end of each eyebrow, then inwards along the upper border of the eyebrows to a point above the root of the nose. The nasal bones had necrosed and come away, leaving a round hole leading into nasal cavity. Ulceration existed on both cheeks, and the left lower eyelid had gone. From the outer edge of the ulcer on one cheek to a corresponding point on the other measured six and a half inches. In the centre of the face was a bridge of tissue, representing remains of the nose covered with epithelium. Below this was another irregular hole where had been the nostrils. Ulceration was present over the area where the upper lip had existed, most of this having disappeared. The edges of these large ulcers were very much raised, irregular nodules composed of chestnut-colored, apple-jelly-like matter, sharp cut towards the ulcer and gradually sloping down towards healthy skin. Some of the nodules stood three-sixteenths to a quarter of an inch above the level of the ulcer.

Inside the nose one large cavity existed, the septum, part of the ethmoid and most of the turbinated bones having disappeared. The walls of this cavity were in a similar condition of ulceration to the external parts. The granulations over all the ulcers were unhealthy, and showed no signs of healing except at the parts most distant to the spreading edge. Here such attempts were very feeble. There was very much discharge of a thin, purulent character. So much collected in the naso-pharynx that the pa-

tient almost choked every morning before he could get rid of this.

The general condition was poor and the man most miserable.

On March 25th, 20 grs. urea t.d.s. ex Aq. Menth. Pip. 1 oz. were prescribed.

April 25th. Granulations much more healthy, edges distal to spreading edge healing. Discharge very much less. Spreading edges not so raised. 30 grs. urea t.d.s. prescribed.

April 30th. Ulcers quite healthy. Edges less raised. Healing up rapidly from parts first affected. 40 grs. urea t.d.s. prescribed and Maltine $\frac{1}{2}$ oz. t.d.s.

May 7th. Edges of ulcers flat. Line of healing. Epithelium from these. 50 grs. urea prescribed.

May 27th Ulcers nearly all healed. Little nodules left on temples and on upper lip.

June 4th. 1 drachm urea t.d.s. prescribed.

June 11th. Nodules on temples disappeared, that on lip disappearing.

At present time the forehead is practically healed, a small sore on the lip, owing to the local application not suiting it, formed, and has not yet healed again.

The local application during the whole treatment was not changed, nor was patient's diet or way of living. His diet was chiefly potatoes, and had been for years. His mode of living was to keep in one room all day, and come out to sell papers in the evening.

CASE 2.

Man, aged thirty. Father died of phthisis. Nine years ago lupus commenced on right side of face, and gradually spread round to under chin, healing behind as it traveled, except at junction of lobule of ear with face.

Four years ago left side of nose and face was attacked.

The patient also developed dactylitis in second finger of right hand four years ago, this eventually healed with deformity, leaving a tuberculous dermatitis on back of right hand.

June 24th. Urea grs. 30 t.d.s. was prescribed. The patches were then all raised and nodular and covered with scales and scabs, under which, on removal, was the jelly-like granulation tissue.

The most marked patch was on left side of nose, as big as half-a-crown.

July 2nd. Very great improvement. The raised areas are level at the circumferences with surrounding skin, and are less red. Sensation in them has improved. The scabs are now limited to central parts. Urea continued.

July 9th. The skin, which was stiff and hard where it was affected, is getting pliable and softer. The patches of lupus are melting away. Patient is still under treatment.

CASE 3.

A man, *act* twenty-two. Glands both groins began to swell a month ago. No apparent cause found. One gland on left, softening in centre, opened, and typical tuberculous caseous gland substance scraped out. Other glands enlarged, and on the right, one softened. Urea grs. 30 t.d.s., increased gradually to grs. 40 t.d.s. The patient, who looked poor and thin, rapidly improved, and the glands did remarkably well; the one that was first scraped out healed in

three weeks, the other enlarged glands undergoing resolution. The man was at work in three weeks. Diet and general conditions fairly good.

CASE 4.

Woman, *act.* thirty, married. Family history of phthisis. Glands enlarged for fifteen years left side of neck. Operated on four years ago, and again by myself six months ago, when I removed glands from base of skull to clavicle. Recurred two months ago, just under angle of jaw, and when put on urea, there was a large mass of glands in this situation pushing out the skin and looking as if they must come through. After urea grs. 35 t.d.s. for six weeks, these glands have almost disappeared, and the woman is better in every respect. Still under treatment. Diet and conditions fair.

CASE 5.

Boy, *act.* fifteen. History of phthisis. History of two months pain and weakness in right elbow. The joint was almost fixed at a right angle, and very painful. All the hollows were filled with typical soft tuberculous granulation tissue in the synovial membrane. Wasting of forearm half inch. No history injury.

July 2nd. After urea gr. xx t.d.s., and rest on a splint for ten days, patient was much improved. Could flex forearm, so that fingers could touch shoulder. Extension not so good. Pronation on arm and supination nearly perfect. All these movements done without pain.

The swelling about the elbow was very much diminished.

July 9th. Swelling about elbow has disappeared altogether. Movements as before, but extension from full flexion to within forty-five degrees of full extension. Still under treatment. Diet and conditions fair. Urea 1.4 per cent. Average total quantity urine, 36 ozs.

CASE 6.

Girl, *act.* eighteen. History of phthisis on mother's side. Lupus commenced two years ago in nostrils. Glands enlarged in both submaxillary regions and broke leaving ulcers. In the left nostril only the orifice could be seen, owing to granulations of jelly-like material and swelling of the parts. There was a typical patch of lupus about the left part of the upper lip and cheek.

July 9. After a month with urea grs. xxx t.d.s. the left nostril can be examined with ease and the septum seen to be occupied by a healthy granulating ulcer. The lupus on the lip and cheek have all but faded away, and the tuberculous ulcers in the submaxillary regions have healed. Patient under treatment. Diet and general conditions poor.

CASE 7.

Patient, *act.* twenty-two. Many enlarged glands on right side of neck, together with large tuberculous abscess under sterno mastoid from the softening of one. The abscess was opened, washed out and stitched up, no drain being used. In six weeks' time, after an average dose of 30 grs. urea three times a day, the whole of these enlarged glands had entirely disappeared. There was a history of phthisis in this case, but diet and general conditions were very good.

In all other tuberculous cases in which I have given urea myself I am having, or have had, good results.

Not a single untoward symptom has arisen; on the contrary, the action has evidently been in many cases that of a nervous tonic.

In conclusion, I will draw attention to the fact that Dr. Harper has already laid stress in the *Lancet* on the facts that the tubercle bacillus in the laboratory grows best on media that are of low nitrogenous value, and that in the lower animals it attacks the herbivorous rather than the carnivorous.

The cow is an interesting animal, from this point of view, as it is the animal more often attacked by tuberculosis than any other. Here we have a large amount of energy expended in procuring a sufficiency of nitrogen from herbs and a large loss daily in proportion in the casein of milk. This process of extraction of nitrogen goes on far beyond the ordinary period of lactation. It would seem that there may well be a relationship between nitrogenous absorption, assimilation and elimination, and the tubercle bacillus in this case.

I sincerely hope that elaborate experiments will be made with urea in the near future and that it will be widely tried in all forms of tuberculosis.

Personally I believe that Dr. Harper's discovery will lead to a revolution in the treatment of this disease, and that many cases which have been considered hopeless in the past will be cured in the future.

UNDILUTED MILK IN THE CHRONIC GASTROENTERITIS OF RACHITIC INFANTS.*

By MAURICE OSTHEIMER, M. D.,

of Philadelphia.

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In the address made by Dr. Holt at the April meeting of the Pediatric Society, he mentioned that he had obtained good results in some cases of chronic gastroenteritis from the administration of concentrated food. Experience in the Paris hospitals has shown me that babies over five months old can thrive upon undiluted milk in small quantities. In half a year's service at the Children's Dispensary in the University Hospital I found but three infants, aged respectively eight, eleven and thirteen months, who might be expected to improve upon such food. In not one case had breast milk been given over three months, after which all sorts of patented foods and diluted milk formulae were tried. They were all more or less rachitic and asthenic, examples of that extreme emaciation which is seen in infants habitually overfed with, perhaps, too diluted food.

In the first case, Sadie G., the patient, weighed 8 pounds at birth. She had been nursed for one month, then took Horlick's food, Mellin's food, and condensed milk, in turn. Gastroenteritis naturally persisted upon this diet. Different grades of diluted milk were then tried, all without success. Signs of rickets and inanition had appeared by this time, and four physicians, to whom the mother applied, gave up hope of saving the child. When the mother brought the child, then 6 months old, to the dispensary, she weighed 7½ pounds. She was taking a diluted milk formula, 5 ounces every three hours, the approximate percentage of which I made out to be 2.5% of fat, 6% of sugar, and 0.60% of pro-

* Read before the Philadelphia Pediatric Society, June 11, 1901.

tolds. She vomited immediately after feeding, cried continually, and had 4 or 5 greenish yellow stools daily. She was very thin and anemic, with somewhat square head, wide open fontanelle, slight rosary, and prominent abdomen, but no epiphyseal enlargement or bowing of the long bones. After a day upon barley water, a mixture of fat, 4%; sugar, 6%, and proteids, 1%, was tried, 3 ounces every three hours. The vomiting diminished, but the bowels remained unchanged. She improved, however, and at 7 months weighed 11 pounds. As there was no vomiting, a formula of fat 4%, sugar 7% and proteids 2%, was given, 5 ounces every three hours. During the succeeding 6 weeks she not only did not improve, but, from the crying, developed an umbilical hernia. I discovered that her mother had increased the quantity of milk given every three hours to 8 ounces. Believing that a smaller amount of a stronger milk would help her, I ordered undiluted, unboiled milk, 4 ounces every three hours, with from two to four tablespoonfuls of boiled water between bottles. She was then 8½ months old. At 10 months she weighed 16 pounds, and no further signs of rickets appeared. She had grown larger, stouter, and constipated. Her mother brought her last at the age of 15 months, when she weighed 25 pounds. The milk had been increased, while abdominal massage, enemata, and glycerin suppositories relieved the constipation. Her first tooth appeared at 11 months, and she had eight teeth at 15 months. The amount of milk was decreased, and fruit, cereals, and green vegetables were added to her diet list.

The second case, Maggie McM., came to the dispensary at 11 months. She was an eight month baby, and had vomited frequently since birth. Diarrhea was constant, in spite of all foods tried. There was no history of tuberculosis or syphilis on either side of the family. At 11 months she was taking 4 ounces of a mixture containing approximately 3% fat, 6% sugar, and 2.5% proteids, every two hours. Her head was large and square, the fontanelle wide open and the eyes deeply sunken. The cervical and inguinal lymph-glands were much enlarged, and there was faint dulness anteriorly, to either side of the sternum, in the second interspace. Eustace Smith's sign was present. She was chicken-breasted, with a well marked rosary. There was slight epiphyseal thickening with some bowing of the tibiae. She perspired freely and moaned a great deal. Her temperature rose in the afternoons as high as 102°F. After a day upon barley water, undiluted milk, unboiled, was given, 4 ounces every three hours, and orange juice twice a day. She thrived so well upon this that it was two months before her mother brought her again. Then she had aphthous stomatitis. She was pale, but had grown stouter. The enlarged lymph-glands, still palpable, were no longer visible. The stomatitis, in spite of vigorous treatment, spread to the pharynx, and laryngitis followed. Klebs-Loeffer bacilli were not found in the cultures made. She recovered, and has grown well since. She is now 18 months old, and runs about. Her milk has been increased to 6 ounces six times a day, and table food is just beginning to attract her attention. Her square head and faint rosary are the only signs of rachitis remaining. She has not been at all constipated. The symptoms of enlarged bronchial glands have all disappeared.

The third case, Martin K., was nursed only three months. As his mother was paralyzed, condensed milk was then given for five months. From 8 months until I saw him at 13 months, he took large amounts of a mixture containing 2/3 milk and 1/3 water, given much too often. His head was large, with prominent forehead, the frontanelle open; there was some epiphyseal thickening, with a rosary. Besides, growing backward from the coccyx was a rudimentary bony tail, 1/2 an inch long, which had almost broken through the skin over it. He rarely vomited, weighed 9 pounds, and looked asthenic, thin, and pale. Undiluted milk, 3 ounces every three hours, was ordered. Two months later he weighed 12½ pounds. At 17 months he weighed 16 pounds and had 12 teeth. When I last saw him, he was 21 months old and weighed 24 pounds. The skin over the rudimentary tail had become normal, showing a dimple 1/4 of an inch deep. The bony process was still palpable beneath the subcutaneous fat. He was living in the country, and took three pints of milk daily. The signs of rickets have all disappeared. He seems a fat, healthy infant, is just beginning to walk, has 16 teeth, and is not constipated.

The only drugs given in these cases were cod liver oil, both internally and by inunction, and increasing doses of syrup of the iodide of iron. I have seen A. B. Marfan, at *L'Hôpital des Enfants Malades*, give undiluted milk to children over five months old, but at longer intervals and in smaller doses than a diluted milk formula. E. Schlesinger (1) has recently published a table showing the improvement which occurred in a number of infants upon substituting undiluted milk for diluted milk formulae.

G. Variot (2) has just reported a case of infantile scurvy in a child of seven months, from the use of "*lait maternel*," cured simply by giving undiluted milk. To resume, then, in the cases reported, from the varied and probably diluted character of the food, rachitis with gastroenteritis of months duration developed. It seems but just to conclude that there are many little patients in whom long standing gastroenteritis is due to the ingestion of too large a quantity of a too dilute food. In such cases the main indication will be small amounts of pure milk, unboiled and undiluted.

UNUSUAL AFTER EFFECTS OF A SNAKE BITE.

By LAWRENCE E. HOLMES, A. B., M. D.,

of Biltmore, Asheville, N. C.

I report this case on account of the curious after-effects of a snake bite.

The patient was a woman, 21 years old, and married. While stooping down to pick up some weeds she was bitten by a snake on the right forearm, on the ulnar side, about two inches above the wrist joint. I saw her about half an hour after it happened. Two minute punctures (teeth marks) were visible in the above mentioned position, and the area around them was red and swollen.

Tobacco-juice—a home remedy—had already been applied. The woman did not know what kind of a snake it was that had bitten her, though she thought it was a garter-snake, a non-poisonous variety. In this uncertainty I gave her the benefit of the doubt, though being out in the country at the time, there was not much choice in the method of treatment, which consisted in circular compression of the forearm above the wound, incising the latter, which was allowed to bleed freely, and was then washed out with a 10% carbolic acid solution, and the same solution used on the dressing. The arm was then put up in a sling, whiskey was given internally, though there were no marked constitutional symptoms, except some faintness. Pain became severe, morphia being required, and continuous cold applications were made to the forearm. In a day or two the swelling subsided, and the numbness, of which she had complained, disappeared, though the pain in the forearm and axilla continued. On the fifth day she noticed some weakness and numbness of the hand, which prevented her buttoning her clothes, and the next day she came back to me. The forearm was slightly swollen, tender and red anteriorly, and she complained of pain in the arm and axilla, though no decided enlargement of the axillary glands could be made out. The wound was in good condition. On careful examination I found that there was complete anesthesia of the hand and wrist, anteriorly, below the position of the wound; posteriorly, below a line corresponding about with the carpo-metacarpal articulation. Within this area, even under the nails, a pin stuck in deep enough to draw the blood, could not be felt. Temperature sense was also lost over the same area. The movements of the hand were impaired, showing loss of power in the hand muscles. Two days later I saw her again. The forearm was less swollen, the pain and tenderness had also diminished. Anteriorly the anesthetic area had not changed, posteriorly, it included the whole surface below the level of the wound. In a few days, under no special treatment.

(1) *Berliner Klinische Wochenschrift*, February 18, 1901.

(2) *Bulletins et Memoires de la Société Médicale des Hôpitaux de Paris*, March 7, 1901.

sensibility and muscular power began to return, and shortly afterwards the hand and forearm had regained their normal condition.

The interesting point in this case is the cause of the motor and sensory paralysis. The possibility of the nerves having been wounded in the incision being out of the question, it lies between hysteria and a toxic neuritis, somewhat similar in character to that occurring in diphtheria, caused by the serpent venom. The fact that the paralysis did not appear for four days after the infliction of the wound, and the absence of any other signs of neuritis, would favor the idea that it was of hysterical origin; the fact that it came and went gradually, that it affected only those movements of the hand controlled by the muscles of the hand, and not by those of the forearm; in other words, that it affected those muscles whose supplying nerves lay in the neighborhood of the wound; and the absence of any neuropathic tendencies in the woman, would favor the diagnosis of a toxic neuritis.

PRESSE MEDICALE.

June 22, 1901. (No. 50).

1. Spasmodic Constipation. ALEXANDER MAZERAN.
2. Painful Anal Fissure Treated by Electricity.

A. ZIMMERN and A. LAQUERIERE.

1.—While constipation generally is accompanied by atony of the intestinal muscle, it is possible for constipation to occur with spasmodic contraction of the intestines. Spasmodic constipation may be essential or dependent upon an organic condition, of which it is but a symptom. This condition may be due to a genito-urinary affection, to abdominal injury, to calculi, to localized inflammation of the intestine, to foreign bodies, or to intoxication. The essential form is found with the neuroses, due to a want of physical energy. The spasm is either the result of this lack of energy in the nerve centers, or the consequence of the hyperexcitability of the peripheral nerves. It may occur with large abdomen and hemorrhoids, in a well man of sedentary occupation; with hollow abdomen and dyspepsia, in the pale, atonic, listless individual; or with normal abdomen, tympany and pain, in women, as a rule. A crisis comes on suddenly, the symptoms being sensations of constriction, expulsion, and torsion of the intestine. The patient complains of feeling a moving ball in the intestines. Other nervous symptoms accompany the pain of the attack. The rest of the time constipation is the main symptom, though there may be flatulence and hicough. Enteroclysis, which is given easily when the constipation is due to atony, is impossible when the spasm is total; or when the spasm is but partial, the liquid may all be retained. Mucocomembranous enterocolitis always co-exists. The prognosis may be serious. The treatment consists of antispasmodics locally, belladonna, assafetida, etc., abdominal douches, baths, and compresses, enteroclysis, and electricity; antispasmodics generally, hygiene, tonics, hydrotherapy, etc.; and diet, mild laxatives, and mineral waters, as adjuvants. [M. O.]

2.—Electricity in the treatment of anal fissure was only attempted three years ago. Surgical treatment alone had hitherto caused a cure, by dilatation of the anal sphincter. After a review of the literature, Zimmern and Laquerrière report the histories of seven cases treated with rapidly interrupted electric currents. Only four of these patients came regularly, but they were cured. All were or had been syphilitic. The apparatus employed is described in detail. Superficial insensibility is produced by the application of the current, followed by a profound diminution of the senses of excitability and irritability. Thus all spasmodic contractions cease, and cicatrization can occur. [M. O.]

June 26, 1901. (No. 51).

1. Exploratory Incision in Doubtful Tumors. QUENU.
2. The Practice of Medicine in China. E. JEANSELME.

1.—Quenu believes that exploratory incision should be performed in patients in whom malignant tumors are suspected. For it will be too late to operate after adhesions,

enlarged glands, rapid increase in size, cachexia, etc., appear. Especially is this true of tumors of the breast. It is thus possible to procure enough to diagnose the nature of the tumor. After describing a number of cases treated thus, Quenu states that exploratory incision will indicate the correct operation to be done. [M. O.]

2.—In China, treatment consists of three sorts of drugs, the curative, the preparatory, and the reparatory or reconstructive remedies. For ailments due to excess of vital heat a cold drug is given, and vice versa. Rock crystal is given for blindness; ginseng, the roots of which resemble the male genitalia, is given for sexual impotence. For most diseases the horns of the stag or rhinoceros, with ginseng, are given. Gold leaf, human bile and urine are often employed. Iron, arsenic, mercury and sulphur are often well prescribed. Ergot is widely used for producing abortion; cantharides as an aphrodisiac. Scarification, cauterization, and acupuncture are all much used in China. Massage is universal. Warm water applications are employed generally after hard work, for fatigue. Any one may practice medicine or pharmacy; he must only attend patients with a practitioner for a short time, and must have read a few Chinese books upon the subject. A son will be taught by his father, thus keeping secrets of treatment in the family. Specialists on all subjects are numerous. Only one visit is made, the physician waiting for another call before going again. Women especially object to a physical examination, even when parents and husband consent. Jeanseime describes the ideas of a number of Chinese physicians he met. A few have added exact observation to the ridiculous theories held. Anatomy and physiology are all lacking. They receive 4 or 5 cents a visit. Jeanseime believes that when the Chinese realize the methods of modern medicine, they will not only copy them, but develop them further. [M. O.]

July 3, 1901. (No. 53).

1. A Short Atypical Epidemic of Pest.

ROBERT JACQUES and

J. CONSTANTIN GAUTHIER.

1.—In August, 1900, a steamer from Constantinople reached the Pirou Islands, where the Marseilles Lazaretto is situated, with three supposed cases of pest. Two other cases had debarked a few days before, at Clazomene, one of whom had been taken ill the day before, the other two days before. They both recovered without their buboes suppurating. They undoubtedly had the pest. The first case which came to Marseilles arrived on the third day of his illness. He had himself injected 50 c.c. of antipest serum twice. He was given normal salt solution and the Yersin serum. He recovered after three weeks of fever. The man who had been looking after him showed slight symptoms, which were cured in a week. Then a stoker died with the pest, after vague symptoms of only a few days' duration. Three other mild cases of mixed malaria and pest infections were seen. Whether the pest case infected the rest, or whether the rats were responsible for the epidemic, is unknown. The only death occurred in the case not treated with antipest serum. Intravenous injections of antipest serum were shown to be a very simple and beneficial proceeding. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

July 7, 1901. (31 me. Année, No. 27).

1. Separation of the Nail.

W. DUBREUILH and D. FRECHE.

2. Supra-vaginal Hysterectomy with Phlebitis.

L. VERDELET.

1.—Separation of the nail from its bed occurs secondarily in many ungual affections, such as psoriasis, eczema, onychia, etc. There is always some hyperkeratosis at first, with desquamation of the bed of the nail. Seven case-histories are given in full, some due to trophic disturbances, others being purely local. In one case the separation occurred with painful attacks; in the next three, it was trophic; and in the rest, no cause could be found. [M. O.]

2.—Verdelet reports two cases of supra-vaginal hysterectomy for fibromata and double hydrosalpinx, in whom phlebitis of the left leg developed about three weeks after operation. There were but these two cases of phlebitis out of five cases operated upon by this method. Verdelet believes this to be due to insufficient drainage by this method, and he prefers to perform total hysterectomy, either abdominal or vaginal, on that account. [M. O.]

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The President's Death.—In the shadow of this great national bereavement any mere disappointment to professional pride that arises from the unforeseen result must sink into insignificance. Yet the case of President McKinley has assumed immense proportions from a merely surgical standpoint, and will doubtless rank for a long while as a precedent of exceptional importance. The disastrous end—so sudden and so disillusioning—came to no class in the community with a greater shock than to the medical profession. There may have been—and there were—conservative and cautious minds in the profession who hesitated from the first to follow the lead of optimism that characterized the progress of the case, but it is safe to say that the majority of physicians and surgeons were buoyed up with the inspiring hope that the wounded Chief Magistrate was to live, and to owe his life to the achievements of modern scientific surgery.

But man proposes and God disposes. All that human skill, knowledge, promptness, daring and an overmastering sense of duty could accomplish, were devoted to the case of the President. There is nothing to retract, to explain or to apologize for in all that has been said or done by the brave and devoted staff who gave their best knowledge and skill to the saving of that valuable life. An unforeseen contingency, such as may happen in any surgical case; an unavoidable constitutional defect, such as may appear in any man well passed middle life; these were the undoing of the best planned and best executed operation of which the case permitted. From the technical standpoint we believe that the case is not open to adverse criticism. Some of its purely scientific aspects we shall discuss further on.

To the surgeons and physicians who bore the burden of this heavy responsibility we extend acknowledgment and sympathy. They performed a grave public duty, and their names will always be honored by an appreciative people.

The memory of the distinguished patient and martyr needs no eulogy from us. The members of the medical profession, who encounter death in all its forms, will pay tribute to President McKinley's fortitude in the face of a great tragedy, his resignation in suffering, and his nobility in death as in life.

The Autopsy.—The report of the autopsy in President McKinley's case is admirably brief, clear and free from technicalities. This is most fortunate, as it is desirable on every account that the public should fully understand it. From the medical standpoint it perhaps leaves some things to be desired. For the pathologist it is not exhaustive, and some queries are bound to arise; some speculation is sure to occur in an attempt fully to interpret it.

The essential point in the case was the occurrence of gangrene. This process had occurred not only in and around the wounds in the stomach, but also along the track of the penetrating bullet. Even the superficial wound made by the first bullet was, according to one observer, not in a healthy condition, but was also the seat of beginning gangrenous change. With all this there was no formation of pus nor any evidence of a distinct septic or pyemic infection. Contrary to what had been thought, two of the viscera beside the stomach were found to have been wounded. One of these, the kidney, was only slightly abraded, and its injury does not seem to have been responsible in any way for the fatal result. The other viscus involved was the pancreas, and this injury was probably of far greater significance. In our review of the case last week we spoke of a possible wound of the pancreas, and pointed out the fatal consequence of such a wound.

In the light of the autopsy the determination of the cause of such an unusual sequela as widely disseminated gangrene, must be largely a matter of speculation. As such we do not intend to enter fully into its discussion, and yet there are a few considerations that suggest themselves in this connection.

The escape of the pancreatic fluid and its constant bathing of the wounded parts are not to be ignored. In disease of the pancreas, with formation of pus, gangrene has been observed (Starr, *Pepper's System of Medicine*, Vol. II).

Again, the occurrence of gangrene, following upon wounds and some suppurative lesions, such as boils and carbuncles, has been observed in diabetes. We have no evidence that such a complication existed in the President's case. The only suggestion of it has come from newspaper reports and other unauthor-

ized statements. Hence we are not entitled to adopt such an interpretation, and must put it aside.

The heart muscle was thin, a condition in which there is always the suggestion of some muscular degeneration in the case of a man almost 60 years of age. The state of the coronary arteries, a thickening of which would induce beginning muscular degeneration and dilatation, is not recorded. The state of the pulse from the first was suggestive of shock, acting upon a somewhat weakened heart.

From the autopsy it is evident that the best directed surgical skill was doomed from the beginning to be frustrated.

The Abdominal Wound.—The gravity of the wound, arising from the important and vital structures in its close proximity, was recognized by abdominal surgeons, and it was the general belief that forty-eight to seventy-two hours must elapse before a reasonable hope for recovery could be entertained. It was, therefore, a source of intense satisfaction, not only to the medical attendants, but to the whole medical profession, that this limit was reached with all the symptoms—save one—pointing towards a rapid and uncomplicated recovery. The rapidity of the heart's action was not accounted for. The steady improvement in every other respect justified the hopeful view of the case that was taken by those in charge. As we pointed out last week a wound of the pancreas did not seem to be indicated because of the favorable progress of the case. The next contingency, a wound of the kidney, was contraindicated by the absence of blood in the urine. The fact that, in spite of a wound of the pancreas, the patient lived for a week, is one of the most noteworthy in the case. The wound of the kidney was so slight as to be insignificant. The fatal collapse which dashed expectations to the ground so abruptly and so irretrievably, could meet with no adequate explanation. Late sepsis, heart-failure, hemorrhage, indiscretion in feeding, all were suggested, but none was satisfactory to those who by long experience knew what to expect and how to recognize the nature of the complication when it came. Now that the track of the wound has been laid bare an exclamation of surprise has swept over the land. Gangrene, the result of intense devitalization of tissues or possibly of the irritating action of some unrecognized germ or virus, had destroyed the patient. The unexpected had happened. The proper course had been pursued, the dreaded complications that were common had been averted, and the medical and surgical men who had labored so loyally and conscientiously in behalf of their patient, had the satisfaction of knowing that no mistake had been made. The unusual sequel against which no precautions could have been taken, had

only revealed itself in its latent stage by rapidity of the pulse, a symptom which might have been purely functional, and one common to many conditions. We as medical men may point with satisfaction to the surgical records of the two great national patients, President Garfield and President McKinley, as an exemplification of the vast strides that have been made in the technique of surgery during the last two decades.

Affections of the Pancreas and Diabetes.—The reported wounding of the pancreas in the President's case suggests at least one physiological question which might have had a direct bearing upon his death. This question relates to the subject of accidental diabetes, and the possible effect of this condition, if it was present, on the gangrenous state of the wounds. Minkowski is authority for the statement that the complete extirpation of the pancreas in dogs invariably leads to diabetes. According to Minkowski the time which elapses after the extirpation of the pancreas and the appearance of sugar in the urine varies. Frequently after but a few hours the glycosuria is noted, and sometimes only after the elapse of three days. Hemorrhage into the pancreas in man has upon several occasions given rise to diabetes, such cases having been reported by Sarfert (*Deutsche Zeitschr. f. Chir.*, 1895, Bd. 42, S. 125) and Cutler (*Boston Med. and Surg. Jour.*, 11, 4, 1895). It is well known, as we point out elsewhere, that gangrene is not uncommonly seen in wounds and in suppurative lesions—such as boils and carbuncles—in cases of diabetes.

The Condition of the President's Heart.—In a man of the late, lamented President's age there are a number of factors to be considered by way of accounting for the heart failure, or weakness, which was a source of continued anxiety to his attending physicians. There were, it appears, no signs indicating the lesion of the pancreas or the gangrene which followed the course of the assassin's bullet.

The blood counts which were made revealed nothing, and the important index in the lack of correlation between the pulse and the temperature was not regarded seriously, owing to the fact that the President was known to have a most erratic pulse. In a man of Mr. McKinley's obese frame and full, sedentary habit, fatty degeneration of the organ was to be expected. This would naturally have followed the hypertrophy succeeding his active army life. Granting the absence of organic valvular disease, as medical men we are interested in speculating as to what might have produced the asthenic condition. In addition to the cause of the original hypertrophy present, the arduous life of the President's younger manhood, he is said to have

been an habitual user of tobacco. The effect of tobacco is to cause nervous over-action, which will in time lead to a hypertrophic condition of the heart, owing to the extra work it throws on the organ. This hypertrophy in time naturally underwent changes of fatty infiltration and degeneration, and consequently dilatation. These may be accounted for by the increased obesity of the distinguished patient and the condition of arteriosclerosis, to be expected in a man of his years and affecting to some extent the coronary arteries.

The effect of the long continued, general anesthesia is not to be overlooked. It has been shown quite conclusively that blood inspissation, a condition of anhydremia, is present after etherization. The hemoglobin is reduced absolutely and a general hemolysis of varying degrees occurs.

These conditions would throw increased work on the already weakened muscular structure, oxygenation requiring so much more effort. If we add to this the effect of the shock, and the toxemia induced by the pathological processes within the abdominal cavity, it is easy to understand how tired nature was beaten in the heroic battle and how one of God's noblemen was lost to a sorrowing people.

The Assassin.—The world once more stands aghast at the crime of an unrestrained Nihilist. The American people—impotent in their benevolence, tolerant to the last degree of any and every extreme social and political heresy that airs itself under the ægis of free speech—stand at the bier of one of their best beloved Chief Magistrates, and tacitly confess that they see no remedy under the constitution and the laws. The situation, shorn of its elements of direst tragedy, would be grim in its suggestion merely of what is helpless and maladroit.

To the mind of the sociologist—of the scientist who studies the pathology of the body politic, just as the physician studies that of the body physical—the situation does not present itself as such a paradox. If there is any standing principle in pathology it is that a disease process should be rooted out. This whole cankerous process of nihilism and anarchy is a disease—social and political infection.

Let no one misapprehend the real elements of this problem. We do not intend for a moment to raise in these columns the threshed out questions of insanity and responsibility. Fortunately and indubitably these questions ought not to be raised in this case. But there may be more than one kind of pathological process in the state. Ignorance, superstition, crime, class hatred, insanity and degeneracy—these are not interchangeable terms. However closely they may dovetail with one another (and that they are mutually reinforceful is not to be denied) they are nevertheless distinct and individual. They must

be studied apart as well as together. They must be analyzed and dissected, and the morbid state of each must be differentiated. The modern school, headed by Lombroso, which confuses criminality and insanity, has gone too far. Ignorance is more potent than either of these for harm to the State.

So long as a civilized state commits itself to the theory that any harebrained doctrines are harmless (and therefore permissible) so long as they are merely spoken, just so long will such a state be subject to the rude surprises that come when such doctrines are bodied forth in deeds. To such a rude surprise have we come now in this country, as we sit in our supreme sorrow and our profound humiliation. This assassination is the foul discharge of a local gangrene in the political body, and the moral, drawn from medical science, is obvious.

Abuses in the Pension Bureau.—There has recently been issued a stirring circular, signed by the Commissioner of Pensions and addressed to the United States Examining Surgeons. It states that carelessness and indifference in constructing certificates have compelled the recent dismissal of a number of boards; and that continuance of such conduct by others will result in dispensing with their services in the near future. The things chiefly complained of are "the use of stock phrases, the machine-made character of the descriptions of the disabilities, and the persistence in rating on the statement of the claimant or his attending physician." It states that many boards "describe organic disease of the heart as present in nearly every claimant they examine." They report "the same condition present in each case and describe it in practically the same machine-made phraseology."

It is a question whether the abuses here exposed reflect more upon the medical profession than they do on the political methods by which examining boards have been selected and kept in office. Certain it is, that the duties of the medical examiner demand both scientific enthusiasm and rigid adherence to truth. The problems presented to him are complex and often baffling. Only the enthusiast will persistently grapple with them and bring all his powers to their mastery. Only the man who enjoys overcoming difficulties of diagnosis can be trusted not to lie down and accept the suggestions of interest or habit. The profession can furnish plenty of the right kind of material, if the Commissioner will devise some improved way of selecting it.

A Valuable Surgical Procedure in Ophthalmology.—While the progress of medical science in the aggregate has for some time been deliberate and gradual, it is not rare for one of its numerous specialties occasionally to make prodigious strides. This

is exemplified in the paper which we publish in this issue on the treatment of the apparently unaffected, or at the most but slightly involved eye in cases of glaucoma, written by Dr. G. E. de Schweinitz. Operative procedures, such, as for instance, the disarticulation of a limb for malignant disease, situated at some distance from the articulation, would at one time have aroused not only much adverse criticism, but even condemnation; and to the surgeons who succeeded in taking time and life by the forelock is due the gratitude of humanity. No less a service is promised by the stimulation of discussion on the subject agitated by Dr. de Schweinitz. The bilateral tendency of the varieties of glaucoma under discussion seems clearly to indicate the practice of preventive iridectomy on the neighboring eye. In a destructive affection like glaucoma an opportune and successful preventive iridectomy on the not yet or only slightly implicated eye is of no little import. The results of extensive clinical experience have frequently revolutionized individual doctrines contained in text books, which may possibly also account for the dearth of recognition which this matter has received in treatises on ophthalmology. But will the patients submit to an operation on an eye which only expert examination can pronounce to be already affected? They will, provided we educate them as they have been in the case of other surgical procedures, notably the operation for appendicitis, which is frequently performed between attacks and in the absence of subjective disturbances. A subject like the one coming from the pen of Dr. de Schweinitz we cannot afford to ignore.

The Bribe for the Doctor.—A circular lies before us assuring the "Dear Doctor" to whom it is addressed that a certain "Institute" has "a perfect specific for all addictions." It winds up thus: "Our prices for cures: Opiates, \$100; liquors, \$60. Your compensation for each patient sent us will be 20 per cent. cash." Such circulars are more common of late. Probably the men who pay for printing and distributing them hope to get their money back and more with it. We wonder what they base their hope upon! Has the late discussion on division of fees given a fresh impetus to these efforts to make the profession a catpaw to quackery?

It is said that the great majority of efforts to make a fortune out of a patent medicine are failures. It is probable that these efforts to get the doctor to play the part of a bunco-steerer are very often as much of a disappointment and harm to their promoters as to any one else. But it is unpleasant to reflect that sometimes such schemes must get the assistance of so-called doctors, or they would not continue to bid for it.

Of course the man who is ready to sell his con-

science and self-respect for 20 per cent. of a fee generally drops quickly to a level of degeneracy, at which he can do little harm. He soon loses the confidence of the community, and with it the power to aid in schemes for swindling it. But it is a matter of regret and shame that he should ever have been counted as a member of the medical profession. We wish that this reflection could be impressed on the faculties of medical schools. Could not some young men be saved from falling into such practices and disgracing the schools that turn them into the profession by a little systematic instruction in medical ethics?

Reviews.

Diseases of the Intestines, by Dr. I. Boas, Specialist for Gastro-Intestinal Diseases in Berlin. Authorized Translations from the First German Edition, with Special Additions, by Seymour Basch, M. D., New York City. With Forty-seven Illustrations. New York. D. Appleton Company, 1901.

Some of the most difficult problems in internal medicine are presented by the diseases of the digestive system, and, more especially, of the intestinal tract. This is partly due to their physical relations, which are so intimate that the imaginary surface lines of their boundaries are of little value in topical diagnosis; but still more to the fact that the symptoms of their disorders are generally vague and often misleading. It is unnecessary to give examples of these facts, which are admitted, as soon as stated, by all experienced clinicians.

The thorough study of the diseases of one of these organs is necessarily directly helpful, but it cannot be undertaken successfully without indirectly contributing to our knowledge of them all. This is particularly true of the intestinal tract which not only underlies, but covers and interpenetrates all the abdominal viscera; a statement which applies as well to their functional as to their anatomical relations.

In the work before us, the problem, i. e., the facts, the symptoms, of diseases of the intestines, is fully and clearly stated; the proper methods of its study inculcated, and the solution—the diagnosis—logically deduced. Let it not be supposed, however, that therapeutics are neglected. About sixty pages are devoted to the general therapeutics of intestinal diseases, while the special therapeutics of each affection receives separate consideration.

The work is divided into two parts, a general and special, one of the most interesting chapters of the former being devoted to the examination of the feces. In this connection it is important to note that the *yellow mucous granules*, barely visible macroscopically, which Nothnagel regards as indicative of catarrh of the small intestines, have never been detected by Boas, and that Ad. Schmidt, who also questions their mucous structure, regards them as dead amebae.

In this chapter Boas calls attention to the fact, not generally known, that fully developed sarcinae are not infrequently found in the feces of patients suffering from gastrectasia, and states that several times his suspicions of a dilated stomach were first excited by the detection of sarcinae in the stools.

Another sign to which varying degrees of diagnostic significance is attached by different authorities, is the presence of Charcot-Leyden crystals in the feces. First associated with ancylostomiasis by Perroncito and Bäumer, they are regarded by Leichtenstern as pathognomonic of that condition, although the value of this statement is somewhat impaired by his admission of their great frequency in association with all forms of intestinal para-

sites. Boas justly remarks that Leichenstern's observations have not received the attention they deserve.

After all, however, the presence of these crystals in cases of helminthiasis is a fact of purely scientific interest, for they are much more difficult of detection in the feces than are the eggs of the parasites with which they are associated.

The chapter on the diagnostic value of urinary examinations in intestinal diseases is short but suggestive. The decision with reference to indican is that this substance in the urine is "of decisive value only when taken in connection with all other clinical symptoms."

One of the admirable features of the book is the generous recognition of the work of other clinicians and especially that of Americans. A gratifying example of this statement is to be found in the chapter on membranous enteritis where the "first classical description" of this disease is justly attributed to the late Professor J. M. DaCosta.

The chapters on round ulcer of the duodenum, as well as those on intestinal neoplasms and intestinal obstruction, though concise, are sufficiently elaborate for a work of this sort. In fact, they are excellent examples of condensed information.

To chapter XIX, which is devoted to appendicitis, the editor has appended "a brief résumé of the American views on appendicitis." This addition is most proper, for, as Dr. Basch remarks: "Whether from climatic, racial, dietetic, or other influences, the type of disease in Europe is a far milder one than in the United States, or whether, because less prevalent, its gravity is not so fully appreciated, certain it is that the medical profession abroad regard appendicitis in a far more sanguine light than we do in this country."

The work of the translator, a former assistant of Dr. Boas, is worthy of the highest praise. It shows him to be so thoroughly conversant with the structure of the German and English languages as to be able to keep the idiom of each in their proper places, i. e., at home.

It is proper to inform the would-be purchasers of this book that it does not contain a separate chapter on intestinal parasites. This, in our opinion, is scarcely to be regarded as an omission, for, as Dr. Boas remarks: "They are treated of fully in the standard text-books of medicine and in numerous monographs."

In conclusion, we heartily recommend this book to the American profession, believing that its object as stated in the preface: "To aid the practitioner in solving some of the difficult problems in intestinal pathology and assist him in the treatment of his patients," will be attained.

[F. P. H.]

Practical Surgery, A Work for the General Practitioner.

By Nicholas Senn, M. D., Ph. D., L. L. D., Professor of Surgery, Rush Medical College, Chicago. 8vo., pp.1133, 650 illustrations. Philadelphia and London. W. B. Saunders & Co., 1901.

A volume of this magnitude and character, from the pen of a great surgeon, demands more than passing notice. It must be looked at from the point of view of the practical surgeon, who opens it to learn the views of one, whose acknowledged position gives his opinions unusual weight, and from that of the general practitioner for whom it is said to have been written.

The trained surgeon will open it eagerly and find its contents of extreme interest and great value. He will read with zest the arguments on mooted points, add to his knowledge by absorbing some of the learning of Dr. Senn, revise his own views by comparing them with the opinions of a teacher of wide experience, and close the volume with a feeling of astonishment at the great amount of original work done by the author.

The general practitioner, however, will scarcely find it of the value he expected. In a technical work of reference, arrangement and method are almost as important as matter. In these essentials the present work is deficient. It lays too much stress on some subjects, says too little, or nothing, about others; and gives up too many pages to historical accounts, details of experimental work and original investigations, to be a convenient and practical guide to the man who fills the honorable and anxious post of general practitioner.

The book is full of the author's personality and many of its statements deserve quotation, because of their in-

trinsic value, and because they illustrate the nature of its teachings. "The life of every anesthetized patient is always in danger." "Very few physicians are safe anesthetizers." "No matter how competent the anesthetizer may be, the surgeon should never lose sight of his patient, no matter how trying the operation."

"Asepsis is the precious, hard-earned reward for faithful antiseptic labor." A wound from a modern bullet "should never be probed, either for diagnostic or therapeutic purposes." "Dirty hands have destroyed more lives than all the implements of warfare." "As an unmistakable indication of fracture, a new point of motion is of greater diagnostic significance than preternatural motion." "The search for crepitation (in fractures) should never be made unnecessarily, as in many instances this sign is absent, and in the vast majority of cases a satisfactory diagnosis can be made by a careful study and analysis of the other symptoms."

"In all dislocations the untorn portion of the capsule or ligaments plays an important rôle in fixing the displaced bone in its abnormal position and in resisting efforts at reduction."

In speaking of cellulito-cutaneous flaps in amputation, he says: "I am strongly impressed with the importance of including in the flap the deep connective tissue, **** as by doing so an important hold on the cut muscles is secured."

In science it is not unusual to criticize even the work of a master, and criticism is proper, when necessity arises; but the criticism should have at its root the wish for better results from so high a source. The author is a standard by which an author's work is judged, and a great man must not fall below his best. It is this feeling, which causes regret that the volume under review has not the system, conciseness, and directness, which have made the value of many books of less distinguished men. [J. B. R.]

Staining of Ameba.—E. S. London, in a paper entitled "Histologic Notes" (*Archiv. Biologischeschik Nauk*, Vol. VIII, No. 3) points out that in the examination of fresh unstained specimens for ameba leukocytes may be encountered which are indistinguishable from the ameba. For this reason the latter are detected with more certainty in stained specimens. The method of staining is as follows: The suspected mass is spread in a thick layer on a cover glass or slide, and dried in the air until it assumes the consistency of dough. The preparation is then treated with a saturated solution of bichloride of mercury for 5-10 minutes, washed several times with 95% alcohol and finally with distilled water. If the film shows a tendency to wash off the water may be omitted and the alcohol allowed to evaporate. The film is stained for 2 to 3 minutes with a stain containing rose bengale, 0.1 grm., aniline yellow, 0.15 grm., 95% alcohol 30 c.c. and distilled water, 70 c.c. It is then washed with distilled water until the washings are no longer colored and counterstained by Loeffler's methylene blue for 1 to 2 minutes, the excess of stain being removed by 95% alcohol followed by absolute alcohol. The preparation is then mounted in balsam. The following microscopical appearance is presented: The protoplasm of the leukocytes is stained red and the nuclei blue, while in the case of ameba the reverse is seen, the protoplasm is blue and the nuclei red. These observations were made on ameba nitrophila. [A. R.]

Alquist-Alexander-Adams Operation for Retroversion and Prolapsus of the Uterus.—A. Eberlin (*Medicinskoie Obozrenie*, June, 1901) gives the following conclusions based on observation of 24 cases: 1. Of all the operations recommended for the treatment of retroversion and prolapsus the shortening of the round ligaments in the inguinal canal is the most rational, the least dangerous and the more satisfactory as to a permanent cure. 2. With good technique, the operation is always successful. 3. The best way of finding the ligament is to open the inguinal canal. 4. The operation is free from complications and does not interfere with pregnancy or labor; while the latter do not weaken the effect of the operation. 5. After rational and careful closure of the wound there is no danger of hernia. 6. The careful isolation of the round ligaments at the internal ring plays the primary rôle in securing good results and preventing hernia. 6. It is desirable that authors report their observations on the remote effects of this operation. [A. R.]

American News and Notes.

The Death of President McKinley.—After an operation which was perfect in the surgical aspect, the lack of development of symptoms of sepsis and peritonitis, and the lapse of almost a week, in which all the indications pointed to a speedy recovery, the sudden change for the worse in the President's condition, altogether unlooked for, came as a shock to the whole country. Hourly bulletins, issued direct from the sick chamber and signed by the physicians in charge, were very encouraging. Feeding by the mouth was begun on Tuesday morning, and was well borne, and since Wednesday all nourishment had been administered in this way. Thursday night, however, brought a decided change for the worse. On Friday he rallied slightly, but Friday evening his condition grew gradually worse, until 2.15 A. M. Saturday, when he died. The autopsy was held on Saturday morning at 11 o'clock. It was performed by Drs. Gaylord and Matzinger, in the presence of all the physicians who had attended the President during his illness. The report was awaited with great interest, and when it appeared it occasioned much surprise. It showed the President's death to be due to gangrene. The whole course of the bullet's track was gangrenous. The bullet perforated both walls of the cardiac portion of the stomach, and lacerated the upper portion of the left kidney. The physicians, though they did not find the bullet at the autopsy, are confident it is imbedded in the muscles of the back. Both wounds in the stomach were found to be perfectly closed, but around each wound was a gangrenous area the size of a silver dollar. The upper portion of the left kidney, part of the spleen and pancreas were also found to be gangrenous. The heart walls proved to be thin, but otherwise were normal. There was no sign of peritonitis or disease of other organs. This closes all criticism as to the methods of treatment employed by the President's physicians and surgeons, death being unavoidable by any medical or surgical treatment. Dr. Mynter is of the opinion that the ball was poisoned, and a bacteriological examination is to be made of the remaining bullets in the chamber of Czolgosz's revolver, a report of which will be awaited with much interest, as will also a further report of the autopsy.

A Brief Personnel of the Surgeons in Attendance Upon President McKinley.—Dr. Matthew Mann, known as an eminent abdominal surgeon, is 56 years of age, and has practiced in Buffalo for about thirty years. He is the author of a standard text-book on gynecology, professor of gynecology at the University of Buffalo, and gynecologist in the Buffalo General Hospital.

Dr. Roswell Park is a graduate of Rush Medical College, and is about 48 years of age. He is the author of Park's "System of Surgery," and is well known to the profession the world over. He is surgeon-in-chief to the Buffalo General Hospital and professor of surgery at the University of Buffalo.

Dr. Herman Mynter is an expert abdominal surgeon, and author of a valuable work on appendicitis. He has recently lectured abroad on this subject. He is now surgeon to the German Deaconess Home at the German Hospital.

Dr. John Parmenter is about 40 years of age. He is professor of anatomy at the University of Buffalo, and is a careful operator.

Dr. Eugene Wasdin is about 40 years of age. He is surgeon to the Marine Hospital. He was one of the experts recently detailed to investigate yellow fever in Cuba.

Dr. T. W. Lee, of St. Louis, was medical director of the Omaha Exposition.

Dr. N. W. Wilson is post surgeon at Fort Porter. He is the sanitary officer of the Pan-American Exposition.

Dr. P. M. Rixey is a medical inspector in the United States Navy. He served as assistant surgeon in the navy for a number of years. Dr. Rixey was chosen physician to the McKinley family three years ago upon the removal from Washington of General Leonard Wood, who had been the family physician.

Charged with Spreading Smallpox.—A suit for \$10,000 damages has been brought by Elmer C. Meyers and his wife against John Crum, a farmer near Linglestown, Pa., based on the allegation that Crum took a smallpox patient to the home of Mr. Meyers, and in consequence infected the entire Meyers' family.

PHILADELPHIA, PENNSYLVANIA, ETC.

Philadelphia County Medical Society.—The first regular meeting of this society after the summer intermission was held September 11, President George Erety Shoemaker occupying the chair.

The scientific business included two papers. The first was read by Dr. Emma E. Musson, on *Rarefying Ostitis in Chronic Purulent Ethmoiditis Simulating Atrophic Rhinitis*. After considering the opinions of various authorities, Dr. Musson stated that clinical experience had convinced her that the following two conditions are separate and distinct diseases, viz: (1) chronic empyema of the accessory sinuses leading to rarefying ostitis and (2) atrophic rhinitis. Prognosis differs greatly in the two conditions, being favorable in the former and decidedly unfavorable in the latter. Four illustrative cases were briefly detailed by Dr. Musson. Some of them had been diagnosed and treated as atrophic rhinitis, one at least having the four typical symptoms of that disease. Cure (or in cases now being treated, improvement) followed curettement and treatment of the ethmoidal cells which were found to contain pus and necrosed bone. Differential diagnosis between the two affections is difficult. The involvement in atrophic rhinitis is usually more extensive, the sense of smell is more often lost, probing finds no carious bone, and the disease does not tolerate surgical treatment. In suppuration of the ethmoidal or other sinuses probing reveals carious bone, the sense of smell is more often retained, and plugging of the nasal cavity will show the presence of pus on the surface of the plug which borders the cells.

Dr. Boardman Reed read a paper on *The Etiology and Symptomatology of Constipation, including the Differential Diagnosis between Atonic and Spasmodic Constipation*.

Dr. Reed spoke of the various causes of constipation and stated that the most prolific causes were atony and spasm. These two forms are also the most amenable to treatment other than surgical procedures. Constipation due to spasm is the most often seen in hysterical and neurasthenic individuals. Massage of the intestines is not indicated in this form, unless it be in the shape of light stroking in some cases. General roborant treatment, diet, and special exercises are indicated. The differential diagnosis between the two varieties is of great importance in determining the treatment. In the atonic form the stool is too small in amount, there is little straining during the movement and the patient feels relieved as after a thorough passage. The condition is more constant and there is no rigidity of the muscles. Percussion often reveals general tympany. In the spastic variety the condition is never constant. The stools will be normal at times or there will be diarrhea. Movements cause great straining and there is no feeling of relief afterward. Tender spots in the abdomen are apt to occur. Occasionally both forms may be found in the same individual.

Dr. William McKinley Dead.—Dr. William McKinley, a distant relative of the late President McKinley, and a graduate of the Baltimore Medical College, was found dead at his home at Polk, Pa., on the night of Sept. 14th. He was 44 years old. On that day Dr. McKinley was in Franklin, Pa., and discussed the death of the late President with friends there. He was of a highly nervous disposition, and at different times during these discussions he became greatly excited over the assassination. In the evening he returned to Polk, and a few hours after his arrival there his dead body was found lying on the ground in the rear of his residence. Death is said to have been due to apoplexy.

Vital Statistics for Philadelphia for the week ending September 14, 1901:

Total mortality	430	Cases.	Death.
Inflammation of the appendix 3,			
bladder 1, brain 9, bronchi 5, kid-			
neys 16, larynx 1, liver 2, lungs			
26, pericardium 1, peritoneum 6,			
pleura 1, stomach and bowels 31,			
spleen 1			103
Marasmus 29, inanition 20, debility			
6			55
Tuberculosis of the lungs			47

	Cases.	Deaths
Apoplexy 16, paralysis 11		27
Heart-disease of 27, neuralgia of 4 ..		31
Uremia 10, Bright's disease 7, diabetes 2		19
Carcinoma of the face 1, breast 3, stomach 3, uterus 6, liver 1		14
Convulsions		13
Diphtheria	51	4
Brain-disease of 1, softening of 2 ..		3
Typhoid fever	97	11
Old age		10
Scarlet fever	24	1
Abscess of lungs 2, atheroma 1, asthma 2, burns and scalds 4, casualties 12, child birth 1, cholera infantum 14, cholera morbus 1, cirrhosis of the liver 4, croup, membranous 2, cyanosis 1, diarrhoea 2, drowned 3, dysentery 2, erysipelas 1, fever, remittent 1, hemorrhage from stomach 1, homicide 2, jaundice 1, leukemia 1, locomotor ataxia 1, obstruction of the bowels 3, rheumatism 1, sclerosis, liver 2, shock, surgical 1, septicemia 6, smallpox 4, sarcoma 1, suffocation 1, suicide 8, unknown coroner case 1, whooping cough 4		91

NEW YORK.

Hospital Superintendents Confer.—The third annual conference of the National Association of Hospital Superintendents was held in New York, September 10 and 11, with a good attendance of delegates. An invitation to hold the next annual conference in Philadelphia was accepted by a unanimous vote.

Medical Association of Central New York.—Among the most important medical societies in the East is the Medical Association of Central New York. This society was organized by the generation now almost passed away, and has had an interesting and active life for more than a third of a century. Its meetings are held annually, rotating between Syracuse, Rochester and Buffalo, usually in October. This year's meeting was held in the latter city a little earlier (August 27 and 28) to accommodate itself to Pan-American arrangements. Dr. Lucien Howe, of Buffalo, presided, and the literary program was unusually attractive. The usual banquet was held in the "Streets of Mexico," at the Exposition. The after-dinner speeches were made by Dr. William B. Jones, of Rochester; Dr. Floyd S. Crego, of Buffalo; Dr. John L. Heffron, of Syracuse; Dr. Eugene Wasdin, of the United States Army, and various other representative men. The next meeting will be held at the usual time at Syracuse.

NEW ENGLAND.

New England Hospital for Women and Children.—Henry A. Turner, who died recently in Boston, bequeathed \$10,000 to the New England Hospital for Women and Children in that city as a memorial to his two daughters.

New Hospital for Tuberculosis.—A new hospital for tuberculosis is being erected in a suburban section of Hartford, Conn., at a cost of \$50,000, half of which has been donated by the State.

WESTERN STATES.

New Hospital for San Francisco.—San Francisco is to have a new hospital. It is to be erected by the German General Benevolent Society of that city, at a cost of \$250,000.

Banquet in Honor of Nathan Smith Davis, M. D., L. L. D.—Under the auspices of the Chicago Medical Society a banquet and celebration will be given in honor of Nathan Smith Davis, M. D., L. L. D., who is the oldest living presi-

dent of the society, and widely known and honored among the profession through his long connection with the American Medical and other associations. The banquet will take place at the Auditorium Hotel Chicago, Saturday evening, October 5, 1901.

Dr. Stewart L. McCurdy, formerly professor of orthopedic surgery, Ohio Medical University; at present professor of anatomy and surgery in the dental department of the Western University, has been elected to the chair of orthopedic surgery in the Western Pennsylvania Medical College, Pittsburg.

Dr. H. G. Nicks, physician to the Christian Orphans' Home, has been elected clinical professor of diseases of children in the St. Louis College of Physicians and Surgeons.

Chicago Hospital School for Nervous, Delicate and Invalid Children.—The Board of Trustees of the Chicago Hospital School for Nervous, Delicate and Invalid Children, has added to the school curriculum a special department for the correction of speech defects. The school will open Tuesday, October 1st, 1901. After this date, in addition to the present course of study, the school will be prepared to furnish instruction either by classes at the hospital-school or private instruction by the hour, in the correction of speech defects and speech inaccuracies. This phase of work will cover cases of stammering, major and minor inaccuracies—enunciation, pronunciation, cases of retarded speech development, and lip-reading whereby those having lost hearing may be taught to read lips of others. Instruction will also be given to young deaf children, and children of slightly imperfect hearing. For this department they have provided four teachers: Miss Gwendolyn Williams for voice development and voice placing, stammering and stuttering, she has studied under William Shakespeare, of London, Prof. William Tomlins, of Chicago, and at the Curry School of Expression, Boston, Mass. She has taken special work in correction of speech defect under Mrs. Monroe, member of the faculty of the Fuller School for the Deaf and of the faculty of the Curry School of Expression, Boston, Mass. Miss Laura Robie, for non-development of speech, lip reading for adults and juveniles, and for instruction of young deaf, or partially deaf children. Miss Robie is a graduate of the Wisconsin Phonological Training School for Teachers, 1899-1900, and was head of the Educational Department for Deaf Children at Muskegon, Mich., 1900-1901. Miss Catherine Dewey for music—vocal and instrumental, voice development and musical phonetics, has studied under Prof. William Tomlins, of Chicago, and Mrs. Kern, in charge of the Department of Music at the John Dewey School and of the Chicago Institute of the University of Chicago. Miss Margaret McKee will continue in charge of a special case in the school—a congenital-partly-deaf child. Miss McKee is head teacher of the Department for Deaf Children in the Kosminski School.

New Hospital for Fort Smith, Ark.—A new hospital is to be erected at Fort Smith, Ark., at a cost of \$10,000.

Appointment.—Dr. L. Blake Baldwin has been appointed professor of clinical dermatology at the College of Physicians and Surgeons of Chicago.

A Chinese Leper.—A Chinese Leper has been unearthed at St. Louis. The patient is Dong Goud, whose vanity caused him to seek relief for an eruption of the face. The examination led to his being suspected, and upon a further examination by dermatologists, he was declared to be affected with macular leprosy of the anesthetic type. He will be isolated.

Southern Minnesota Medical Association.—The tenth annual convention of the Southern Minnesota Medical Association was recently held at Rochester, Minn. A number of interesting papers were read.

CANADA.

(From Our Special Correspondent.)

Deaths from Consumption in Ontario are beginning to wane, and it is hoped by the Provincial Health Officer that the fight against the plague is beginning to tell in the monthly vital statistics. One hundred and eighty-two deaths occurred in the province during July of the present

year, municipalities containing 91 per cent. of the population registering. Compare this number with 264 deaths from the same cause in July of 1900, when municipalities containing 97 per cent. of the population reported. Thus it would seem that a small, but steady, improvement was being made, which may be set down to improvements in isolation and regulations controlling the disposal of expectoration.

Theories re Tuberculosis have recently been discussed by Prof. J. George Adami, of McGill University, who attended the Tuberculosis Conference at London. He believes that too great emphasis has been placed in the past on the danger to be apprehended in milk, from tuberculosis in cattle; but he does not believe it is right to state there is no danger. Two years ago, when the Canadian Medical Association met in Toronto, Dr. Adami contributed an able paper on this very subject, and, therefore, Koch's theory is not an entirely new one to the profession here. The paper, which he then read, along with other documents, was sent to Berlin and came into the hands of Dr. Koch, who in this manner became conversant with the work then being done in Canada in this connection. For the last two years Prof. Adami, Dr. C. F. Martin and Dr. Higgins, of Montreal, have been working along these very same lines, and the Canadian Government was fully aware of the trend of the work. Dr. Adami's paper referred to was entitled "Is Bovine Tuberculosis Infectious from Animal to Man?"

The Ontario Medical Council and the Medical Defence Association are not much in love with each other, and the latter promises to have it out to the full. This Medical Defence Association must not be confounded with any organization looking towards protecting practitioners from suits for alleged criminal malpractice, as it is nothing of the kind, its object being primarily and all the time to correct evils which they claim exist in the composition and laws of the governing body of the College of Physicians and Surgeons of Ontario—the Medical Council. The Executive Committee of this organization recently held a meeting in Toronto and decided that the grievances against the Medical Council should be properly brought before the profession in Ontario and the public generally, with the object of influencing the Legislature in their behalf at the coming session. Dr. J. H. Sangster, the Secretary of the Committee, was urgently and unanimously requested to undertake the compilation and presentation of a series of letters to the public press, and in his first letter declares there are three formidable, but not insuperable, obstacles to success in this matter, viz: The absence of public interest and sympathy, the almost Asiatic apathy of a large section of the profession itself and the determined resistance of the medical schools, that were suffered to shape the Medical Act of 1869, by which they engineered themselves and a comparatively large contingent of homeopaths into the executive of the profession. It will be interesting to report further on what sort of a case Dr. Sangster will be able to make out against the constituted authority of the profession in Ontario.

The College of Physicians and Surgeons of Quebec, like its contemporary in Ontario, too, is having troubles of its own, but in a somewhat different way. Dr. H. C. Dumont, who has been refused a license in that Province, although he claims to have passed all the examinations and had studied medicine during the number of prescribed years, only a few days ago was granted a petition by Mr. Justice Langle for a writ of mandamus. On the part of the College, it has been urged that Mr. Dumont had not conformed with the regulations governing the admission to study prescribed by the College of Physicians and Surgeons; hence their refusal to license. The mandamus orders the College to issue the license. Last year five or six cases were decided similarly against the College, and the present one will now be considered as a test case. The College will take the case through the court of appeal and to higher courts, if it be found necessary.

The British Columbia Medical Association held its second annual meeting at Victoria on the 5th and 6th days of September, when a full representation from the Province was present, and several practitioners from the East, who had been attending the Canadian Medical Association at Winnipeg, came on after the close of that meeting. Dr. Dune presided, while Dr. J. M. Pearson, of Vancouver, acted as secretary. A special steamer took the delegates to the William Head Quarantine Station, and to a visit to the

lepers confined on Darcy Island. The annual banquet was held at the Driad. Several interesting and valuable papers were read, including one by Dr. R. E. McKechnie, of Nanaimo, on "Midwifery" and one by Dr. Fagan on the subject of "Tuberculosis." The following officers were elected for the ensuing year: President, Dr. Walker, of New Westminster; vice-president, Dr. McEugan, Vancouver; treasurer, Dr. Helmchen; secretary, Dr. J. M. Pearson, Vancouver.

Two Dowieites have been arrested at Victoria, B. C., one an elder and the other a disciple. They are charged with manslaughter for refusing to provide proper medical assistance for the infant child of the latter.

The Medical Staff of the Montreal General Hospital for the ensuing year will be composed of Dr. von Eberts as medical superintendent and the following as house surgeons: Drs. Turner, Secord, Robertson, Campbell Howard, Bruce, Brown, Rogers and Ker.

Dr. Montizambert, Director-General of Public Health at Ottawa, has handed in his report to the Dominion Government on the recent Tuberculosis Conference held at London, to which he was a delegate. It is understood he combats Professor Koch's theory regarding the transmissibility of bovine tuberculosis to human beings.

Dr. Laberge, Medical Health Officer of the city of Montreal, has gone to Germany to attend a medical conference shortly to be held in that country.

Hospital for Contagious Diseases.—A hospital for contagious diseases is to be erected in Ottawa, Canada, at a cost of nearly \$20,000.

MISCELLANY.

Obituary.—Dr. Louis Warfield Ritchie, at Georgetown, D. C., September 10, 1901, aged 48 years—Dr. William McKinley, at Polk, Pa., September 14, 1901, aged 44 years.

Poisoning From Tin Chloride in Stockings.—An interesting case is reported in the *Wiener klin. Rundschau* of this kind of poisoning, and quoted in the *Oklahoma Medical News*. A young lady, who had been wearing yellow silk stockings, noticed a sudden disturbance in motility and sensibility in her limbs. Several weeks later more intense symptoms, simulating ataxia, set in again after wearing the stockings. On examination these were found to be impregnated with tin chloride. The urine contained albumoses, serum albumen and globulin, and gave the tin reaction for months after she ceased wearing the stockings. There was also some destruction of the corpuscular elements. Silk, especially the light shades, should not be worn next to the skin, as it is oftentimes considerably impregnated with tin chloride to increase the body of the silk. The patient in this case recovered, although hysterical symptoms persisted for a long time.

Olive Oil.—Seventy-five per cent. of the "olive oil" in our markets, says Schlichting, consists of mixtures of cottonseed and other oils (peanut, palm, etc.). Most of the "pure imported Lucca oil" comes from the cotton fields of Georgia, whence it is sent in bulk to Europe, and there used to adulterate the olive oil.

Segregation of Lepers in the Philippines.—The United States War Department has received the report of a Board of Officers, appointed not long ago to recommend a suitable island of the Batanes Islands for the segregation of lepers. The Board recommended the island of Barri. Its water supply is good, soil fertile, and timber is good. The report states, however, that at certain seasons of the year the group of islands to which it belongs is swept by typhoons.

Changes in the Medical Corps of the Navy, Week Ended September 14, 1901.

MEDICAL INSPECTOR H. WELLS, ordered to the Boston Navy Yard, September 14—Sept. 7.

MEDICAL INSPECTOR W. E. TAYLOR, retired, ordered to the Honolulu Naval Station—Sept. 7.

MEDICAL INSPECTOR R. C. PERSONS, ordered to duty at the marine recruiting rendezvous, New York, N. Y., September 9, and to other special duty—Sept. 7.

SURGEON M. H. CRAWFORD, detached from duty at the marine recruiting rendezvous, New York, N. Y., September 9, and ordered to duty in connection with fitting out the Illinois and to duty on that vessel when put in commission. Sept. 7.

PASSED ASSISTANT SURGEON D. N. CARPENTER, detached from the Naval Hospital, Norfolk, Va., and ordered to duty in connection with fitting out the Illinois, and to duty on that vessel when put in commission Sept. 7.

PASSED ASSISTANT SURGEON G. D. COSTIGAN, resignation accepted, to take effect September 16—Sept. 9.

PHARMACIST J. COWAN, detached from the Naval Hospital, Mare Island, Cal., ordered home and granted sick leave for one month—Sept. 9.

PASSED ASSISTANT SURGEON C. E. HIGGS, detached from the New York Navy Yard and ordered to the Port Royal Naval Station—Sept. 11.

ASSISTANT SURGEON J. C. THOMPSON, detached from the Port Royal Naval Station and ordered to the Columbian—Sept. 11.

ASSISTANT SURGEON R. M. YOUNG, detached from the Naval Hospital, New York, September 14, and ordered to the New York Navy Yard, same day—Sept. 11.

ASSISTANT SURGEON A. G. GRUNWELL, detached from the Brooklyn and ordered home—Sept. 12.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended September 14, 1901.

SSMALLPOX—United States.

			Cases.	Deaths.
(VINHOATIV.)	San Francisco	Aug. 25-Sept. 1	2	
MASSACHUSETTS:	Boston	Aug. 31-Sept. 7	13	
	Medford	Aug. 31-Sept. 7	1	
MINNESOTA:	Minneapolis	Aug. 31-Sept. 7	2	
NEW JERSEY:	Newark	Aug. 31-Sept. 7	9	
NEW YORK:	New York	Aug. 31-Sept. 7	6	4
PENNSYLVANIA:	Philadelphia	Aug. 31-Sept. 7	12	4
UTAH:	Salt Lake City	Aug. 24-Sept. 7	5	
WISCONSIN:	Green Bay	Sept. 1-8	1	
	Milwaukee	Aug. 31-Sept. 7	1	

SMALLPOX—Foreign.

BELGIUM:	Antwerp	Aug. 17-24	1	
BRAZIL:	Pernambuco	July 17-31	44	
BRITISH				
COLUMBIA:	Vancouver	Aug. 1-31	1 suspect	
COLOMBIA:	Panama	Aug. 26-Sept. 2	12	
ECUADOR:	Guayaquil	June 22-Aug. 7	1	
FRANCE:	Paris	Aug. 17-24	9	
GREAT BRITAIN:	Leeds	Aug. 24-31	1	
	London	Aug. 17-24	41	
INDIA:	Calcutta	Aug. 3-10	2	
	Madras	Aug. 3-9	7	
ITALY:	Messina	Aug. 16-24	8	
	Naples	Aug. 17-24	115	22
	Palermo	Aug. 19-24	1	
RUSSIA:	Moscow	Aug. 10-17	2	
	St. Petersburg	Aug. 4-11	12	
URUGUAY:	Montevideo	July 18-25	10	

YELLOW FEVER.

COSTA RICA:	Liberia	Aug. 25, prevalent.		
	Port Limon	Aug. 18-24	8	1
CUBA:	Havana	Aug. 24-31	7	2
	Inoculation Stat'n	Aug. 24-31	1	
MEXICO:	Merida	Aug. 16-24	2	
	Vera Cruz	Aug. 24-31	3	2

CHOLERA.

INDIA:	Bombay	Aug. 6-13	9	
	Calcutta	Aug. 3-10	6	
	Madras	Aug. 3-9	45	
JAPAN:	Island of Shikoku	Aug. 6	3	
	Yokohama	Aug. 3-10	1	

PLAGUE—Insular.

PHILIPPINES:	Camp Stotzenberg	July 13-20	2	
	Manila	July 13-Aug. 3	26	21

PLAGUE—Foreign.

INDIA:	Bombay	Aug. 6-13	197	
	Calcutta	Aug. 3-10	17	
JAPAN:	Karachi	July 24-Aug. 11	17	13
STRAITS	Formosa	Aug. 5, epidemic.		
SETTLEMENTS:	Singapore	July 20-27	1	
CHINA:	Hongkong	July 27-Aug. 3	13	11

GREAT BRITAIN.

A Chair on Anesthesia.—The reorganized University of London has arranged for a corps of teachers for instructing in anesthesia.

Death of Alfred E. A. Lawrence.—We regret to learn that Dr. Alfred E. A. Lawrence, professor of midwifery and diseases of women in University College, Bristol, died suddenly on the 30th ult. while on holiday with his family.

Honored by the University of Glasgow.—The University

of Glasgow at its recent four hundred and fiftieth anniversary conferred honorary degrees on Quincke, Mikulicz and Kronecker, of Germany.

Mr. Trevor N. Smith, J. P., F. R. C. S. I., has been appointed Assistant Master of the Coombe Hospital, Dublin.

Dr. R. Tanner Hewlett has been appointed professor of general pathology and bacteriology at King's College, London.

CONTINENTAL EUROPE.

The Eightieth Anniversary of Prof. Virchow's Birthday.—On October 13th Professor Virchow, the renowned German pathologist, will have tendered to him by his confrères a celebration which promises to rival many that have yet taken place. A detailed description of this event will be published in due time in these columns.

New Clinics in Odessa.—The city appropriated 500,000 roubles (\$250,000) for the establishment of new clinics in connection with the University.

The Regulation of Admission of Foreign Physicians to Practice in Russia.—The Department of Public Instruction is framing a law compelling foreign physicians who desire to practice in Russia to pass the regular medical examination only in the Russian language and present a certificate of preliminary education equivalent to the Russian Gymnasium.

A Twentieth Century Drug Store.—In St. Petersburg a woman-pharmacist opened a drug store, in which all the employees, except one, are women. This establishment will also serve as a school of pharmacy for women.

A Self-sacrificing Nurse.—In the Government of Vitebsk, Russia, a ten-year-old boy received severe burns, necessitating skin grafting to save his life. One of the nurses, a Sister of Mercy, offered to supply the necessary skin, and refused to take an anesthetic during the operation. She was presented with a medal.

Leprosy in Russia.—Several cases of leprosy developed in the Government of Lifland. Two cases appeared in the Government of Smolensk.

Homeopathy in Russia.—There are about 100 homeopaths, 20 dispensaries, 1 hospital and 30 drug stores in the entire country. The homeopaths are preparing to gather for the first time in St. Petersburg. The chief objects of the meeting will be the discussion of infinitesimals, as well as means of bringing the two schools together.

Legislation Against Pellagra in Italy.—An influential group of Italian Senators is promoting legislation for the prevention of pellagra, which is becoming more and more prevalent. According to the last official statistics there are about 60,000 sufferers from the disease in Italy, only 3000 of whom are in public institutions. The drying, preservation, and consumption of maize and its derivatives are to be supervised by the local authorities. The notification of every case of pellagra is made compulsory.

Dr. Juergens, for many years assistant of Virchow, and curator of the Pathological Institute, has been appointed professor.

Professor Dr. Steinbruegge, aged 70 years, died at Glessen, Germany.

Dr. Bide, of Cherment, has been appointed professor of pathology and operative medicine at the college of the same city.

Dr. Laurent has been appointed professor of pharmacy at the Rennes Medical School, replacing Dr. Lenormant, who has become professor of medical chemistry.

Dr. Bataille has been appointed professor of anatomy at the Poitiers Medical School.

Post-Graduate School of Medicine in Paris.—An effort is being made to form a Post-Graduate School of Medicine in Paris. A report has been made by the Paris Municipal Council, which favors the foundation of this Municipal Institute of Applied Medicine, for graduated physicians only. A special hospital will eventually be built for the use of the physicians, with dispensaries for all the specialties.

A League Against Syphilis.—As an outcome of the Congress on the Prophylaxis of Syphilis held in Brussels in 1899, a league against syphilis has recently been founded in Paris. The president is Professor Fournier; the vice-presidents are Drs. Béranger, Brissaud, and le Pileur. Dr. Barthélemy is secretary-general.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

August 31, 1901.

1. The Advantages and Disadvantages of the Profession of Medicine.
2. Medicine as a Career.
3. The Medical Curriculum.

Just before the opening of the medical schools each year, the *British Medical Journal* devotes an issue to the various phases of medical education. The present number is devoted to those topics and the articles do not lend themselves to abstracting. [J. M. S.]

LANCET.

August 31, 1901.

1. A Clinical Lecture on the Lessons to be Learned From Vegetable Pathology.

JONATHAN HUTCHINSON.

2. A Case of Cerebral Abscess Complicating Gunshot Injury with Bilateral Loss of Peripheral Vision.

ALFRED W. SANDERS.

3. Some Recent Inquiries and Researches Into the Poisonous Properties of Naphthalene and the Aromatic Compounds. R. P. WHITE and JOHN HAY.

4. On the Prophylaxis of Carcinoma. C. B. KEETLEY.

5. A Case of Spontaneous Gangrene in an Infant.

T. ARMSTRONG BOWES.

6. Hospital Camp Sanitation in South Africa.

BURTON A. NICOL.

7. On the Behavior of Oxy-Hemoglobin, Carbonic Oxide-Hemoglobin, Methemoglobin, and Certain of Their Derivatives, in the Magnetic Field, with a Preliminary Note on the Electrolysis of the Hemoglobin Compounds. ARTHUR GAMGEE.

8. Tonsillotomy Rash. WYATT WINGRAVE.

9. Tuberculosis, Bovine and Human.

FERDINAND HUEPPE.

2.—Sanders reports the following case: A private soldier received a bullet wound of the head about 2½ inches above the external occipital protuberance and 1½ inches to the right of the median line. He immediately became blind and subsequently had fever. Ten days later he was operated upon and 4 drams of pus evacuated from the brain just beneath the bullet aperture. The portions of the brain involved were the anterior part of the occipital cortex on its outer aspect, the hindmost portion of the angular gyrus, and part of the white substance of the occipital lobe including part of the optic radiation. The point of chief interest is the cause for the extensive impairment of vision in both fields by an apparently unilateral lesion. This case tends to show that in man both sides of both retinæ are represented to some extent on one side of the brain. The author says the case may be described as one of left hemianopia due to injury to the occipital lobe with concentric contraction of the fields of vision on the same side as the lesion, due to the destruction of fibres of the optic below the angular gyrus. There was no mind blindness.

[F. T. S.]

4.—Keetley believes carcinoma is caused by a living organism which flourishes in either the secretions or the cells of the skin glands, e. g., milk, butter, cheese, sebaceous material and sweat, and that before milk, butter and cheese are used they should be sterilized by heat, while the secretions of the glands of the skin should be kept away by washing. The commonest seats of primary carcinomata are in the alimentary canal, where food may lodge or adhere. He says that primary cancerous infection in places which are not accessible to milk and its products may be due to conveyed infection via the lymphatics. The secondary carcinoma implies that not only the cancer germ, but the epithelium in which it lives have been conveyed from one part of the body to another. He speaks of the importance of removing chronic inflammations, suppurations and ulcerations; of avoiding well-known sources of irritation of skin or mucous membrane. He says nothing but smooth, clean linen, cotton or silk, and soap and water should come in contact with the nipples. They must not be touched with the hand or fingers. [F. T. S.]

3.—White and Hay discuss the recent inquiries and re-

searches into the poisonous properties of naphthalene and aromatic compounds. This article deals with the dosage and the relative poisonous action of naphthalene and of the aromatic series of compounds. Nitrid aromatic compounds, act as powerful poisons and influence the higher centers. In small doses they act upon the sympathetic nerves, their influence upon the blood is of a hemolytic character, and degeneration takes place in the tissues of certain organs. They found that dinitro-benzene naphthalene was more poisonous than the mono-nitro preparation. Mono-nitro-benzene did not seem to have a poisonous effect upon cats, while dinitro-benzene was found exceedingly poisonous to both animals and men. Tri-nitro benzene was slightly more poisonous than dinitro-benzene. Mono-nitro toluene did not affect cats. They did not experiment with nitro-toluene, as the compound was too dangerous to work with. Tri-nitro toluene was found comparatively harmless. By series of experiments, these authors were able to demonstrate that dinitro-benzene, when in close contact with the skin, is absorbed. [F. J. K.]

5.—Bowes reports a case of spontaneous gangrene in an infant. The infant at birth, on March 25, 1901, appeared in perfect health. On April 7th, a vesicle was noticed in center of the back in the lumbar region; this soon developed into a pustule which was surrounded by a dusky red area. The pustule ruptured, leaving a small circular ulcer, which continued to spread upwards. A red discoloration appeared in the neighborhood of the umbilicus; some of the finger tips also showed discolored patches. On April 13th, the discolored area on the back was three inches in diameter. It still continued to spread upwards and downwards. The skin appeared dusky and lifeless. Death occurred on the 14th. A post-mortem examination was not made. [F. J. K.]

6.—Nicol writes on hospital sanitation in South Africa. This article points out very clearly that the hospital alms, in certain instances, might have been more carefully selected, and also that a more careful supervision of the details of the sanitary work would have resulted in a lessening of the sickness among the hospital staff. The continued use of one particular hospital was not considered disadvantageous by the authorities, but undoubtedly fouling of the ground continually occurred when a large number of typhoid fever cases were brought together for a long time. The advantages of the canvas hospital are stated. The most important one is its mobility. [F. J. K.]

7.—Gamgee discusses the behavior of oxy-hemoglobin, carbonic-oxide-hemoglobin, methemoglobin, and certain other derivatives in the magnetic field. This author first discusses the observations made by Faraday in 1845, who concluded that the blood, notwithstanding the iron which it contains, is a diamagnetic liquid. Reference is also made to Plucker's study on the diamagnetic properties of blood. This investigator demonstrated that the blood corpuscles are more strongly diamagnetic than the plasma in which they float. The object of Gamgee's present investigation was to determine the magnetic properties of crystalline blood coloring matter. In his researches, he employed the electro-magnet constructed by Ladd many years ago, and which was found to be sufficiently powerful. He suspended between the poles of the magnet, by means of a few fibres of silk, a cake of the crystalline bodies of oxy-hemoglobin, CO-hemoglobin, and methemoglobin. He reached the following conclusions: 1. Oxy-hemoglobin, CO hemoglobin, and methemoglobin, are decidedly diamagnetic bodies. 2. Iron-containing derivatives, hematin and acethemin, possess powerful magnetic properties. The decomposition when the hemoglobin is reduced in the presence of oxygen, probably induces the change in magnetic behavior of the blood coloring matter, and the hematin and acethemin. From a preliminary study of the electrolysis of the oxy-hemoglobin and CO-hemoglobin, he found that the iron-containing group of the coloring matter was the electro-negative radical. [F. J. K.]

8.—Wingrave discusses tonsillotomy rash. He found that in his experience, both in the hospital and private practice, a rash often follows tonsillotomy, which is not necessarily specific. He noticed this rash in 34 cases, in the course of seven years. Generally, the rash makes its appearance on the second or third day. It is either papular, roseolar or erythematous in character. It may be situated upon the neck, the chest, the abdomen, the face, and the extremities. Generally, its duration is from two to three days, rarely as long as five. In the 34 cases are in-

cluded three which proved to be scarlet fever, one diphtheria, and the remaining cases were of the non-specific character. [F. J. K.]

MEDICAL RECORD.

September 14, 1901.

1. The Origin and Formation of Fibroid Tumors of the Uterus. MARY A. DIXON JONES.
2. Some Observations on Cardiotherapy. HOMER WAKEFIELD.
3. The Function of the Tonsils, etc. R. C. MATHENY.
4. A Unique Specimen of Vesical Calculi. F. C. LARIMORE.

1.—Jones, in speaking of the origin of fibroid tumors, says that medullary tissue or protoplasm contains the life-elements, and only from these life-elements can come any new formation. This is nature's law. In this way fibroid growths of the uterus are formed, and it is the only way that they or any abnormal growth can be developed. One tissue cannot produce another, nor can one structure give birth to another anatomical formation. When there is a myofibroma not only the uterus is diseased, but it is this disease of the uterus that produces the fibroid growths. Fibroid growths are diseased products and the outcome of diseased conditions. The tissues of the uterus are first reduced to granular or medullary tissue, and from this granular or medullary tissue fibroid tumors are developed. A new growth can only come by some tissue being reduced to its primal elements or to protoplasm. If any part of the uterus is seriously diseased, other portions are in a similar state. The fibroid growth does not depend upon the year, age or period of life; it is when there is infection and consequent inflammation that the growth develops. When the tumor appears it is no indication of the time of life, but it reveals the important fact that there is disease. There is a still more advanced transformation, a more thoroughly diseased uterus, the inflammation going on to ulceration. We may call them fibroid growths, myoma, fibromyoma, or what not; they are diseased products, changing formations, abnormal and uncertain growths, and continually giving new manifestations of disease. [W. A. N. D.]

2.—Homer Wakefield presents some observations on modern cardio-therapy. He details the essential action of the Nauheim bath treatment and the method of mountain climbing first suggested by Stokes and put in practice by Oertel. Speaking of the physiological action of the Schott treatment, while acknowledging the pressure of the abdomen by reflex action of the splanchnics proves a valuable means of resuscitation in collapse, especially when visceral venous stasis is marked, he does not believe that the essential beneficial results of the treatment are due to percussion. He mentions the fact that the physiological method of blood-letting as practiced by the old-time physicians in one respect accomplished the same end as the Schott method, in that it lowered the arterial pressure in reducing the total quantity of blood in the body. He mentions one of the incidental results of the Nauheim bath, the fact that the patients often have an attack of acute or subacute rheumatism after taking their initial baths, and mentions that this may possibly be due to the rapid production of peripheral hyperemia. A valuable bibliography of reference is appended to this article. [T. L. C.]

3.—R. C. Matheny discusses the function of the tonsils, with a few suggestions regarding the differential diagnosis of tonsillar affections. He mentions the condition of simple hypertrophy of the tonsils and the effects of such hypertrophy, as well as conditions of lupus or tuberculosis of the tonsils and malignant diseases. He discusses the differential diagnosis of acute follicular tonsillitis, herpetic tonsillitis and ulcerative lacunar tonsillitis. [T. L. C.]

4.—F. C. Larimore reports a case presenting unique specimens of vesical calculi. The stones were eight in number, uniform in size, tetrahedral in shape, hard, smooth, weighing one drachm each, and were taken from the bladder of a physician. The section of one demonstrates that it was formed from a central nucleus, with concentric layers, each formed in the same way. When all of the stones are matched together a complete hemisphere is formed. A history of the case and report of the opera-

tion shows that there was residual urine in the bladder for a long time; hence the stones were always in a fluid medium. They were removed by a superpubic cystotomy. The stones were all in one place in the bladder, like eggs in a bird's nest. [T. L. C.]

MEDICAL NEWS.

September 14, 1901. (Vol LXXIX, No. 11.)

1. The President's Case.
2. The Garfield Case; A Summary of its Important Features.
3. A Case of Foreign Body in the Esophagus. RUSSELL S. FOWLER
4. Infantile Atrophy. JOHN LOVETT MORSE.
5. The Treatment of Cystitis. CHARLES CHASSAIGNAC.
6. Medical Treatment of Diabetes Mellitus. ARCHIBALD DIXON.

3.—R. S. Fowler reports three cases of the above condition in which esophagotomy was finally resorted to after other efforts at dislodging the coin had failed. In one case the coin was not found by operation, but appeared later at stool. So far as the author's experience goes he recommends complete anesthesia in children; the use of extremely flexible instruments, particularly in children; the lowering of the patient's head as the foreign body approaches the pharynx to avoid of its falling into the larynx; the constant visual supervision of the instrument through the fluoroscope; and finally, that such instrumentation should always precede any operative attempt at removal. [T. M. T.]

4.—J. L. Morse gives the diagnosis of infantile atrophy as follows: The condition is to be differentiated from starvation, wasting secondary to functional or organic disease of the stomach or intestine, congenital syphilis and disseminated tuberculosis. The differentiation from starvation due to congenital deformities is self-evident; that from starvation due to insufficient but suitable food is also plain. The rapid gain when sufficient food is given will settle any doubt. That from starvation due to food of improper character can usually be readily made by a careful consideration of the food in question and by a rapid improvement when a suitable food is given. The differentiation from gastro-intestinal diseases associated with wasting must often be a difficult one, as infantile atrophy is frequently complicated by them. In them, however, the wasting is not the one prominent symptom, as it is in infantile atrophy. It is, moreover, not the earliest, but a late symptom, always following symptoms of gastric or intestinal disturbance. Vomiting and diarrhea are more common. The stools show evidences of indigestion and inflammation not present in those of infantile atrophy. The abdomen is, as a rule, distended. The temperature is usually elevated. There is fretfulness and sleeplessness instead of apathy. The course is not so progressively and uninterruptedly downward. Infantile atrophy in the vast majority of cases occurs in the first six months, and rarely after the first year; the other conditions occur at any age. The history of syphilis in the parents and the presence of other signs of syphilis, active or inactive, make the diagnosis from syphilis with emaciation easy. The differentiation from disseminated tuberculosis, however, is frequently difficult and at times almost impossible, for in the tuberculosis of infancy the local symptoms are subordinate to the general. A family history of tuberculosis or of continued exposure is of certain, but not of great importance. So also is doubtful milk supply. The temperature is likely to be elevated in tuberculosis, but is not always. On the other hand, in some cases of infantile atrophy, especially if complicated, there is fever. Diarrhea cannot be considered as pointing especially to tuberculosis of the intestines, as it may as well be due to some complicating condition. Enlargement of the spleen is in favor of tuberculosis. Enlargement of the liver may occur in either. Rales are almost always present in the lungs of cases of a complicating bronchitis. Solidification of the lung is the most important point in the differential diagnosis, except in the rare instances in which the tubercle bacilli can be demonstrated in the sputum or feces. Even solidification, however, may be due to a complicating bronchopneumonia. [T. M. T.]

5.—In the treatment of cystitis, C. Chassaignac, before considering the treatment, always takes into account the

etiology of the various clinical types, namely: (1) Gonorrheal cystitis. (2) Tuberculous cystitis. (3) Cystitis of urethral stricture. (4) Cystitis of prostatitis. (5) Cystitis of calculus. (6) Cystitis of tumor. (7) Traumatic cystitis. (8) Cystitis by direct infection. (9) Descending cystitis. (10) Cystitis from ingestion of certain irritants. A mere enumeration of them suggests what is in all cases the first indication, namely, the removal of the cause when possible. However, before taking them up *seriatim*, it will be useful to study briefly the general indications applying to a greater or lesser degree to all forms of cystitis. [T. M. T.]

6. A. Dixon, in speaking of treatment of diabetes mellitus from a medical standpoint, says that we can hardly afford to ignore the question of diet. The main object to be accomplished is the reduction of carbohydrates as far as may be. It is not possible to do this absolutely for any length of time, nor indeed does he think it necessary, but by a careful selection of food the amount of starch can be reduced to a very small quantity. It is, of course, necessary in each case to write out and give to the patient careful directions as to diet, but we all know how distasteful a strictly diabetic diet becomes, and how difficult a matter it is to confine a patient to it, in fact, he thinks this is rarely, if ever, done, except in cases of exceptional severity when the patient is himself alarmed. In mild cases, when the amount of sugar is small and is, as so often happens, associated with gout, all that is needed is that the patient be given a diet that is suited for that malady. Cases are often encountered in which, although much starch occasions much glycosuria, a small quantity will not do so, the amount of the disturbance of the glyco-genic function being slight. It is, therefore, important to discover in case of any individual patient how much, if any, starch he can consume without increase of sugar in the urine. He should be allowed to take a certain small quantity of starchy food, and, if no increase of sugar results, a little more may be given, and in this way can be learned what quantity of starch it is safe to give. In a number of the author's cases there was no strict adherence to rules of diet, and in two cases the patients took both bread and potatoes and other interdicted things as well.

[T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

September 14, 1901. (Vol. LXXIV, No. 11).

1. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
2. Professor Max Schuller's Views on Malignancy. JAMES EDDY BLAKE.
3. The Clinical Diagnosis of Carcinoma of the Esophagus, and the Techniques of Gastrostomy. CHARLES GREENE CUMSTON.

2.—Charles Greene Cumston divides carcinoma of the esophagus into five groups: (1) In this form of disease the first symptom which declares itself is the difficulty that the patient experiences in swallowing solid food. The dysphagia occurs suddenly in some instances, while in other cases it develops slowly, becoming more and more intense, while the pain increases as the stricture produced by the neoplasm becomes tighter. When the stricture has closed to such a degree that food can no longer enter the stomach, the esophagus becomes filled with the alimentary mass and dilates above the obstruction, forming a pocket which varies very much from one case to another. In a case that was under the author's care an hour-glass dilatation was found at the autopsy. (2) By far the most frequent, may be properly called the tracheo-bronchial type, not only on account of the extensive and intimate relationship that the esophagus has with the trachea and the large bronchial tubes, but also on account of the tracheobronchial lymphatic glands which are often involved by a metastasis, resulting in a disintegration and secondary infection occasionally, from which fistulae between the trachea and esophagus or the esophagus and the bronchial tubes are formed. Symptoms of compression are first noticed when the neoplasm in the esophagus begins to press on the posterior aspect of the trachea, and finally almost completely occludes the lumen of the latter, and ultimately results in a permanent dyspnea with pulmonary emphysema; (3) This group of cases may be called, the

laryngeal, and under this title may be classed two different forms, one being the result of extension of carcinoma of the mucous membrane, muscles and cartilage of the larynx, while the second is due to the compression or inclusion of the laryngeal nerves. The first type is the most infrequent, because primary carcinoma of the esophagus rarely makes its appearance at the level of the larynx, but when both organs are affected the neoplasm usually begins in the larynx and only invades the esophagus. This type is only a modification of the tracheal variety, and has the same symptoms, namely, dyspnea, and attacks of coughing and suffocation. The second type is not much more frequent than the one that has been considered, and is always extremely serious. The special objective symptoms are produced by a paralysis of the inferior vocal cords; (4) The pleuropulmonary complications following carcinoma of the esophagus may be produced by the extension of the malignant mass to the lung, but often also pneumonia or pleurisy or a combination of both is met with, although the lung and pleura are free from the neoplasm. When extension of the growth does occur, we may have either a serous or a purulent pleurisy, a hydropneumothorax or pneumonia. Usually one finds a mixed lesion: there are a few carcinomatous nodules disseminated in the pulmonary tissue which have become the nucleus of hepaticization, but carcinoma can never reach the lung without involving the pleura, and consequently, along with a pulmonary lesion, there is always a pleurisy, usually with a bloody liquid. This pleurisy may be encysted and give stethoscopic signs of pneumonia; (5) The fifth and last group of carcinoma of the esophagus which the author describes is the cardiovascular form. The heart and large vessels are in too intimate relation with the esophagus to escape lesions in many cases where this organ is the seat of carcinoma, and consequently we often meet with complications either of the heart or pericardium, the aorta, the carotid, the inferior thyroid artery, the brachiocephalic trunk, or the vena cava or the subclavicular veins.

[T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

September 12, 1901.

1. The Use of Gynecology by the General Practitioner. EDWARD REYNOLDS.
2. Some Cases of Cancer Treated by the X-Rays. FRANCIS H. WILLIAMS.
3. General Anesthesia in Operation upon the Nose and Throat.—Nitrous Oxide, Chloroform and Ether. F. B. HOPKINS.
4. Eosinophile Leukocytes and Nuclein Bases. EDWARD T. WILLIAMS.
5. Discussion Upon Climatic Treatment of Pulmonary Tuberculosis versus Home Sanatoria. S. G. BONNEY.

2.—The cases of carcinoma that have been treated by Williams with the X-rays include, not only the smaller and lesser forms, but also some that were believed to be inoperable, for example, a carcinoma of the eyelid in an old man. Microscopic examination has been used, not only to make the diagnosis, but also for the purpose of observing the changes that were taking place in the growth during the treatment. The tumor was a typical, rapidly growing epidermoid carcinoma and, after the treatment had been progressing for some time, the microscope showed that the central portion of the ulcerated area was free from carcinoma cells, but that near the edges of the ulceration there were still a few islands of epithelial cells. The persistence of the epithelial cells in this area may have been due to the fact that the periphery of the growth was in some way protected from the X-rays by the lead shield used to prevent the rays from striking the healthy skin. In treating carcinoma of the skin with the X-rays there is danger of producing an X-ray burn. Williams' experience has led him to believe that the X-ray may be used in the early stages of skin carcinoma. [J. M. S.]

3.—Hopkins finds that nitrous oxide is a safe anesthetic and that it is not disagreeable to the patient, either while he is taking it or in its after effects. The short period of the duration of the anesthesia produced by it renders it of doubtful utility in operation on the nose and throat. Chloroform is particularly dangerous when administered to children who suffer from adenoids. The author has had no serious after effects from the use of ether. He recommends the rectal administration of ether after the anes-

themia has been induced by the usual method of inhalation. [J. M. S.]

4.—In 4 of the eosinophilous diseases, namely, leukocythemia, asthma, helminthiasis and trichiniasis, eosinophilic leukocytes are constantly associated with all the nuclein bases either in the blood, the marrow, the glands, the organs, the tissues or the excretions. The presence of the nuclein bases in eosinophilia proves that there is a decomposition of nuclein going on somewhere in the body. But nuclein is only to be found in nuclein-bearing cells. According to Williams, nuclein-bearing cells, therefore, are undergoing decomposition and these cells are the eosinophiles themselves. [J. M. S.]

5.—Bonney is an earnest advocate of the value of climate in the treatment of consumption and he is, likewise, heartily in support of a suitable regime of daily life and management, but believes this to bear to the preceding condition the relation chiefly of a most valuable adjunct. While each separately constitutes an exceedingly important factor in the effort to secure arrest, they are, nevertheless, mutually interdependent, with the best results obtained only through their conjoined effect. He believes, however, that life in a sanatorium is not the *sine qua non* for the observance of the strictest disciplinary system of regimen. The prevailing tendency to provide home sanatoria for all classes and to repudiate the established facts of climatic influence cannot fail, in the end, to prove a most unfortunate delusion. [J. M. S.]

JOURNAL OF AMERICAN MEDICAL ASSOCIATION.

September 14, 1901.

1. The Nature of the Cancerous Process.

ROSWELL PARK.

2. Early Diagnosis in Carcinoma.

CHARLES A. POWERS.

3. Some Phases of Malaria. J. B. McELROY.

4. Medical Shock. O. T. OSBORNE

5. The Spread of Tuberculosis by Coughing.

L. NAPOLEON BOSTON.

6. Treatment of Certain Forms of Cancer by the X-Rays.

FRANCIS H. WILLIAMS.

7. The Relation of Unbalanced Physical Development to Pubertal Morbidity as Shown by Physical Measurements. W. S. CHRISTOPHER.

1.—Park says the only hypotheses concerning cancer that are worth mentioning are the dietetic, the embryologic, the irritation and the parasitic theories, and that the dietetic theory is of importance only in case we may succeed in maintaining the parasitic nature of the disease. He believes cancer to be due to parasites, and that these parasites have been discovered in the Buffalo laboratory. The arguments adduced in favor of the parasitic hypothesis are those by analogy, comparative pathology, the study of well-known affections which produce tumor formations, the study of metastases, the local infectivity of the cancerous lesions, and the microscopic appearances of the growths. Tumors in plants are due to parasites as well as tumors that are common in the lower animal. The higher we go in the animal scale the more closely these tumors resemble those of human beings. By a study of the infections which produce tumor formation one of the strongest arguments is set forth. This is not a question of bacteria, but a question of organisms, about which we as yet know very little. In answering the argument against the parasitic theory, that the duration of cancer is too long to permit its recognition as an infectious disease, the facts that cancer is often as rapid as tuberculosis and more rapid than syphilis or leprosy, are given. He claims that Dr. Gaylord had absolutely produced adenocarcinoma by inoculation in animals. The organisms of cancer appear to belong to the protozoa. They undergo ameboid movement, but a minute description of these organisms can scarcely yet be given. The most successful way that has yet been devised to cultivate them is to deposit them in collodion sacks in the living animal. He says that if cancer be recognized and be removed thoroughly it can be absolutely cured. If we establish the parasitic cause it is not too much to hope that some agent, be it vegetable or mineral drug, or animal antitoxin, may yet be discovered by which the ravages of the disease may be checked or prevented. [F. T. S.]

2.—Powers deplores the delay in diagnosis of carcinoma. This is due to the non-perception of the patient or to his fear of being given an unpleasant report, or to a lack of

recognition by the medical attendant. The first may be met by a systematic instruction of the laity through suitable lectures, magazine articles and the like. If the blood exhibits no giant and nucleated forms of red corpuscles and no leukocytosis, we may exclude the presence of pernicious anemia. Tentacular and pseudo-parasitic forms of red corpuscle, with abundant hematoblasts, point to cancer. Marked anemia without an anemic murmur suggests cancer. That the hemoglobin may be reduced is true of simple gastric ulcer as well as cancer. Of seventeen cases of cancer of the stomach a digestion leukocytosis was found in four, and hydrochloric acid persisted in certain instances. The discovery of the *Boas filiform bacillus* in large amounts in the stomach contents justifies the diagnosis of cancer. The diagnostic reaction from the use of cancer serum is also mentioned. This is prepared from the parasite of the so-called cancer of trees, and is without effect when injected into animals; but in man and animals with cancer, injections produce a rise of temperature of from 1 to 3 degrees in from two to four hours. Larger doses produce chills, rapid pulse, cardiac palpitations, headache and thirst; the crisis terminates at the end of some hours in polyuria and profound sleep. Auto-inoculation as an aid to the early diagnosis of cancer is discussed. Concerning the microscopic examination, he says that experienced surgeons resort to trial excisions in suitable doubtful cases. Some claim this to be dangerous because of the rapid dissemination which the excision may initiate, while all recognized the element of error which may be present in an individual instance. The writer believes that trial excision should always be avoided, if possible, and that it is best to always be prepared for immediate operation. The greater the surgeon's experience, the greater reliance will he be able to place on his general estimate of the individual case. [F. T. S.]

3.—McElroy discusses some phases of malaria. The author reports a case of malaria which occurred in a strong negro, 60 years of age. The patient developed coma, which lasted for seven hours. During the illness large bullae developed on each knee. The blood examination revealed estivo-autumnal parasites. The fever subsided after vigorous anti-malarial treatment in seventy-two hours. After four weeks the skin where the bullae appeared became gangrenous. The patient finally recovered. The author states that in the Mississippi Valley a few cases of pernicious malaria have been reported, in which the benign parasites were responsible for the symptoms. In the author's experience he has found that a large majority of malarial fever occurring in the Mississippi Valley were of the estivo-autumnal character. He also emphasizes that, as a rule, two predominating broods of parasites are responsible for grave symptoms. In the author's experience he has not found the negro immune, but, on the contrary, the comatose, convulsive, cardiac, gastric, choleric, hemorrhagic and hemoglobinuric types occurred in negroes, and in some of the cases death resulted. The article is concluded with a report of a case of estivo-autumnal malaria, with multiple gangrene, which occurred in a mulatto girl, four years of age. [F. J. K.]

4.—Osborne suggests the term **medical shock** as meaning a condition due to many acute chronic diseases, and characterized by rapid heart action, irregular, soft, and perhaps diastolic or intermittent pulse, incomplete inspiration without actual dyspnea, and precordial oppression. The author believes that we are justified in using the term, as we are using the term, surgical shock. He contends that this condition is brought about by vasomotor paralysis, except perhaps in some very acute diseases, where there may be excessive hemolysis. The treatment of medical shock is laid down on the same lines as that of surgical shock. [F. J. K.]

5.—Boston has made a series of investigations to show that tuberculosis may be spread by coughing. He found that tuberculous patients, during the act of coughing, would eject a spray of fine droplets of sputum. He collected this spray of sputum on a mask, placed in front of the mouth and nostrils. He studied 50 cases of unquestionable tuberculosis. In 38 of these he was able to detect tubercle bacilli in variable numbers in the spray ejected by coughing. The author suggests that this method of collecting may be of some value in the diagnosis, particularly in those cases of tuberculosis where the chest examination is unsatisfactory, and the sputum is swal-

lowed. We are reminded that it is probable that a number of acute infectious diseases may be spread by coughing. [F. J. K.]

6.—Williams remarks the increase of cancer in the various countries. From the standpoint of treatment by the X-rays, he divides cancers into the external and internal forms, and discusses the external form only. Diagnosis of all cases has been made by a microscopic examination. He has treated cases of epidermoid cancers, typical epitheliomas and rodent ulcers, and also cases which have had the clinical appearance of beginning cancers, but which, under the microscope, were found to be plasmoma or simple cases of ulceration, necrosis or inflammation. He says we have in this new agent a useful therapeutic agent for all forms of external growths except syphilis. All forms of growths yield to the treatment by the X-rays. Great care is necessary in carrying out the treatment; the surrounding parts should be protected from the action of the rays, and the treatment should not be so vigorous as to cause an X-ray burn. The advantages of this method are no pain, healing without a burn, some cases improve after a certain number of sittings without further renewal of the treatment, treatment can be carried on without interfering with the work of the patient, and it causes a cessation of pain and foul odor from ulcers. Its disadvantages are: The necessary apparatus is expensive and difficult to use, and that the treatment must be continued for some weeks. He cites three cases which were cured. These were an epidermoid cancer of the lip, an epithelioma of the eyelid and a rodent ulcer on the side of the nose and cheek. He mentions a fourth case, an epithelioma of the right hand, which is still under treatment, and is markedly improving. [F. T. S.]

7.—Christopher writes on "the relation of unbalanced physical development to pubertal morbidity, as shown by the physical measurements." In this article are included a number of statistical tables. He offers the following conclusions: At the pubertal period there is an exaltation of life processes, which manifests itself not only in an increased rate of growth, but also in an increase of physical power. In girls this exaltation begins at an earlier age and is of shorter duration than in boys. The period of puberty is one of great individualization. During the ages of childhood (including puberty) the range of physical measurements is of uniform distribution above and below the line of average measurements. Morbidity is high at puberty, while mortality is low. The principal morbid conditions of the physical, intellectual and emotional turmoil which characterize puberty are neuroses, psychoses, neurasthenias, cardiopathies, deformities and anemias. An important factor in the production of morbid conditions is unbalanced physical development. This unbalanced physical state occurs during the developmental period of life, and is especially marked at puberty. [F. J. K.]

AMERICAN MEDICINE.

September 14, 1914.

1. Wounds of the Thoracic Duct Occurring in the Neck. Report of Two Cases. DUDLEY P. ALLEN and C. E. BRIGGS. (Continued.)
2. The Practice and Scientific Value of Blood Examination to the Medical Man and Surgeon. ROBERT N. WILLSON. (Continued.)
3. Condition of Epileptics in Pennsylvania. WHARTON SINKLER.
4. Modern Experience vs. Ancient Tradition Concerning Alcohol as a Beverage and Medicine. H. P. DIDAMA.
5. Atropia as an Efficient Aid in Relieving Acute Pulmonary Edema. CHARLES O'DONOVAN.
6. A Note on Bacillus Coli Communis in a Possibly New Role as an Inhibitor of HCl in the Stomach. G. W. McCASKEY.
7. The Eye Complication in a Case of Ankylostomiasis. HOWARD F. HANSELL.
8. The Lane Lectures on the Social Aspects of Dermatology. No. 1. MALCOLM MORRIS.
9. Intra-spinal Cocainization, Etc. BURDETT ATKINSON TERRETT. (Continued.)

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

3.—Wharton Sinkler has made a personal canvass by means of letters to the different State and private institutions in Pennsylvania as to the condition of epileptics in

the State. He has had reports of 1,164 cases, and these incomplete returns show that the epileptics bear a proportion of 1 to 5,414 to the population. These are in public institutions. There are probably twice as many who are cared for by their families, so that we are safe in assuming that there is at least one epileptic to every 2000 persons. A large number of epileptics in the different institutions is undoubtedly able to do a moderate amount of work if given the opportunity. A great majority of the cases in asylums and other institutions is insane, but many of this number could be employed, and thus be benefited physically. The benefit of a well-regulated life and constant out-door employments to the physical health of the patients is very great. It has been noted that a very much smaller amount of medicine is required than formerly given. At the Pennsylvania Colony Farm for Epileptics one patient, who had several attacks each day, passed eight months without a seizure. Some patients went an entire year without an attack. A considerable number had one fit instead of a number, as in the past. A decided improvement was noted in the mental action and intelligence of the patients. [T. L. C.]

4.—H. D. Didama presents a paper on *modern experience vs. ancient tradition concerning alcohol as a beverage and medicine*. This author does not use the drug as a beverage nor prescribed it as a medicine. [T. L. C.]

5.—Charles O'Donovan reports upon *atropia as an efficient aid in relieving acute pulmonary edema*. He gives at once 1/100 grain of atropia sulphate, with 1/50 grain of strychnia sulphate. While this is being absorbed, attention can be given to preparations for *venesection*, if this should prove necessary. It is safe to begin, he says, with 1/100 grain of atropia, and repeat it in a half hour or at longer intervals, until the system is well under its influence. He has had excellent results from this treatment, and advises its employment. [T. L. C.]

6.—G. W. McCaskey contributes a note on *bacillus coli communis in a possibly new role as an inhibitor of HCl in the stomach*. A case is reported in which the gastric contents were found to contain almost a pure culture of the *b. coli*. There was not a trace of HCl after a test breakfast. Abundance of lactic acid was present. There were no microscopic evidences of malignancy, either in the shape of cell-structure or a typical mitosis. After washing out the stomach thoroughly, oatmeal gruel was given and the contents withdrawn in an hour. There was not a trace of lactic acid, but 65 degrees of free HCl. A full test breakfast was ordered, and seven hours later a test was made. No lactic acid and free HCl were found. He gives three possible explanations of this phenomenon. 1. The possibility of variation, due to neuropathic conditions. 2. The strong stimulation of gastric mucosa by the irrigation. 3. The removal of immense quantities of bacillus coli communis, which was in this case the undoubted producer of lactic acid. He believes that the growth of the organism acted by means of its metabolic products as an inhibitor of HCl secretions. [T. L. C.]

7.—Howard F. Hansell reports the *eye complications in a case of ankylostomiasis*. The conjunctiva was transparent, the sclera white and bloodless, the cornea clear, the musculature unaffected, the lens and vitreous clear. The fundus reflex was light pink in hue, like that seen in pronounced blondes, although the patient was a decided brunette. Both optic papillae were edematous, their outlines indistinct or lost, and the retinas infiltrated with serum in a small zone surrounding each disc. In the right eye, to the lower nasal side of the papilla, were two small linear extravasations, evidently in the fibre layer of the retina. In the left eye, in the neighborhood of the fovea, was a round hemorrhage, probably subretinal, and a few scattered flame-like extravasations. The retinal arteries were distinguished as nearly transparent lines. Their coats were not thickened nor were the vessels contracted. The loss of coloring matter in the blood gave them a peculiar appearance. It seemed as though they were filled with water rather than with blood. The veins were tortuous and darker in color than the arteries, but much lighter than in health. The blood current could be distinctly seen as it coursed through the veins. Where the vein was inclined toward the observer the contained blood appeared dark, but in the horizontal part of the vessels the blood column reflected much more light. The blood extravasations were not due to ruptured vessels, but rather were a transudation, made possible by its altered constituency. [T. L. C.]

VRATCH.

June 2, 1901. (Vol. XXII, No. 22).

1. On Tuberculosis of the Lymphatic Glands.
B. K. FINKELSTEIN.
2. On the Application of Psychotherapy in Childhood.
H. A. PETERS.
3. Brandt's Method of Treating Diseases of Women, and Some of its Peculiarities.
D. D. SANDBERG-DEBELE.
4. The Economics of Births, Treatment and Mortality.
P. A. GOVORKOFF.

1.—Finkelstein presents a statistical review of 456 cases of tuberculosis of the lymphatic glands treated at the Male Obouchoff Hospital within the last 10 years. According to age, the cases were distributed as follows: Below 10 years, 7; from 10 to 20, 329; from 20 to 30, 97; from 30 to 40, 18; from 40 to 50, 3; from 50 to 60, 2. Of 30 patients in whom the inguinal glands alone were involved only 9 were between 10 and 20; the others ranged between 20 and 50. The greater frequency of tuberculosis of the inguinal region in adults is explained by the supposition that in such cases the virus gains entrance through the genital organs, although concurrent affection of the latter has been observed only in 4 cases. Concurrent affection of the bones or joints was rare. Of 31 cases in which the axillary glands alone were involved, tuberculosis of the bone has been observed only in 4. Of 30 cases of tubercular affection of the inguinal glands of the bones were involved only in 2. Pulmonary tuberculosis was rare, only 51 patients (11.2) having been affected. Scurvy occurred as a complication in 5 cases (1.3%). The following conclusions are drawn: 1. Tuberculosis of the lymphatic glands is a very serious disease, demanding the closest attention on the part of the physician. The appearance of slight enlargements is a grave foreboding of a serious affection. 2. In the incipient stages general systemic treatment alone is sufficient. However, when the glands are glued together, enlarge and begin to suppurate, satisfactory results can be obtained only from an operation. 3. Of the local applications the best is heat. Injections of tuberculin, arsenic, chloride of zinc and nitrate of silver only hasten, but do not cause absorption. 4. Extirpation of the affected glands should be performed with the utmost care. All of the involved tissue should be removed, and the blood vessels first freed from the surrounding tissue to avoid injury. 5. To prevent relapses, general treatment is indicated. All our efforts, however, are frustrated by the terrible conditions under which these patients live and work. It is therefore necessary to introduce broad sanitary measures, which alone can render effective the fight against tuberculosis of the lymphatic glands in particular. [A. R.]

2.—Peters treats of the application of psychotherapy in the treatment of various hysterical neuroses of children, describing a number of illustrative cases. He has employed successfully hypnotic and other forms of suggestion in the following conditions: Hysterical aphasia, enuresis, hysterio-epilepsy, simple hysteria, hysterical chorea, hysterical paresis of the diaphragm, congenital epilepsy, chronic constipation, traumatic neurosis and chorea of Charcot. The best results were obtained in hysterical paresis, and enuresis dependent on hysteria. The author points out the difficulty of recognizing hysteria in children, since many of the essential and characteristic symptoms of that affection are lacking, such, for instance, as hemi-nesthesia, globus hystericus, sudden fits of crying, etc. On the other hand, change of character and disposition, sudden changes from crying to laughing, so characteristic of the hysterical adult, are normal phenomena in a child. Occasionally a grave disease is mistaken for hysteria, owing to the confusing symptoms. In one case the author made a diagnosis of hysteria in a little girl who proved to be suffering from a developing osteo-sarcoma. In another the first stages of myelitis and in a third the beginning of spondylitis were masked by hysterical symptoms. The various methods of inducing hypnosis in children are discussed. [A. R.]

3.—Sandberg-Debele advocates Brandt's method of treating diseases of women, claiming that in it we possess the very best therapeutic agent. The method consists in massage and Swedish movements, and is indicated in various inflammatory processes of a chronic nature. The author employed the method unaided in 25 cases of diverse

affection of the uterus and adnexa with most gratifying results. A detailed history of each case is given and the indications for this mode of treatment fully discussed. [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

June 6, 1901.

1. A Case of Foreign-body in the Cardiac Portion of the Stomach, Diagnosed by Radioscopy and Esophagoscopy. Gastrostomy. Cure. G. GOTTSTEIN.
2. Obstruction of a Coil of Small Intestine by Ring-like Adhesion of the Appendix. HERMES.
3. Further Investigations Concerning Dysentery and the Dysentery Bacillus. KRUSE.
4. The Condition of Blood Pressure in the Treatment of Chronic Heart Diseases. SCHOTT.
5. Fatal Stab-Wound of the Heart without Macroscopic Blood Stains on the Knife. FOUCK and PRAUM.

1.—The foreign body in this case consisted of a plate with false teeth which had been swallowed six months before admission, but had given no trouble until three months before. As the course of events afterward showed the plate must have lodged at first in the lower part of the esophagus, but in such a position as to leave an easy passage way for food and drink. Three months afterward sudden intense symptoms of esophageal obstruction set in, probably as the result of the plate's dropping down the cardia itself. These symptoms afterward improved, but pain and difficulty on swallowing, referred chiefly to the region of the cardia were constantly complained of. The relief in the symptoms proved to be due to the fact that the plate had passed the cardiac opening. There was much difficulty in diagnosis as the history seemed strange. No foreign body could be felt with a sound in the esophagus or stomach, and it was suspected that the patient had grown hysterical over the matter and the plate had either never been swallowed or had passed completely through the alimentary tract. By combined esophagoscopy and radioscopy, however, it was learned that on the one hand, there was an ulcer with pus oozing from its depths in the cardiac portion of the stomach near the esophageal opening, and there was, on the other hand, a shadow at about the level of the cardiac orifice that might readily be the plate. It was decided that the plate was at least partly without the stomach, having perforated the wall, and operation showed the correctness of this view. The plate projected somewhat through a fistula very near the cardia, but the greater portion lay outside surrounded by a pus cavity. After opening the stomach, the plate was successfully removed, though with some difficulty. The patient recovered entirely. The situation of the foreign body was unique so far as the literature seems to show. The case is also evidence against Rosenheim's view, based upon anatomical studies, that the cardia lies normally opposite the twelfth dorsal vertebra. In this case the shadow of the plate which was just about at the level of the cardia, was not lower than the 9th dorsal and Gottstein considers that this evidence obtained intra vitam is better than any post mortem evidence; the conditions present were, however, certainly not such as necessarily to indicate the level of the normal cardia. [D. L. E.]

2.—The chief interest in the case is indicated by the title. The appendix was found drawn across the cecum and adherent by its tip. Through the loop thus formed had slipped a portion of the small intestine and the latter had been absolutely firmly caught and was entirely obstructed. The chief interest in diagnosis was between appendicitis with peritonitis, perforating gastric ulcer and peritonitis, and ileus. Appendicitis seemed not very probable as there were no local appendiceal symptoms and there had been none recently at least. The symptoms just preceding the attack and for a long time before had been chiefly gastric and the sudden onset of symptoms strongly resembling peritonitis rendered perforating gastric ulcer probable, though the flat abdomen, the full strong pulse and the very sudden onset indicated volvulus. The operation disclosed the condition mentioned and led to entire recovery. [D. L. E.]

3.—Kruse reports further investigations concerning the bacillus which he has previously described (*Deutsch. Med. Woch.*, 1900, No. 40). In an insane asylum near Düsseldorf there occurred one case of dysentery and three months afterward 15 more cases were observed. The blood serum

of eight persons was examined for agglutination with the previously described bacillus, and reaction was obtained in seven. The eighth was from a patient who had been sick only three days. Kruse previously stated that serum from normal persons might react with the bacillus in dilutions less than 1 to 50. He no longer believes this fully, however, since about fifty healthy persons showed absolutely no reaction in any such dilution, and he thinks now that the persons who were supposedly normal, but had given the reaction had probably had dysentery earlier. He describes the case of his assistant who acquired dysentery very probably as the result of laboratory infection with Kruse's bacillus. Since his stools contained the bacillus in large numbers, his blood serum reacted in high dilution and he had in no other way come in contact with dysentery, nor had dysentery occurred lately in that neighborhood (Bonn). This, Kruse considers a satisfactory case of experimental infection with his bacillus. He thinks the bacillus is found in America also as Spronck reported to him that he had found it in Utrecht in a man recently from America who then had dysentery. Flexner's bacillus differs from Kruse's in that it has slight motion, but there is no other well marked difference and it agglutinated after twenty-four hours with a serum that agglutinated Kruse's bacillus. Kruse believes that his bacillus, Flexner's and Shiga's are all closely related, but not identical, and that numerous organisms capable of causing dysentery will probably be found. (To be Continued.) [D. L. E.]

4.—Schott found after a long series of experiments with Gaertner's tonometer that in cases that did well with the bath treatment the blood pressure rose during the treatment. While cases that did badly showed a fall of blood pressure. The latter cases were of the classes that he has previously stated should not be given Nauheim treatment. He considers that Gaertner's tonometer should be regularly used in cardiac cases; if during treatment the blood pressure rises the treatment is doing good and the prognosis is correspondingly better. If the pressure falls the treatment is probably harmful and the prognosis worse. [D. L. E.]

5.—The case was that of a man who had committed suicide. It was of interest only in that the knife which the wife said he had used was apparently not blood stained. Chemical examination (hemin-test) showed blood in one spot after it had been dry for two weeks. [D. L. E.]

BRITISH GYNECOLOGICAL JOURNAL.

May, 1901.

On Hemorrhage, Hemostasis, and Protection of the Bladder and Ureters in Dealing with Myomata, with Some Remarks on the Choice of Operation and Operative Technique. FREDERICK EDGE.

Edge discusses the various methods of securing blood-vessels and arresting hemorrhage that have from time to time been employed by the different operators in abdominal surgery, including the method of angiotripsy. In hysterectomy he claims, that direct ligation of the vessels is to be aimed at; for this catgut is best because it is absorbed. When direct ligation is impossible, the broad ligaments should be ligatured in sections; the sections should be small, and the uterine and ovarian vessels when seen on the face of the stump should be separately secured. Angiotripsy should be always used for small points, and combined with ligation may be used for large vessels. Clamps for the broad ligaments or *serre-nœuds* for extra-peritoneal stumps are only to be used when ligation is impossible or some secondary action is aimed at, as in vaginal hysterectomy for prolapse, or finally, when rapidity of operation is of unusual consequence. In using catgut, care is required not to include too much tissue in each ligation, not to use too great force, and not to tie any vessels on the face of the stump. Silk is our great reserve when catgut is bad or unsatisfactory to the surgeon. When catgut or silk sutures have been used the after course is usually straight and smooth. From his personal experience in the surgery of myomata, he is inclined to conclude as follows: 1. The vagina should be carefully cleaned and the uterine cavity douched, and even curetted when possible. 2. The essence of all methods is the securing of the arterial supply of the uterus early in the operation. 3. It is essential that the operator should know the anatomy of the uterus and the pelvic organs. 4. He must be ready to perform panhysterectomy in what may appear to be the

simplest case. 5. In panhysterectomy the vaginal attack may, when the cervix is free, remove all difficulty, and in any case facilitates the operation and gives the operator a clearer conception of what he has to do. 6. Panhysterectomy with suture of the peritoneal flaps and care as regards leaving plenty of vaginal mucous membrane is the safest operation, and is the only true and complete treatment of the myomatous uterus. 7. The question of malignant disease (degeneration or recurrence) in the cervical stump is a subject requiring further investigation. [W. A. N. D.]

August, 1901.

A Case of Puerperal Septicæmia, Pyæmia and Insanity.

F. PERCY ELLIOTT.

Elliott describes a case of considerable interest in which puerperal infection seems to have been due to the use of an aseptic vaginal douche on the thirteenth day after delivery, and in which the patient was treated with anti-streptococcal serum and recovered, after death appeared to be inevitable. The history of the case shows that prior to infection there was no septic symptom whatever. The cause of sepsis was undoubtedly some *matrices morbi* lurking in the vagina and conveyed into the uterine cavity by injection. In addition to her septic condition the patient developed a puerperal mania. No local uterine treatment was employed at any time after the initial rigor. There developed inflammation of certain of the joints of the body; these were treated with warm fomentations, and the application of equal parts of glycerin and extract of belladonna during the acute stage, and when the inflammation had subsided, by massage and enforced movements. [W. A. N. D.]

JOURNAL DES PRATICIENS.

July 13, 1901. (15me. Année, No. 28.)

1. The Treatment of Suppuration of the Upper Extremity. MAUCLAIRE.
2. The Therapeutics of Lecithin. H. HUCHARD.

1.—Mauclaire divides his subject into abscess of the fingers and of the hand. In either case they may be superficial or deep. Superficial abscess of the fingers is called paronychia or whitlow, and is generally a reticular, diffuse, subepidermic angioleucitis. This may be erythematous, phlyctenular, peri-ungual, sub-ungual, or retro-ungual. It this goes further, it becomes a subcutaneous paronychia. This may be gangrenous, erysipelatous, diphtheritic, etc. The diagnosis is easy. Osteomyelitis, brain abscess, septicæmia, etc., very rarely occur. The treatment is free incision. Deep whitlows may affect the tendons, the phalanges, or the joints of the fingers. When teno-synovitis occurs, the fingers are drawn up, and immediate incision is necessary. Phalangeal osteomyelitis is frequently secondary, but may be primary. There is much pain, and immediate incision is again indicated. When arthritis occurs, the prognosis is less favorable, as ankylosis generally results. Abscess of the hand may be palmar or dorsal in position. Mauclaire divides palmar abscess into the supra-aponeurotic, which may be cutaneous or subcutaneous, and the sub-aponeurotic, or deep palmar abscess. The cutaneous palmar abscess is erythematous or phlyctenular. There is great pain with subcutaneous palmar abscess, limited especially to one spot. Movement of the fingers is, however, preserved. Deep palmar abscess may be due to lymphangitis or synovitis. The fingers are retracted, and diagnosis is not difficult. Incision and thorough drainage will be necessary in all of these forms of palmar abscess. [M. O.]

2.—Huchard reports a case of diabetes in whom the weight increased and the glycosuria diminished upon lecithin. He has used it also in anemia, chlorosis, tuberculosis and neurasthenia, with good results. The medication is not new, since it was used by Gobley in 1846, and is well described in 1874 in Gauthier's Chemistry. Huchard states that the uric acid excreted diminishes with the use of lecithin. The increase in weight following its employment is marked. [M. O.]

Society Reports.

CANADIAN MEDICAL ASSOCIATION.

Reported by

DR. GEORGE ELLIOTT.

Our Special Correspondent.

Continued from Page 413.

SECOND DAY—EVENING SESSION.

Cancer of the Uterus, with Lantern Demonstrations.—This was a very interesting and profitable demonstration conducted by Dr. Thos. S. Cullen. In introducing Dr. Cullen, Dr. Chown spoke of him as a young Canadian who had gone wrong in having removed to the United States and having never returned. Dr. Chown considered that the experimental work pursued by Dr. Cullen, if done in Canada, would meet with as signal success as that which attended his labors in the United States. For over an hour Dr. Cullen was engaged in showing a large number of excellent lime-light views, the results of microscopic examinations of tissues, each view being lucidly explained by the demonstrator. At the close of his excellent demonstration Dr. Cullen was accorded a hearty and unanimous vote of thanks moved by Dr. Eccles of London and seconded by Dr. Gray of Winnipeg and carried amid great applause.

Skin Diseases, with Lantern Demonstration.—This was another valuable demonstration and was conducted by Dr. Francis J. Shepherd of Montreal. He first exhibited cases of blastomycetous dermatitis and further spoke of a few cases which he had seen of this disease. Views were given also of cases after treatment with iodide of potash. Some interesting views were those caused by eruptions of which he showed two or three due to salicylate of soda. In one of these Dr. Shepherd said the lesions first came out with large welts like urticaria. This is rather a rare form of drug eruption. It appeared after two doses of ten grains each of the drug. One case almost died of acute laryngitis from the eruption in the throat. Amongst other views shown were papular purpura, which is generally associated with rheumatic attacks, psoriasis of the nails, X-ray burns as the result of one application and most interesting were cases of smallpox, one showing pustules upon the palm of the hand. Views of feigned eruptions were also shown. This demonstration proved so interesting to the members that Dr. Shepherd was frequently called upon to give more or go on.

The Varieties and Distribution of Bacillus Diphtheriae and their Clinical Significance.—Dr. F. F. Westbrook of the University of Minnesota presented a paper on this subject, primarily from the laboratory point of view. He exhibited a carefully prepared chart showing in tabulated form the results of numerous examinations in schools and stated the conclusions which he deduced from these facts. Formerly it was believed, that the bacillus remained localized at its point of entrance, but now, within recent years, however, careful observations have showed that the toxins had been distributed throughout the body and the bacillus itself found in organs far removed from the atrium. From evidences of 230 cases of diphtheria at autopsy, observers had called attention to the frequency with which the bacillus of diphtheria was found in the organs of the body. The bacillus and its toxins have been shown to be capable of producing lesions which differ greatly from each other, as in ulcerative endocarditis, meningitis etc. In summarizing Dr. Westbrook said, where each school was reported and where great care was taken in the isolation of clinical cases with typical form, the percentage was very small.

Removal of Hairy Tumor from the Stomach weighing 23 ounces...Specimen. Recovery, by Dr. H. A. Bruce, Toronto.—The subject of this case was a woman aged 26; she had been married six years and had two children. A lump was noticed in the abdomen two months previous to the birth of the last child. Patient had no symptoms. The

lump was about 5 inches in width and it could be lifted forwards. It reached to within 3 inches below the umbilicus. It gave the patient no special discomfort, there being absolutely no symptoms present. Dr. Bruce advised exploratory incision. This was done on July the 22d last at St. John's Hospital, Toronto. On opening the abdomen in the middle line the spleen and kidneys were found in a normal condition, but there was a large mass in the neighborhood of the stomach. The surgeon could make out the mass lying free in the stomach, a portion extending through the pyloric end of the stomach. An incision was made into the stomach and the mass removed. After removing the mass of hair, the opening of the stomach was closed in the usual way.

Hot salt solution was given for two hours and nutrient enemata for six hours. Twenty-three hours after the operation sips of hot water were given by the mouth. Forty-eight hours after operation patient was given one half an ounce of milk and lime water every hour. She left the hospital on the 20th day. The tumor was entirely of hair exactly the same color throughout and the same color as the hair on her head. It was about 24 inches in length, being about 2 inches in diameter at one end and gradually tapering down to a point at the other. Dr. Bruce considered this case rare but offered no solution as to how the hair got into the stomach. There were no evidences of hysteria present in the patient. There are some specimens of hairy tumors in the McGill Museum at Montreal.

THIRD DAY—MORNING SESSION.

A Case of Transplantation of the Ureter for Cure of Uretero-Vaginal Fistula, by A. Laphorn Smith, Montreal.—This occurred in a married woman, thirty-four years of age, who came to Dr. Smith on the 1st of July, 1901. During parturition forceps were employed and the vagina lacerated and ever since there has been a constant flow of urine by the vagina. Operations for her relief had been performed in England without success. Dr. Smith had seen Saenger perform an operation of this character in Leipsic, when he was there three years ago, namely, to open the peritoneum running over the large vessels at the brim of the pelvis and to feel for the artery, see the vein and pick up the third tube which was the ureter. The operation was done in the highest Trendelenburg posture. A very small incision was made in the peritoneum lining the pelvis in the line of the ureter, a silk ligature was passed around it and then the ureter was severed a little above the ligature. The end of the ureter was split open to a distance of a third of an inch. A slit was then made obliquely into the right upper corner of the bladder and the ureter stitched into it, the mucous membrane of the ureter to the mucous membrane of the bladder with very fine chromicised catgut. This is the first time this operation has been done in Canada and Dr. Smith stated that not a drop of urine had passed through the fistula since.

Syphilis as Seen by the Ophthalmic Surgeon.—This paper was read by Dr. F. Buller, Montreal. In commencing his paper Dr. Buller expressed the hope that it would elicit a little discussion. It often falls to the lot of the ophthalmic surgeon to discover the presence of active syphilitic virus where the disease had long been considered cured or that the subject cherished the belief that there was no more to fear from it. The ophthalmic surgeon is scarcely, if ever, called upon to treat the disease in the primary stage. The largest share of his work is in connection with the tertiary period, and in this class of cases the disease has been apparently cured for a long period of time. Dr. Buller considers that the time at which the syphilitic lesion makes its appearance is always a very important element in the diagnosis. Discussing medication Dr. Buller does not believe that the protiodid of mercury at least as ordinarily administered is a reliable anti-syphilitic. He appears to favor the inunction method first and then gray-powder. The following took part in the discussion of this

paper:—Dr. Lafferty, of Calgary; Dr. Muir, of Truro; Dr. Laphorn Smith, of Montreal and Dr. Shepherd, of Montreal, who also condemned the prothiodid-treatment.

The Present Outbreak of Smallpox in America.—This subject was presented by Dr. H. M. Bracken, Health Officer, Minnesota. He outlined the origin and traced the course of many outbreaks in various parts of the State of Minnesota. The case of a porter on the Great Northern Railway, who arrived in St. Paul in March, 1899, was mentioned as the source of the outbreak. He was supposed to have contracted the disease in Seattle, and, when told that he had smallpox, he said that, if so, there was plenty of the same where he came from. Other epidemics were spoken of in various parts of Minnesota with a total of 3,429 cases, and the disease has still many centres in that state. It is impossible to locate positively the source of the present wide-spread epidemic farther than that it spread from the Southern and South-western States into North Dakota, Minnesota, Nebraska, Montana and Texas. Dr. Bracken showed that returning soldiers from the Philippines were not responsible for its introduction. He suggested that it was probably imported into the United States by Cuban refugees before war broke out between that country and Spain.

An interesting discussion took place on this paper. Dr. Russell Thomas wanted to know where the best vaccine was manufactured, a product that could be relied upon.

Dr. Inglis, formerly Medical Health Officer, Winnipeg, related his experience in the schools of Winnipeg, and spoke of some of the bad results resulting through impure vaccine.

Dr. Bracken in reply:—Vaccine was often spoiled by not being kept in proper temperature, as it was frequently being shipped in cans which were too hot, and subsequently kept in warm offices. The health commissioner of Minneapolis kept all his vaccine in an ice box, but, of course, not frozen, and had obtained good results. Replying to a question in regard to isolation Dr. Bracken favored eighteen days quarantine.

The Necessity of a Recognition and Isolation of Trachomatous Patients in Canada.—In the absence of Dr. W. Gordon M. Byers, Montreal, Dr. C. F. Martin, of the same city, read this paper. The paper recited the history of a young girl from Glengary County, Ontario, who came to the clinic at the Royal Hospital, Montreal, with a most intense condition of granular lids. She had been unable to open her eyes properly for months past, and her vision was reduced to the counting of figures. The seriousness of her disease had not been recognized at home as she mixed freely with other members of the community. Another case was referred to in the County of Leeds, and in this case as well no precautions had ever been taken to prevent the spread of the disease. Dr. Byers believes that there are many unrecognized and untreated cases scattered here and there throughout the Dominion. The disease is said to be prevalent in districts of Manitoba and certain centers in the eastern counties of Ontario and others in Quebec. The trachoma problem has had to be faced by one Government in Europe and the matter has been brought to the attention of the Dominion Government which has not yet taken any action in the matter. Dr. Montzambert stated that the question of exclusion of trachomatous immigrants had been under consideration by the Government for sometime. He considered these people somewhat undesirable immigrants. (To be Continued.)

To Abort Gonorrheal Infection.—Zydowski (Narzyn Lekarskie, March, 1901; *Urolog*, Vol. XXII No. 17) claims that gonorrhea when seen early may be aborted by a 10% solution of nitrate of silver. The urethra is washed with a solution of boric acid anesthetized by a 10% solution of cocaine, and thoroughly swabbed by means of a cotton tampon saturated with the nitrate of silver solution. In one case the gonococci disappeared from the discharge on the following day and complete cure resulted in 12 days.

[A. R.]

British Congress On Tuberculosis

Continued from Page 445.

A Plea for Seaside Sanatoria for Children Especially for the Prevention and Treatment of Scrofulous Complaints, by Sir Hermann Weber, M. D. In former times the so-called scrofulous diseases were much discussed by the medical profession and the public, but comparatively little attention is paid to them at present, while the more fatal pulmonary tuberculosis commands general attention. Yet there is good reason why scrofulous affections should in an equal measure engage our sympathy and attention, firstly, because they are likewise of tubercular nature and intimately allied to other forms of tuberculosis; and secondly, because they cause infinite suffering and misery to the patient and often cause death or invalidism or a crippled state for life. By treating scrofulous affections we therefore not only endeavor to cure the existing diseases, but also to prevent pulmonary tuberculosis.

The principal means of cure are:

Life in the open air; Good food adapted in quality and quantity to the patient's condition; Hydrotherapeutic measures, such as bathing in the open sea or in tepid sea water, friction of the body with cold water, etc.;

Active or passive exercise or rest in the open air, regulated according to the nature of the affection.

Surgical treatment is required in some cases, and is more successful in the pure air of the seaside than in inland towns; but the majority of diseases of bones and joints, of enlargements of glands and scrofulous ulcers, heal without active operative interference, though bandages are often indispensable.

Such treatment cannot be carried out at the homes of the children of the poor, and frequently even not at the hospitals of large towns; but in the pure air of the seaside (and also of inland places, especially at high elevations) the treatment, if commenced early, almost always results in complete cure.

Those who are rich can make the most necessary arrangements in private houses or establishments, but the children of the poor have no chance excepting in public sanatoria; and for the great majority of them, sanatoria at the seaside are preferable to those inland, on account of the more vivifying effect of the sea air, which undergoes constant changes by the regular local currents of air and by the stronger general winds, and on account of the facility of bathing in the open sea or in tepid sea water. Experience shows that at the seaside the energy of the nervous system, the appetite and digestion, and the whole organism are more rapidly improved than at inland localities. Inland sanatoria, however, can likewise be rendered most useful, and are, indeed, preferable in cases of scrofulosis complicated already with pulmonary tuberculosis, or in cases of pulmonary tuberculosis alone, most of them bear high winds badly. Localities situated at high elevations, as for instance Samaden, exercise a very beneficial influence, not only on pulmonary but also on glandular affections, and on the so-called surgical tuberculosis of joints and bones. This remark is, however, not to be understood as if we did not recognize that great results can be obtained at well situated and well managed sanatoria in lower inland regions. Great and welcome lessons, for instance, are to be learnt from the benefit effected by the "Cuvre d'Ormesson," at Ormesson and Villiers-sur-Marne, near Paris.

As the subject is so very large, we will confine ourselves at present to the sea-side sanatoria for children, as means of prevention as well as cure. Although we must attend to diseases already developed, we must, if possible, not wait till the scrofulous or tuberculous disease is already fully established, but must begin our treatment at the first indi-

eations, when we can gain in two months what in advanced cases barely can be effected in two years.

The poor children who are most benefited, and who specially require the sanatorium treatment, are those affected with:—

1. General weakness and deficient nutrition.
2. Tardy and imperfect recovery from various acute diseases such as measles, whooping cough, scarlet fever, diphtheria, influenza, etc.
3. Anemia.
4. Rachitis.
5. Scrofulous and tuberculous swelling of the lymphatic glands.
6. Scrofulous and tuberculous inflammation of the joints, including hip-joint disease and Pott's disease.
7. Adenoid affections of the throat and nose.
8. Scrofulous ophthalmia.
9. Scrofulous skin diseases.

For the treatment of the majority of the cases it is not sufficient to use any ordinary house, but we require a properly arranged sanatorium which must possess large rooms with abundance of light and air, with windows from the ceiling to the ground, through which the patients' beds can be moved on the adjacent balconies or terraces; the patients who cannot walk must lie there from morning to night, and many with advantage also, with proper shelter, during the night in fairly good weather. The rooms for meals and games must likewise be large and airy. Pavilions of moderate size, of one or two stories only, are preferable to large blocks having two or three stories. A pavilion for isolation of infectious cases is a necessity, and a well-arranged operating room is likewise indispensable, although in most cases, if taken early, the necessity of operations can be avoided. Boys and girls ought to be in separate pavilions when older than five years, but may be in the same rooms up to that age.

There ought to be on the sea-shore sheds open on two sides, with rotatory arrangement, for shelter against wind and rain, and to some degree also against too fierce a sun. These shelters are especially necessary and must be numerous, if the balconies for lying out are inadequate, or too far away from the actual shore. To these shelters the little patients who cannot walk must be carried on comfortable kinds of bed-stretchers, and remain there during the whole day.

There must be good arrangements for bathing in the open sea and for tepid sea-water baths, to be used in winter as well as in summer. The resident medical officer must prescribe the diet for every single case, as also the nature and amount of walking and playing, and of Swedish or other gymnastic manipulations, particularly for spine or joint cases.

The beneficial effect of sea-side sanatoria can be greatly increased by providing each sanatorium with a *hospital* or *sanatorium boat*, arranged for the accommodation of the sick children, on which, in suitable weather, the invalids can be taken out to the open sea for shorter or longer periods of the day, since it is indisputable that the air on the high sea itself has a more powerful effect on the organism than that on the shore.

The duration of the stay of patients at the sanatorium ought not to be fixed by fast rules, but must depend on the nature of the case, and be left entirely to the judgment of the medical attendant. It may vary from a few weeks to a few years. To limit it to two or three months by the rules of the institution is absolutely wrong. If the patients are admitted at the beginning of the disease or at the first signs of the threatening, a short term will mostly suffice; while advanced cases of hip-joint disease or Pott's disease may require years, and ought not to be discharged before the cure is as complete as the circumstances admit.

Another mistake which is made at many sanatoria is the restriction of the treatment to the warmer months of the year. Although the weather at the northern sea resorts is not always agreeable during winter and spring, the patients at seaside sanatoria are under infinitely better influences

than that in their homes, or even in ordinary hospitals or infirmaries in crowded towns. The patients sent home during winter lose there often more than they had gained at the sanatorium during the summer.

The number of children who require sanatorium treatment at the seaside is very large, and the number of beds available for them in England is very small. There are perhaps three hundred beds in the seaside sanatoria of England, while five thousand would certainly not be too many. Every hospital for sick children ought to have a seaside branch. It is almost incredible that there should be this strange defect in the hospital accommodation of England, especially when we reflect that the whole of the United Kingdom has such splendid sea-coasts, and when we further consider that England was the first country to awake to the great importance of this matter by establishing, on the suggestion of Dr. Lettsom and Dr. Latham, the General Sea-bathing Infirmary at Margate in 1791. The next country to move was Italy, which half a century later founded a sanatorium at Viareggio (1841); and France followed in 1874 by the sanatorium at Cette. While France has made great progress, and deserves the highest praise for her enlightened philanthropy, England has remained almost stationary in this matter. The town of Paris alone maintains in its sanatoria at Berck-sur-Mer about 1,034 beds for scrofulous and rachitic children all the year round, and has also many beds in several other seaside sanatoria on the French coasts. At Berck-sur-Mer, in addition, the benevolent Rothschild family gives perfectly gratuitous treatment to one hundred children in the beautiful Hôpital Rothschild, likewise summer and winter. France has numerous other seaside sanatoria along her different coasts, mostly under the direction of the "Assistance Maritime des Enfants Scrofuleux et Rachitiques" and "l'Œuvre des Hôpitaux Marins." Independently of these sea-side sanatoria France possesses, as already mentioned, the admirable inland sanatoria for tuberculous children at Ormesson and Villiers-sur-Marne (Œuvre d'Ormesson).

How is it that England, with its wonderful sea-coasts, and with its many excellent institutions for the sick, erected and maintained by private gifts, neglects this important matter? We cannot think otherwise than that the crying need for help and the possibility of bringing this help, are unknown to the philanthropists of this country, men as well as women. If they were aware of the great sufferings which the poor children affected with Pott's disease of the spine, with hip-joint disease, with caries of bones, or with tuberculous inflammation of joints, undergo in their wretched homes, and how large a proportion of them become consumptive later on, or cripples for life, or die after protracted misery; and if they knew, at the same time, that the majority of them can be cured entirely, and that many of the others can be restored to such a condition that they can earn their bread and can enjoy life, provided they are sent early enough to a sea-side sanatoria, many philanthropic persons would surely assist in supplying means to found numerous such establishments. It may be difficult to obtain all the means required by private benevolence; but the subject urgently demands also the attention of public bodies, such as the County Councils and the Poor Law organizations. Associations like the Trade Unions ought likewise to feel the obligation to contribute their share towards the cure of the sick children of their members. The subject is so important and so large that I venture to suggest that an "Association for the Erection of Sea-side Sanatoria" should be formed, as a sub-division of the "National Association for the Prevention of Consumption and other Forms of Tuberculosis."

Two Cases of Senile Chorea.—A. Iarosinsky (*Czasopismo lekarskie*, March, 1901; *Vratch*, Vol. XXII, No. 19) reports two cases of chorea in a brother and sister, 65 and 63 years of age, respectively. In both the affection dates back about 20 years. [A. R.]

Special Article.

THE CASE OF PRESIDENT MCKINLEY.

William McKinley, twenty-fourth President of the United States, died at Buffalo, New York, on September 14th, 1901, from the effects of a pistol shot wound of the abdomen at the hand of an assassin. Few rulers, crowned or uncrowned, have ever been the objects of such respect, affection and solicitude as were displayed for him during the week he lay battling with death.

With these facts in mind, with a consciousness of the fierce glare of public opinion concentrated on them, the distinguished patient's surgeons accepted their tremendous task. They saw their plain duty and met it, irrespective of the immeasurable enormity of the responsibility they shouldered. It was not the difficulty of the operation, but the fact that the censure of a nation would fall on him who made the slightest mistake in judgment or technique that required the nerve to perform it. There was no delay to share responsibility, and no fastidious red tape. Within an hour of the reception of his wounds the illustrious patient was operated upon in the Emergency Hospital in the Exposition grounds. That this was possible can but reflect great credit on the medical management of the Exposition. Dr. Matthew D. Mann, Professor of Obstetrics and Gynecology, University of Buffalo, performed the operation. His first assistant was Dr. Herman Mynter, Professor of Operative Surgery, University of Buffalo. Dr. John Parmenter, Professor of Anatomy and Clinical Surgery, University of Buffalo, acted as second assistant, and Dr. E. Wallace Lee, of St. Louis, Mo., served as third assistant. Dr. Eugene Wasdin, of the Marine Hospital Service, administered the ether. Dr. Prestley M. Rixey did not reach the scene until after the operation had been started. Dr. Roswell Park, Professor of Surgery, University of Buffalo, had gone to Niagara to operate. He was summoned to the hospital and arrived on a special train in time to assist in the completion of the operation.

The bullets were fired from a revolver held in front of the President by a vile thing having the appearance of a man, a Frankenstein monster whose bread and salt came from the country he so sorrowfully afflicted. One ball struck the sternum on the left side, between the second and third ribs. It was abstracted without difficulty and caused no serious injury. The fatal bullet penetrated the abdomen at a point two and a half inches to the left of the median line and at a level of about one-half inch above the umbilicus. An incision, five inches in length, was carried into the abdomen and the trajectory of the bullet followed. A perforation in the anterior wall of the stomach was found and sutured with fine black silk. The intestines were then inspected, but no injury was found. The perforation in the posterior wall was over an inch in diameter, with irregular lacerated and contused edges. This also was sutured with fine silk. The fact that food had not been ingested for a least three hours before the injury, together with the promptness, celerity and dexterity of the surgeons, accounts for the little peri-

toneal contamination present. A copious irrigation of surgical salt solution was next employed and the abdomen closed without drainage. Through and through sutures of silk-worm gut were used and the fascia brought together with catgut. During the anesthetic sleep an ambulance conveyed the august patient to the house of Mr. John Milburn, President of the Pan-American Exposition. Three male nurses from the United States Army Corps and three female nurses were selected to administer to the President's wants. The male nurses were selected from those on duty with the Field Hospital Exhibit of the Army Medical Department at the Exposition. They were Acting Hospital Steward Palmer A. Eliot, Private Ernest Vollmeyer and John Hodgkins, all of whom graduated from the School for Hospital Corps men at the Army General Hospital, Washington, D. C. Eliot is also a graduate of the Bellevue Hospital Training School, and Vollmeyer a graduate of the Presbyterian Hospital of New York. Hodgkins has had a long experience of nine years in military hospitals. "The efficiency of these men is such as to have elicited much favorable comment from the staff of attending surgeons." We are glad to note the marked competency of the Army Hospital Corps in meeting the great duty which devolved upon it, and also the rare commonsense displayed in not excluding male nurses. The female nurses were Miss Helen Mohan, a graduate of the Buffalo General Hospital Training School; Miss Conley, a graduate of the Buffalo Hospital Training School; Miss Hunter, Mrs. McKinley's nurse, and Miss Grace McCullough, of Baltimore, all of whom deserve the highest praise for their part in the unsuccessful campaign against the Grim Reaper.

The President's faithful physician, Dr. Rixey, and one of the surgeons remained in the house each night, and all the physicians and surgeons consulted three times each day. Dr. Charles McBurney, of New York, was sent for as a consultant; he arrived the next day.

There was apparently no profound shock following the operation. The pulse, however, always remained above the normal, but as the period for peritonitis slowly dragged by without any evidence of this dreaded complication, anxiety and doubt dissolved and crystallized themselves into the conviction that recovery was assured.

At frequent intervals bulletins, brief, plain and simple, telling the progress of the case, were issued, signed by Drs. Rixey, Mann, Park, Mynter, Wasdin and McBurney, and by Mr. George B. Cortelyou, Secretary to the President. They contained no opinion, nor made any prognostication. The phantom of tetanus, injury to the pancreas, kidney or thoracic duct, and necrosis around the bullet tract, as is sometimes seen in diabetes and in other debilitating diseases, and indeed in individuals otherwise healthy, skulked in the background and must have haunted the brains of the surgeons. Retroperitoneal abscess, uremia and the condition of the heart we heard mentioned frequently. There was scarcely room in one's mind, nor time, to consider the remoter possibilities. And here the newspapers come in for honorable mention. With a few yellow exceptions they told the whole truth, and nothing but

the truth. It was suggested that the bullets might have been poisoned, but there seems to be little probability of this.

At the end of the fourth day two stitches were removed because of some wound irritation. Nutritive enemata and stimulants hypodermically had been administered, but now some liquid nourishment was cautiously given by mouth. Convalescence was believed to have begun. On Thursday, the sixth day, a piece of toast, some weak coffee, beef juice and a cup of chicken broth were given by mouth. The surgeons were confident that the gastric wounds had been securely sutured. There was nothing to indicate food would not be assimilated; indeed, food had been absorbed, and the patient's condition demanded nourishment. Then, like a bolt from the blue sky, came the tiding that the patient was fatigued, that there were evidences of toxemia. Many thought of perforation. Questions as to the propriety of allowing food by mouth were raised by some, as if small fragments of broth-soaked toast could tear asunder the careful stitching that had been done.

Dr. Charles D. Stockton was asked as a medical expert to see the weakening patient. The morning of the next, the seventh day, hope grew stronger, but towards evening fear assumed supremacy, and when night fell hope was abandoned, and the situation resolved itself into a watching and waiting for the inevitable. Early in the morning Dr. Edward Janeway, of New York, and Dr. W. W. Johnston, of Washington, were summoned, but nothing mortal brain could evolve, nor mortal hand do, was sufficient to stay the ebbing vital tide. As the last words of the dying President expressed it, "God's will, not ours, be done."

Few adverse criticisms concerning the treatment have been made. The country is convinced that nothing was left undone, and everything was done to save its leader, and that the accursed bullet, together with the weakened resistance of its victim, engendered by long and onerous public service, was the direct cause of death, and that this was destined to be so from the first. All the surgical skill and good judgment of the world's surgeons could have done no more than was done.

The following report of the autopsy silences all criticism. It was made on the day of death and signed by representatives of the government, the family and the profession.

REPORT OF AUTOPSY.

The bullet which struck over the breastbone did not pass through the skin, and did little harm. The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissues around each hole had become gangrenous. After passing through the stomach, the bullet passed into the back walls of the abdomen, hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas. The bullet has not yet been found. There was no sign of peritonitis or disease of other organs. The heart walls were very thin. There was no evidence of any attempt at repair on the part of nature, and death resulted from the gangrene which affected the stomach around the bullet wounds, as well as the tissues around the further

course of the bullet. Death was unavoidable by any surgical or medical treatment, and was the direct result of the bullet wound.

HARVEY D. GAYLORD, M. D.
HERMAN G. MATZINGER, M. D.
P. M. RIXEY, M. D.
MATTHEW D. MANN, M. D.
HERMAN MYNTER, M. D.
ROSWELL PARK, M. D.
EUGENE WASDIN, M. D.
CHARLES D. STOCKTON, M. D.
EDWARD G. JANEWAY, M. D.
W. W. JOHNSTON, M. D.
W. P. KENDALL, Surgeon, U. S. A.
CHARLES CARY, M. D.
EDWARD L. MUNSON,
Assistant Surgeon, U. S. A.
HERMANUS L. BAER, M. D.

In the certificate issued by the coroner the cause of death is given as gangrene of both walls of the stomach and pancreas following gunshot wound. It is signed by H. R. Gaylord, H. Z. Matzinger and James F. Wilson, coroner.

JOURNAL OF NERVOUS AND MENTAL DISEASE.

July, 1901. (Vol. 28, No. 7.)

1. President's Address before the American Neurological Association. G. L. WALTON.
2. A Case of Simple Serous Cyst of the Cerebellum, with Autopsy. GEORGE W. JACOBY.
3. Binocular Hemianopsia and Optic Nerve Atrophy in a Case of Diabetes Mellitus.
HOWARD F. HANSELL.
4. Report of a Case of Melancholia Followed by Stupor Lasting Three Years and Eight Months; Recovery.
CECIL MACCOY.
5. A Case of Peroneal Muscular Atrophy.
CHARLES GILBERT CHADDOCK.

2.—H. I. Hansell states that **atrophy of the optic nerve in diabetes** is either primary or secondary to retinitis. In the former the loss of visual acuity is rapidly progressive until it is complete. The field shows contraction, sometimes concentric, sometimes irregular. The ophthalmoscopic appearances are those usual to simple optic nerve atrophy. Lawford says the complication is extremely rare and the cases on record in which single optic nerve atrophy was present are few in number, and in several of them it is questionable, whether the optic nerve lesion should be considered the result of the glycosuria. "Of fifty cases with ocular symptoms, observed by Leber, there were fourteen, *i. e.*, twenty-eight per cent. with optic trouble." In two cases in which a post-mortem examination was made, a tumor was found pressing on the optic chiasm in one, and in the other there was no cerebral lesion, but there was distinct degeneration of the kidneys. Williamson says it is stated that occasionally the retinal changes are associated with primary optic nerve atrophy and he gives an illustration of such a case. He also says that it is exceedingly rare that a central lesion has given rise to an optic neuritis and glycosuria in the same patient. In the examination of 140 diabetic patients, Schmidt-Rimpler obtained evidence of retro-bulbar neuritis, not traceable to the abuse of alcohol or tobacco, in 34. In one case, distinct atrophy of the macular fibres of the optic nerve was found on microscopical examination. Wiesinger describes in detail a patient, 57 years old, with plastic iritis who had amblyopia; the ophthalmoscopic appearances were those of simple optic nerve atrophy without other limitation of the field than color scotoma; and another case with recurring iritis, senile cataract, glaucoma, and finally optic nerve atrophy of the left eye, all of which symptoms he traced to diabetes. [T. M. T.]

Original Articles.

THE DELETERIOUS RESULTS FOLLOWING OPERATIONS IN HYPOCHONDRIASIS, PERFORMED FOR THE SAKE OF MENTAL IMPRESSION.

By PROFESSOR A. PICK.

of Prague, Bohemia.

* Translated with Permission of the Author by Max R. Dielspiel.

The almost common-place statement that the progress of human knowledge takes place, figuratively speaking, not in a straight, but in a spiral and gradually ascending course, is also true of the science and practice of medicine; in the latter we see how from time to time views and methods of treatment return, which earliest observers have advanced and practiced with imperfect results; at any rate a new "phase" sometimes deceives us concerning the derivation of "new" ideas, and such a fallacy in itself justifies us in tracing the relationship and showing the invalidity of modernized views on the subject under consideration. In the following discussion I take occasion to consider such a phase of older psychiatry that has recently again been brought to my notice; not only because it appears to me to be justified, in itself, but also because it is qualified to throw light upon other pertinent facts.

During about the first third of the last century operations performed for their mental impressions occupied a prominent position in the therapy of hypochondriasis, and examples of such operations are still found in modern literature (Griesinger). These were principally cases which are now considered as hypochondriacal paranoia, and which are characterized by a delusion becoming developed and fixed in the patients, that they have a foreign body—an animal, in the affected area, the delusion being caused by abnormal organic sensations, and the accompanying imaginations; the operation, and the demonstration of the foreign body removed by the operation, were supposed to have a curative effect upon the patients, in that the changes of imagination produced by these procedures, gave rise to the disappearance of the hypochondriacal ideas.

This project, however, based upon an imperfect conception of psychological phenomena, was almost as a rule a source of disappointment; moreover, the effect of the operation was nearly always that the increase in the attention directed toward the symptoms, gave rise to their intensification, and caused not only stronger fixation of delusions already present to be developed, but the formation of new hypochondriacal ideas as well. It resulted, that such operations, even if they have not entirely disappeared from the list of alleged remedies against such an obstinate affection as hypochondriasis, at least became fewer, more recent literature showing but scattered instances of such interferences. Jolly (in Ziemssen's *Handbuch der Krankheiten des Nervensystems* Vol. 2 pag. 701, 2. Edition 1877,) reports the case of a paranoiac, who claimed that his wife had stuck quills into his head, into which physicians had frequently made incisions and shown him the

removed obstacles, but all of course without the hoped-for result.

Although such observations occur more rarely in literature at present, and although Jolly himself, in revising his chapter on "hypochondriasis" in Elstein's manual on internal medicine which has just appeared, ignores such operative methods, it nevertheless would be erroneous to conclude that these methods of treatment are entirely discarded by contemporary authors.

While it may no longer occur if for instance a patient should claim that he feels spiders in his stomach, that one of these operations would be performed and the spider subsequently shown to him, nevertheless almost similar procedures are not rarely employed at the present time, only that they are hidden, as it were, under a medical subterfuge. Boettiger (*Archiv für Psychiatric*, 31, pag. 397) reports the case of a woman who had contended that she was pregnant and who finally persuaded a physician to perform an operation, which probably consisted in a curettement of the uterus under chloroform anesthesia; in spite of the suggestion to her that after all that was possible had been removed, she must of necessity feel considerably relieved, abnormal sensations again occurred which were finally worked out by her into hypochondriacal delusions. For such reasons I consider it by all means apropos to show the useless and generally directly harmful consequences of such operations.

The most significant of my observations is that of a man now 39 years of age, a watchmaker by occupation, who has been visiting the clinic for several months, and whose psychosis, which has existed for several years, has been known to me from private consultation, since its inception. He himself always states the following: More than three years ago he awoke one night with an erection of the penis, and as he was not in the position to have intercourse with his wife, he masturbated; in order to quickly complete the act he had knocked the penis, which was still in a state of erection, against his thigh, and, according to the patient injured the organ. The patient makes various statements regarding the nature of the affection, at one time saying that he had "broken something," and at another time that he experienced a sensation as if there were two needles at the location of the alleged traumatism; he furthermore states that he is now ill, and could not work, being occupied all day with thoughts of the injury. He visited all the physicians he possibly could, and in spite of their assurances that nothing was the matter with him, he finally submitted to an "operation." As a result of this operation there is present a long whitish scar about 2 cm. in length extending from the root of the penis upward along the pubis, and but superficially involving the skin. The patient states the operation had been absolutely of no aid to him moreover he had become worse thereafter. He not only persisted in his statement as to the alleged injury to the penis, with which he was exclusively occupied during the first years of the psychosis, but now believes that all the pelvic organs are involved; he thinks that his kidneys are affected, that there is water in his abdomen, causing distortion, that his liver had become black, etc., etc.; the whole day he is occupied with the condition of his pelvic organs, and even when he does not suspect that he is being watched, he presses his hand against the genitalia, slinking about with his body distorted, as if in pain. He has entirely neglected his business, and on account of various irrational acts his detention at the institution became necessary; he has repeatedly expended large sums with frequenters of saloons, stating that he would soon die anyhow. His frame of mind is continually depressed, and it was only possible to keep him occupied for a brief period. The somatic examination yields absolutely no tenable point upon which to base the hypochondriacal sensation; no material nervous disturbances of motion or sensation can be demonstrated.

Without entering any further into the clinical diagnosis, it will suffice if I call attention to the fact that we obviously had to deal with one of those cases of hypochondriasis which from the very beginning ran its course according to the acute paranoic type. And I particularly desire to emphasize, that the operation performed for its mental impression not only was futile, but just like any other local procedure, was bound to lead to an intensification of the disease because the increased attention directed to the *locus morbi* caused also an intensification and increased development of abnormal sensations. Even old Romberg has called attention that one of the principal indications in the treatment of hypochondriasis is "the diversion of the attention from the sensitive area", and therefore the procedure under discussion not only does not meet with the indications of Romberg, but directly contraindicates them.

Of course, in order to oppose the argument just advanced, it may be contended that in the cases just alluded to, a simple hypochondriasis did not exist, but one of the paranoic variety; notwithstanding it is just these cases mentioned in literature, which very easily mislead one to perform operations for mental impressions. Consideration of the subject will lead to the universally accepted conclusion (but one whose consequences are yet too little considered) that also in simple hypochondriasis, even mild procedures, unless they are stringently indicated by any existing local affections, produce effects contrary to those expected. I would like to report here another case as showing that even in cases where hypochondriacal delusions are associated with local affections, great care must be taken and due weight be given in considering whether harm would not be done even by the otherwise indicated operation.

In the year 1897, a proprietor of a tavern, 34 years of age, was brought to the clinic with the following medical history: About four weeks ago the patient was brought to a physician on account of a marked depression of spirits. The physician upon careful examination found a congenital phimosis; the patient was visibly gratified that the cause of his depression was found, and without making any mention of it himself, accepted the proposed operation, which was subsequently performed. Immediately after the operation the patient was joyful, worked diligently, and seemed like a changed individual. But soon a new idea in the patient became formed, namely that the foreskin must glide over the whole penis in order for the operation to be successful, and in consequence within fourteen days the patient again became timid, began to fear everybody, and became possessed of suicidal ideas.

The patient, upon whom, with the exception of the remains of the phimosis and a mild balanitis, nothing abnormal could be demonstrated, gives the following personal history: Whenever he wanted to marry he became possessed of the idea that his foreskin was not the same as others, and therefore he could not marry; also that he could not urinate on account of the overgrowth of the foreskin, and this year, for the first time, he sought medical aid, feeling thoroughly satisfied after the small operation had been performed. But soon again he believed that he could not marry, thinking that he had another disease, and finally he became possessed of fear; he claimed that people knew all about his ailments, that they had cracked whips at him, and had whistled, and furthermore he had heard various voices resembling those of animals, it appearing to him as if people were laughing at him (there is no history of true hallucinations). All this had excited him considerably, especially because he did not know what it all signified, and therefore he thought of suicide. Sometime thereafter, the patient's frame of mind improved, he

slept better, his appetite also improved, his ideas became clearer, and finally he stated that all his ailments had been due to a mania of persecution which he had had. The patient was then taken away by his relatives, in an improved condition.

If we analyze this case it will be seen that the intensification of a visible defect, as represented by the delusion regarding the phimosis, is that condition which recently has been designated by Wernicke as "the over estimated idea" and it will furthermore be plainly evident how this idea was not removed by the operation, but increased to develop in the sense of a simple paranoia, which apparently, as far as our own observations are concerned, ran an abortive course.

The following case, although clinically different, no operation having been performed, resembles the previous one, in as far as the insinuation of the necessity of an operation had something to do with the fixation of the delusion.

In the year 1899 a woman, 37 years of age, who at that time was nursing her 3 months old, and tenth child, was admitted to the clinic. Upon admission she states that about one year ago when an ulcerated finger was lanced, she suddenly felt a splitting pain in her head, followed by inability to move the whole arm; this paralysis, which was accompanied by anesthesia of the whole member, lasted for three months, and occurred without any unconsciousness on the part of the patient. While the history was being taken the patient also spoke of the "little frog" which she had in her mouth, similar to the one she stated her son had; a physician, according to her statement, had cut the one of her son and told him that the whole family was similarly afflicted; since then she had felt the frog in her body, into some aperture of which it had gained entrance; she could feel how the animal sucked up the blood in her brain, how it blew itself up in her intestines, causing her abdomen to become quite distended. When this first began, she looked into her mouth and had seen the little frog under her tongue. She therefore visited various physicians, one of whom had attempted to quiet her regarding the frog, but another had told her that an operation would have to be performed, and since then she has had no peace. Her frame of mind in spite of encouragement and explanation is markedly lowered, and she is constantly occupied with the frog, and the fate which she believes is in store for her. Since a few days, however, her mood has changed, she now declaring that she does not wish to have anything to do with the ranula (which is really the local cause of her trouble) and states that she has now fully recovered as she had "bitten away the frog" during the night. Her wish to look after the children was gratified by her husband, in spite of advice to the contrary, notwithstanding the change in her condition.

In the absence of all other symptoms, the possibility of hysteria was thought of, which also seemed to be suggested by the self-described "attack" of the patient; but on the other hand examination showed nothing to substantiate the suspicion, and therefore the case remained somewhat obscure, until later on the patient again presented herself with at first a doubtful, and later a well marked case of progressive paralysis, euphoria and delusions of grandeur.

In conclusion I will report a pertinent observation from the clinic which is qualified to show the futility of repeated examinations in the cases under discussion.

A woman, sixty years of age, when questioned regarding her "ear disease" stated the following: "In July, as she was sitting in the open, an earwig had crawled into her ear. Since then she has pains in the head, which increased since a physician had told her that nothing could be done for her. When questioned closer concerning her malady, she stated that it was fearful and that she experienced the sensation as if young birds were in her head. At first

there was an itching sensation in one ear, later in both ears; she had consulted several physicians who had syringed her ears and assured her that there were no foreign bodies therein, but apparently they did not find anything "because they did not possess the necessary instruments;" another physician had injected alcohol into her ear in order to force the worm to crawl out, and then told her that it had been removed; improvement set in for a few hours but soon again she felt that there was a "breathing" in her head. She then presented herself to the ear clinic whence she was referred to the psychiatric clinic. In addition the daughter of the patient stated that soon after the onset of the affection the patient had complained that the earwig was growing, and had borne young ones, the latter having now crawled over to the other side of the head; she also contended that occasionally at night she felt as if a small pouch was growing out of her head; if someone would only take the worm out of her head; she herself had attempted to cause the worm to crawl out by injections into her ear; she thinks of nothing else but that her mind has been weakened; appetite and sleep have been profoundly affected.

This case also does not require any further explanation for it substantiates what has been said about the deleterious results in such cases, of all operations performed for their mental impressions.

CONCERNING THE TREATMENT OF THE APPARENTLY UNAFFECTED OR AT MOST BUT SLIGHTLY INVOLVED EYE IN CASES OF GLAUCOMA.

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of Philadelphia.

This paper deals only with cases of *primary* glaucoma when they appear as (1) acute glaucoma; (2) subacute or chronic congestive glaucoma ("glaucoma irratif," chronic inflammatory glaucoma); (3) chronic non-inflammatory glaucoma (usually known as simple chronic glaucoma); (4) absolute glaucoma. These varieties may be described as follows:

Acute glaucoma, although a disease of sudden onset, may give warnings for weeks and even months prior to the attack. These warnings are alterations in the amplitude of accommodation; temporary obscurations of sight, iridescent vision, that is, the phenomenon of rainbows around artificial lights; and periods of increased intraocular tension. The attack itself is characterized by severe pain, sudden almost complete loss of vision, dilatation and immobility of the pupil, shallowness of the anterior chamber, steaminess of the cornea and great increase in intraocular tension.

Chronic congestive glaucoma may have the same prodromal signs which have just been enumerated, but these are repeated and progress until they, with several added ones, become the salient symptoms of the disease: Steamy cornea, shallow anterior chamber, semi-dilated pupil, degenerating iris, cupping of the optic disc, pulsation of the retinal vessels, and contraction of the visual field, most often on its nasal or supero-nasal approach. Exacerbations are common, and then chronic congestive glaucoma resembles acute glaucoma, although it should be regarded as a different clinical manifestation.

Chronic non-inflammatory glaucoma, ordinarily known as *simple chronic glaucoma*, presents no active symptoms. Instead there are progressive failure of vision, particularly of the field of vision; exca-

vation of the optic disc; crowding of the vessels to the nasal side; halo around the nerve-head, and increased *intraocular tension*, which may not be constantly present. It is difficult to fix the date of onset in this variety because of the absence of the pronounced prodromal symptoms which may precede the other types of the disease.

It is important, as De Wecker insists in his admirable *Rapport sur la Valeur de l'Iridectomie dans le Glaucoma*, presented to the *Société française d'Ophthalmologie*, in May, 1901, to separate from each other these three great clinical types of glaucoma if one wishes to obtain the best results from therapeutic measures. Furthermore, it seems inadvisable, at least in the present state of our knowledge, to exclude simple glaucoma from the catalogue of the glaucomas, but it should be carefully distinguished from progressive optic nerve atrophy with excavation and other types of progressive optic nerve disease unassociated with increased intraocular tension.¹ The chronic congestive variety of glaucoma sometimes resembles simple chronic glaucoma and *vice versa*. If, as De Wecker has pointed out, in the affected eye corneal involvement is made evident by nebulous vision, halos, etc., or, in other words, by irritative attacks, the case ceases to be one of simple glaucoma, and is to be grouped with the chronic congestive types.

All of these varieties may pass into the stage which we ordinarily know by the name *absolute glaucoma*, with its characteristic symptoms of fixed and dilated pupil, discolored iris, greenish reflex from the lens, obliterated anterior chamber and hazy cornea.

From the times of Von Graefe to the present day experienced ophthalmic surgeons have held that some form of surgical intervention most frequently gives the best and most permanent results in the treatment of glaucoma, and that the more nearly such intervention approaches the onset of the disease, the more likely is the ultimate effect to be a good one.

The reasons for promptness in surgical interference are not hard to find. As Rochon-Duvignaud tersely puts it: the excretory apparatus of the eye (iritic angle) is intact at the time of the first attack of glaucoma, but it is obliterated at a more advanced period of the affection. Iridectomy will be efficacious if performed *before the root of the iris is welded to the cornea*; otherwise not.

The *bilateral character of glaucoma* is well known and has been commented upon by Von Graefe and all succeeding writers. All cases of acute primary glaucoma which have come under my own care during the last fifteen years, except two which followed the instillation of a mydriatic,² have sooner or later been bilateral, the shortest interval being about six hours and the longest two years and ten months; that is to say, all that I have been able to trace. The same is true of cases of chronic congestive glaucoma. Of chronic non-inflammatory glaucoma we may say, with Von Graefe, "glaucoma

¹ Czermak (quoted by De Wecker, loc. cit.) typifies a school which holds to an entirely different definition of chronic simple glaucoma, inasmuch as he admits in this class only those cases in which he has never been able to establish an increase in the tension of the ocular globe.

² One of these cases shows prodromal signs in the other eye.

* A Paper presented to the American Ophthalmological Society, July 1901.

simplex affects almost without exception both eyes successively;" or with E. T. Drake-Brockman, "persons suffering from chronic glaucoma are usually attacked in both eyes simultaneously, or at very brief intervals of time between the two eyes"; or with Nettleship, "in something like two-thirds the disease is sooner or later symmetrical;" or with Priestley Smith, "in the large majority of cases primary glaucoma is a bilateral affection." I need not burden the pages of this paper with further quotations illustrating this point.

Occasionally the interval of time between the beginning of the disease in one eye and its development in the second is very long. Thus, Mr. Nettleship¹ referring to chronic glaucoma, says: "In twenty-six cases at least a year was known to have elapsed since the disease in the first eye; in thirteen of these twenty-six five years or more had elapsed without the second eye being attacked." But immunity for five years does not confer complete immunity, and it is impossible to state that any specified interval insures to the second eye entire freedom from risk. Ten-year intervals have been reported by Schweigger and other observers. The most notable instance of delay in the appearance of glaucoma in the second eye, viz., twenty years, has been contributed by Mr. Priestley Smith.² These cases, however, are the exception. The bilateral character of glaucoma, or a comparatively short interval before the second eye is affected, is the rule.

To introduce the subject, and I hope to stimulate discussion, I wish to propound certain questions:

1. *What shall be done with the apparently sound eye after the first eye has been operated upon for acute glaucoma?*

It is a well known fact that iridectomy upon one eye for acute glaucoma is frequently followed by a speedy outbreak of the same disease in the opposite eye. Therefore a good rule and one usually followed, is to keep the non affected eye under the influence of a myotic until the eye upon which the operation has been performed is entirely healed and free from irritation. A case of this character is the following:

CASE 1.—A woman, aged 30 +, came to the Jefferson Medical College Hospital with typical acute glaucoma of the left eye which had existed for five days. Iridectomy was immediately performed under general anesthesia; no reaction; wound closed in twelve hours. Forty-five hours later an attack of acute glaucoma occurred in the right eye, which was controlled by eserine. There was a repetition of this attack one week later, when a broad peripheral iridectomy was performed, healing without reaction; ultimate vision in each eye 6/6.

Outbreaks of glaucoma during the first two weeks after an iridectomy has been performed upon one eye are especially referred to by Von Graefe,³ who noted that they were very apt to happen (in thirty per cent. of his cases) when the operation had been made on an eye with primary acute glaucoma during the period of high-grade inflammation, especially if it previously had exhibited prodromal signs of glaucoma. A good example of this character has been recorded recently by Dr. Risley.⁴

The cases described by Von Graefe are typified by the following instance from my practice:

CASE 2. On September 3, 1900, a woman, aged 70, came with typical acute glaucoma of the right eye, vision being reduced to shadows. In the left eye were peripheral lenticular opacities, a slightly congested disc containing no cup, and full veins depressed and crossed by arteries undergoing endarterial changes; tension and field normal; refraction hypermetropic, 5D. The right eye was iridectomized on September 7; no complication except much hemorrhage in anterior chamber, which was slow in absorbing; complete relief of pain and reduction of tension to normal. On the twenty-eighth of September, that is, eleven days after the iridectomy, while the patient was quietly sitting in her own room, she began to notice at four o'clock in the afternoon, obscuration, halo-vision, etc. before O. S.; tension + 2; cornea deeply hazy. A typical attack of acute glaucoma was cut short with pilocarpine and large doses of salicylate of sodium. Iridectomy was proposed the next morning, but positively declined. The patient continued to use pilocarpine in that eye until the day of her death, eight or ten months later.

Sometimes the interval between the attacks is very long. A case in point is the following:

CASE III. A woman, aged 50, with constitutional syphilis, and who had suffered from plastic iritis, which, however, had entirely disappeared, was attacked in the left eye with typical acute glaucoma on October 10th, 1895. An iridectomy was at once performed; the wound healed with entirely satisfactory results and vision equalled 6/9, which degree has remained until the present day. The right eye was apparently healthy, only a few pigment flecks on the lens capsule; refraction hyperopic, 2 D. On the 21st of December, 1898, the right eye was iridectomized for an attack of acute glaucoma which had lasted twenty-four hours and had appeared with the usual prodromes; normal healing; ultimate vision 6/6. The interval between the two attacks was two years and ten months.

It is not germane to the present inquiry to discuss the causes which contribute to the second attack: predisposition, dilatation of the pupil under a covering bandage, shock, worry, and nervous apprehension, all have been given a rôle in this respect. Doubtless two are potent, viz.: apprehension in a predisposed subject.⁵

Are there any signs by which one may reasonably infer that the apparently sound eye will suffer an acute glaucomatous attack like its fellow eye, within a comparatively short time? The following have been suggested:

(a) Shallowness of the anterior chamber and beginning opacity in the lens with swelling and a high degree of hypermetropia, and smallness of the corneal diameter.

(b) The mydriatic test suggested by Edward Jackson,¹ G. C. Harlan,² and W. A. Brailey.³ This consists of the instillation of a solution of homatropine into an eye which is under suspicion, and noting whether it produces any rise in intraocular tension, or pulsation of the blood vessels of the fundus.

(c) The palpation test; that is, an observation is

¹ Ophthalmic Record, March, 1901.

² The disposition of the first patient whose history is recorded (Case 1) entirely changed after the second iridectomy. Prior to this she was apprehensive to the point of nervous irritability; her expression gave the impression which is best described by the word "hunted." Asked in regard to the change in her mental attitude, she replied: "Ah, you see the terror is gone." This anecdote is recorded because it well illustrates the potency of apprehension; De Wecker makes similar references.

³ Am. Jour. Med. Sciences, April, 1898; also International Clinics, Vol. I., Eleventh Series.

⁴ Ophthalmic Record, January, 1898.

⁵ Trans. Ophth. Soc. U. K., XX, 1900, p. 258.

¹ Royal London Ophthalmic Hospital Reports, XII, 1888-1889.

² Ophthalmic Review, 1885, X, pp. 261-266.

³ Arch. f. Ophthal., XV., 1899, 3 abt., p. 116.

made whether finger-pressure on the globe so slight that in a healthy eye it does not cause pulsation of the bloodvessels of the fundus, does cause them to pulsate in the eye under suspicion.⁴

(d) The history of prodromal glaucomatous phenomena.

If these tests are positive, the correct answer to the question originally propounded would seem to be: *An iridectomy should be performed upon this eye as soon as the anterior chamber is restored upon the opposite side; that is to say, as soon as the wound has closed; in the meantime the eye should be kept under the influence of a myotic.*

Doubtless many will at once say, "Certainly, who teaches otherwise?" I do not know that any one teaches otherwise, but I also doubt if in any well-known modern textbook this advice is given in so many words, although now and then the statements are fairly positive. Thus Fuchs¹ says: "In inflammatory glaucoma an operation should be performed in the prodromal stage, provided the patient will consent. If the operation is deferred until the inflammatory attack is developed, the surgeon cannot foretell how severe it will be, and, moreover, he operates under less favorable conditions." I am inclined to think we may advance even beyond this position under the circumstances which I have detailed, especially if the patient is to pass from under expert observation, and be placed under conditions not favorable for obtaining competent advice.

II. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic congestive glaucoma?*

The situation can best be described by detailing the history of a patient whom I examined by the courtesy of Dr. Myles Standish, of Boston, whose notes, somewhat condensed, I am permitted to quote:

CASE IV. A man, aged 42, was examined first in January, 1896 and had a compound hypermetropic astigmatism of the right eye and a mixed astigmatism of the left eye corrected, vision rising to normal. He complained of a rainbow ring around artificial lights at times, the phenomenon being present only before the right eye. There was absolutely no other sign of increased intraocular tension. He was forbidden to do close work for prolonged periods at a time (he was an architect by profession), and was given a solution of eserine with instructions to use it in case the signs of acute glaucoma appeared. In the fall of the same year his eyes were again examined: the rainbows had increased in frequency and sometimes persisted for several days. Vision was still entirely normal on clear days. The central depression of the nerve-head occupied about two-thirds of its centre and there was venous pulsation; the tension was noted as very doubtfully increased. The field of vision was absolutely normal. Six months later the condition was still unchanged, that is to say, when the examination was made. In June, 1898. He was not again seen until February, 1901, when the vision of the right eye was .2 and the tension +1; there was loss of nasal-field, and the nerve-head was typically cupped. Before the left eye, which previously had exhibited absolutely no sign of trouble, rainbows had begun to appear, but vision and field of vision were normal; tension was doubtfully increased.

Three months later his visual fields appeared as in the diagrams. (Figs. I and II).

⁴ It is needless to point out how difficult it is to apply this test with accuracy.

⁵ Some surgeons would prefer sclerotomy.

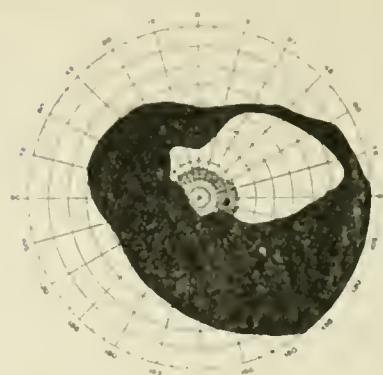


FIGURE 1.—Almost complete loss of nasal and lower field semi-circular scotoma. Case I.

This is a case of chronic congestive glaucoma, although there never were any very violent manifestations. It is a type of the cases to which De Wecker refers so eloquently in his report and which

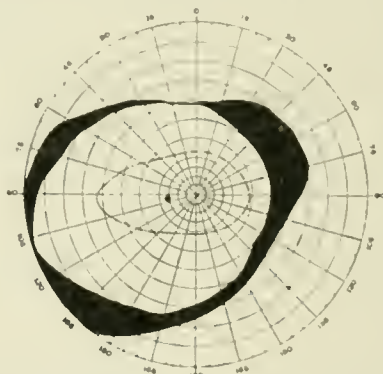


FIGURE 2.—Beginning contraction of field, particularly on nasal approach; dotted line represents red field. Case I.

nearly approach in their clinical history simple glaucoma, and therefore may be debarred from the most desirable treatment, or, in other words, there may be unnecessary delay in surgical intervention. Had it been possible for the patient whose history has just been detailed to be under constant observation, or had he permitted himself to be examined by his ophthalmic surgeon at suitable intervals, the decided change from the prodromal to the more fully developed glaucomatous stage would have been prevented by iridectomy. But this is the very point of the whole matter. How soon dare we interfere in these cases, and if we interfere surgically, where may we point for authority for such early surgical interference? In such a case iridectomy would seem to be indicated as soon as the rainbow vision was certainly associated with attacks of increased intraocular tension. It illustrates further, as has so often been noted before, that even the most intelligent patients cannot be trusted to report at suitable times and in season; *an eserine existence is not a safe one.* Now, of course, a successful iridectomy on the right eye should be followed by an iridectomy on the left eye before the vision fails, and *while the iritic angle is intact.* This plan has, I believe, been pursued with satisfaction to surgeon and patient.

¹ *Lehrbuch der Augenheilkunde*, Achte Auflage, Wien, 1900, p. 432.

Doubtless all of us remember Laqueur's article on "The Prodromal Stage of Glaucoma,"¹ with its accurate description of the visual obscurations, the colored rings around lights, the nebulous cornea, and the increased intraocular tension, and perhaps we also remember his recommendation that at this period the treatment should consist of eserine, careful attention to the patient's general condition, particularly his diet, but that if after a time any anatomical change in the eyeground, any excavation of the optic nerve, or any obscuration of any portion of the visual field, or any sign of the same disease in the opposite eye should appear, then an iridectomy should at once be performed. He refers to the brilliant results which Von Graefe obtained with iridectomy in this very prodromal stage, and says that his own experience can confirm this, and yet he hesitates. Why should one wait for the excavation, or for a permanent obscuration of a part of the visual field, when a clinical history definitely shows that there have been periods of rainbow and nebulous vision and increased intraocular tension, and particularly when it can be proven that these were dissipated by the use of a myotic. Why should one wait until the damage is done? Would it not be better to anticipate both the agglutination of the root of the iris to the cornea in a firm adhesion, and the destruction either of areas of ganglion cells of the retina, or of the optic nerve fibres, by making what E. Treacher Collins¹ has termed a *preventive iridectomy*, which he thinks under certain circumstances is justifiable? Perhaps you may say, "Who acts otherwise," and yet authority for such a surgical procedure is hard to find; I have already quoted Fuch's opinion.

III. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic simple glaucoma?*

It is confessedly more difficult to give an answer but also less frequently necessary, because so many cases of chronic non-inflammatory glaucoma are bilateral, almost from the start.

If this type of chronic glaucoma is bilateral, operation upon the more affected eye, followed as soon as it is safe by iridectomy (or sclerotomy, or a combination of both) upon the other eye, is a common surgical procedure and gives the patient the best chance.¹

Frequently, however, one eye is pronouncedly glaucomatous, and the other eye, although presenting the ophthalmoscopic appearances of glaucoma of this type, retains perfectly normal central and peripheral vision, and the patient would be greatly surprised if operative interference on this eye were proposed. A case in illustration is the following:

CASE V. A man, aged 70, of typical gouty antecedents and with many gouty manifestations, and who had had many attacks of influenza, came with typical chronic glaucoma of the right eye. Vision included large letters seen only eccentrically. The field of vision is illustrated in the diagram (Fig. III). The nerve-head was typically cupped;

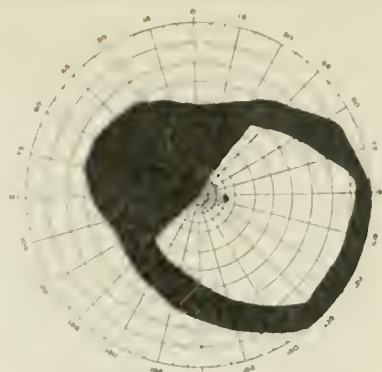


FIGURE 3.—Almost complete loss of nasal half of visual field, with scotoma encroaching on central area. Case 7.

the vessels were pushed to the nasal side; there was slight increase in intraocular tension. The vision of the left eye was normal after the correction of its hypermetropic refraction, +1.50 D; the media were clear; the disc was typically cupped; there was no positive increase of tension; the peripheral field was perfectly normal. A more careful field taken a few days later still showed that the periphery was nearly normal, but that a scotoma existed in the position marked on the diagram beginning at the blind spot and passing upward and inward. (Fig. IV). Iridectomy

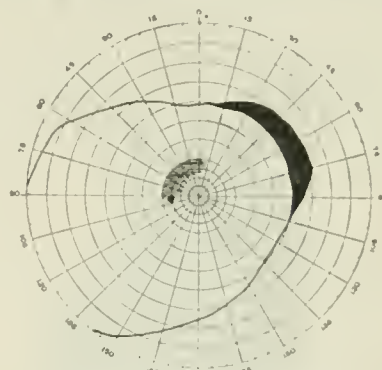


FIGURE 4.—Just beginning contraction of nasal field; scotoma extending from blind spot in semi-circular manner upward and inward. Case 5.

tomy on the right side was proposed and declined. The treatment consisted of eserine, strychnia and nitro-glycerine. Eighteen months later, although central vision in the left eye is perfectly normal, the scotoma has progressed and became ring-shaped. (Fig. V). The right eye remains

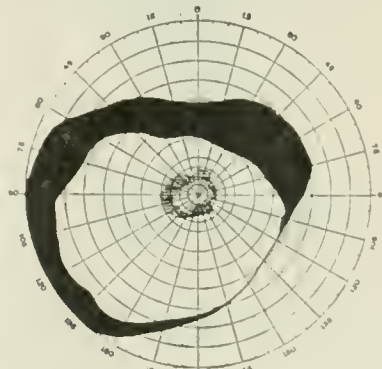


FIGURE 5.—Visual field of Case 5, eighteen months after Figure 4 was drawn; greater contraction; scotoma now ring-shaped.

as before, tension, if anything, a little greater. Vision only hand movements. Operation is still declined.

This is a type of many cases in which, in spite

¹ Royal London Ophthalmic Hospital Reports, XIII., 1890-93, p. 166.

¹ I am aware of the fact that Mr. Nettleship doubts the propriety of operating upon the poorer eye first, but begins at once upon the better or less affected eye.

of the normal vision and practically normal peripheral field, it would seem proper to urge iridectomy, or, at least, some form of operative interference; the evidence of what will happen is afforded by the other eye.

Less frequently this type of the disease is truly monolateral, or as nearly monolateral as these cases ever are. Are there any signs by which one may reasonably infer that the apparently sound eye will pass, gradually to be sure, into a condition resembling the one upon the opposite side. The following have been suggested:

(a) Ophthalmoscopic evidence furnished by the formation of a cup beginning to be pathological on the temporal side.

(b) Periods of increased intraocular tension detected with the educated finger tips, placed, as Coccius and Schweigger advise, upon the sclera itself. Such examinations should be made at different hours on the same day and repeated in the evening, as it is well known that in this disease increased intraocular tension is not constantly present and may be absent for hours and even days at a time. There is no reason why we should not place the patient under circumstances where expert examination can be made very frequently, no reason, for example, why he should not be watched exactly as the general surgeon causes cases suspected of Jacksonian epilepsy to be watched for days at a time until he establishes or does not establish localizing symptoms.

(c) Alterations in the visual field. In typical cases restriction begins on the nasal side and contraction of the color field-corresponds with that of white. That this rule meets with exceptions, and perhaps frequent ones, I am sure.¹ It cannot then be utilized alone as a safe guide of action.²

Again, the visual field might be contracted for one examiner and uncontracted for another, as there is perhaps no examination in ophthalmology which is surrounded by so many possibilities for inaccuracy. But if on successive days, under the same circumstances, controlled, if necessary, by separate examiners, and especially if the test-objects include squares of gray paper (Ward Holden's tests, for example), the visual field is found contracted, it may be on the nasal side or it may be concentrically, it is fair to assume a beginning pathological change and to act accordingly.¹

But it is not sufficient to trust to the periphery of the visual field for information. I am convinced that the study of scotomas in connection with chronic glaucoma furnishes a prognostic guide. There is no difficulty in finding them, either by the method suggested by Bjerrum, who uses a small test-object at a much greater distance than that or-

dinarily employed, or by ordinary perimetric methods, when care is taken to investigate each meridian and suitable test-objects are employed under varying degrees of illumination. Doubtless, as Bjerrum has pointed out, these scotomas are the result of the destruction of the fibres of the papilla at the margin or sides of the excavation, but sometimes they are to be accounted for by alterations in the inner retinal layers. These scotomas are topographically different from those which occur in simple atrophy, and may be utilized as a differential test between the two conditions, as Bjerrum has already suggested.¹

As I have pointed out elsewhere,² scotomas are often the forerunners of subsequent defects in the peripheral visual field. The following diagrams illustrate this, and are taken from the paper already

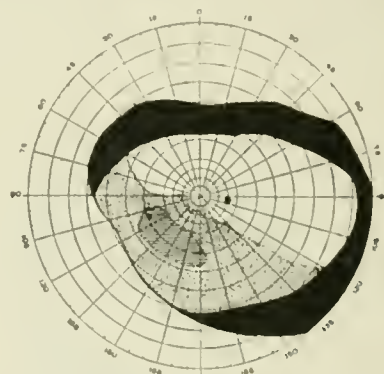


FIGURE 6.—Chronic glaucoma, female, act. 55. Visual field of right eye, showing the mechanism of the loss of the lower and inner portion of the field with preceding development of scotoma which gradually extends.

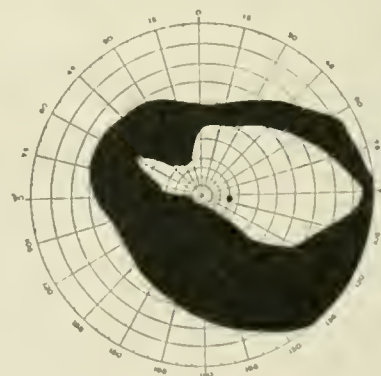


FIGURE 7.—Later stage of Figure 6. Visual field completely dark.

referred to. (Figs. VI, VII.) Therefore, I would warn against the conclusion that the field of vision is normal because its periphery has its full extent. No field is mapped until each meridian has been examined from fixation point to periphery when dealing with cases of chronic glaucoma.

(d) De Wecker's sclerotomy test. This surgeon has suggested the performance of anterior sclero-

¹ *Annals of Ophthalmology*, VIII., October, 1899.

² I am aware that Mr. F. R. Cross (*The Treatment of Chronic Glaucoma*, British Medical Association, August, 1900), referring to the field of vision in chronic glaucoma, states that he is satisfied "that diminished vision on the nasal side (or in the upper or lower quadrant of the nasal side) is the most important evidence that we can obtain for the early detection of chronic simple glaucoma, while the retention of vision in the temporal and infero-temporal portion of the field is equally characteristic as the disease progresses."

¹ Even De Wecker is willing to use eserine as long as vision and the visual field remain normal, but at the very first sign of depreciation or contraction, he operates. This necessitates a constant and faithful attendance of the patient, difficult to secure.

¹ It will be remembered that Bjerrum has frequently detected central or paracentral scotomas in chronic glaucoma and believes that they are peculiar in that they spread over the periphery in all directions, sometimes more in one direction than in another, except outward, where they never pass beyond the blind spot. In other words, the defective area wherever situated is in direct continuity with the blind spot. I have not always found this direct continuity, but the scotomas are certainly very commonly present.

² *Annals of Ophthalmology*, VIII., No. 4, October, 1899.

tomy in doubtful cases—an operation which he thinks is harmless. If the symptoms are ameliorated, especially if the visual field enlarges, the suspicion is confirmed, and iridectomy may be performed.

Absolute glaucoma may be a unilateral disease. Generally if one eye is blind from glaucoma of this type, the question when an operation shall be performed upon the opposite eye is answered with the statement: not until there are some manifestations of glaucoma. On this point Finkala¹ is very emphatic, being one of the few writers who seems to have the courage to state his convictions exactly. He says: "In case the glaucoma of the first eye is already absolute, one should perform an iridectomy upon the second eye before the outbreak of the disease, at least, when the suspicion that there will be an outbreak exists." He does not forget to discuss in this connection the chances of failure, and whether an iridectomy is a positive preventive of future attacks of glaucoma, reaching the conclusion that the former are slight and the latter, while not absolutely certain, furnishes the patient with the best protection. The patient must submit to the risk which all operations entail of inflammatory and infective processes, the danger of the development of cataract, especially if cataract has already begun to develop, the temporary disturbance of vision caused by the changing from a circular pupil to a key-hole-shaped aperture, the astigmatism, which even the best placed iridectomy temporarily produces, and the danger that the operation may be followed by malignant glaucoma. These chances must be taken because apparently the risk is greater without than with the surgical interference, and taking all things into consideration, it seems probable, as De Wecker has so forcibly pointed out in his recent report, that surgical interference is, even at the present time, too frequently delayed rather than too frequently recommended. What is the best surgical procedure is not part of the present discussion. Personally I have expressed, and am glad to do so again, my preference for iridectomy. Others think differently. We have not yet sufficiently far advanced in our knowledge of sympathectomy to give it its proper place among surgical procedures.

I would make the following recommendations subject to alteration suggested by the discussion, which I trust will follow:

(1) In cases of acute glaucoma the apparently unaffected eye should be operated upon as soon as the anterior chamber is restored in the opposite eye: that is to say, as soon as the wound is closed, provided the history of the case or an examination of the eye furnishes indications already described that it is likely to suffer a glaucomatous attack like its fellow, especially if the patient is so situated that he or she will pass from observation and from the resources of expert examination.

(2) In cases of chronic congestive glaucoma the same line of advice applies, and the operation is to be urged if clear information can be obtained that the apparently unaffected eye has suffered attacks

of nebulous or iridescent vision, associated with increased intraocular tension.

(3) In cases of chronic simple glaucoma, if any periods, however, temporary, of increased intraocular tension can be demonstrated according to the methods already suggested, operation should be performed even if central and peripheral vision are perfectly intact. Even when these are normal, careful perimetric examination may reveal a scotoma of the character already described; if so, operation should not be postponed.

(4) In cases of absolute glaucoma the same line of advice expressed under No. 1 and 2 is applicable.

AN IMPROVED LANTERN FOR DETECTING COLOR-BLINDNESS, TO SUPPLEMENT THE DEFICIENCIES OF THE WOOL TESTS.

By WILLIAM THOMSON, M. D.,

of Philadelphia.

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And ARCHIBALD G. THOMSON, M. D.,

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Ophthalmic Surgeon to the Childrens Hospital, Assistant Ophthalmic Surgeon to Wills Hospital and to the Orthopedic Hospital and Infirmary for Nervous Diseases, Assistant Ophthalmic Surgeon, Penna. R. R.



The present model is a more simple form of the one described a year ago in the last edition of Nettleship's book on Diseases of the Eye, and exhibited at the meeting of the American Ophthalmological Society, in Washington.

The lamp chimney and two discs are unchanged in form. Instead of ten holes there are now but seven, and the English measure is used in place of the French. The holes are one-half inch, except the small opening one-twelfth of an inch, which is equal in size to an angle of one minute at XX feet, and are

1. Berliner klin. Wochenschrift, 29, 1891, p. 1248.

2. De Wecker prefers sclerotomy followed by iridectomy.

*Read before the American Ophthalmological Society at its Meeting in July 1901.

to be viewed from the standard distance of twenty feet.

The lower disc contains the red, white, plain and ground, green, and blue glasses, similar to those used in railroad signals. The upper disc is for a "cross examination," and has white, ground white, the three "confusion colors," viz., London smoke, pink, and blue-green, which appear white to the ordinary color blind, and cobalt which to him appears and is called blue, having much red in it to the normal eye.

The letters of the alphabet designate the upper holes, and the figures the lower ones, when an accurate record is needed.

The examination is made in a dark room, the chimney being placed on its lamp, on an Argand burner, a spring candlestick, or over an electric light. The small opening may be taken as the standard of color perception at twenty feet, and the large one would be therefore six times in size. The color-blind make gross mistakes and can have their defects briefly stated on a record or blank by the examiner, using the letters and figures for this purpose.

A lantern of some kind has long been in use, that of Prof. Donders having been employed in all my examinations for years past. This one is of great value and should be used in connection with all of the wool tests, hereafter by not only the ophthalmic surgeon but by all lay examiners.

The uncertainties of Holmgren's generally-used test wools are pointed out by Eldredge-Green in the London Lancet for April 13th, in a paper which should be consulted, and which calls attention to the necessity of using transmitted light in lanterns. Of Holmgren's test he says: "If there be at the present time any specialist who is in doubt about its efficacy I shall be only too pleased to give him an opportunity of examining a case which has passed the test even under the most rigid and careful examination."

There are doubtful cases that all have encountered when using wools alone, and I am led to report the details of several of these.

I was aided in the first case by a young ophthalmic surgeon who suffers from *green-red* blindness, the form of color defect which I have found the most difficult to detect by the wool test of Holmgren and its varieties. Two years ago this young man had spent much time in trying Holmgren's test, but he always made an average of five failures. With the Color Stick he promptly selects the reds and the pinks, and half of the greens, making mistakes only in the group of light greens, which, with their confusion colors he sees as yellowish-brown. With the New Wool Test arranged for these difficult cases, the red colors being left out entirely, he does not select any blues with the rose or pinks, but reveals his real defect by confusing them with the greens. He so nearly passes the wool test that it is seen why practical examiners say that the Holmgren test does not succeed except in the hands of ophthalmic experts, and cannot be used by a lay examiner. The secret of his difficulty is revealed by the use of the spectroscope. Like all color-blind, the spectrum of this green blind man presents to him but two colors, yellow and blue. This coincides with the usual spectrum of the red blind man, whose spectrum is shortened at the red end. To show that there is a red perception in this case, a violet color screen, composed of red and blue, was placed in front of the spectroscope, when he lost all of the yellow and green part, but clearly saw the red end. A red screen also cut off his entire spectrum except the red portion, as it does in persons of normal color percep-

tion. This seems to show that he is dichromic, and partially color-blind, having the red and blue sensations only, but lacking the green. That he sees red objects is proved also by his having the acquired red blindness when looking at red objects through a peacock-green glass, a defect which is also induced in a normal eye. When tested with wools he sees the reds too well to fail in selecting them, as he also does the red in the pinks, for he never matches them with blue. He does not fail to see changes in the fundus oculi, nor in pictures of it—nor does he ever confound red with black ink, as the *red-green* blind may do. He seems able to distinguish the diseases that cause changes of color in the eyes of patients. He classified the wools of a full set of Holmgren placing the various colors together fairly well, making mistakes mainly with the greens which for him appeared as gray. He is therefore classed as a *green-red* color-blind. Attention is called to his selections preserved from the skeins with their names, on this card of bristol board.

Next, an engine-man from a railroad was seen soon after, whose symptoms were so similar as to need no further description. He had been examined by a doctor employed by his road, and found not defective. By another doctor he was considered as partly color-blind. He had been so carefully trained by his two daughters in the wool tests that he felt sure he would pass my examination. With the stick he made no mistakes with the red or rose skeins. He said a large imitation strawberry in my box, 3 by 2 inches, with red flannel body and yellow-green calyx, looked like a pear. When confronted with my lantern, however, the ophthalmic scholar, and the trained veteran engine-man were both helpless, and failed on every test by transmitted light. Red was called green or white; green was called red or white; the blue-green was called white or blue; the pink, gray; and the cobalts, blue. Any tyro could have decided these cases with the lantern.

The ophthalmic surgeon, although calling red and seeing it correctly generally, yet had but one name for the spring grass; that he was sure was red. His defect was first revealed by his insisting that a green ribbon on a lady's neck was red.

A similar case gave me much trouble and discussion on the P. R. R. where a signal-man, a member of a labor union, refused to acknowledge his color defect, detected by the stick by a lay-examiner, and spent much time and money in being coached with the color stick and wools by a local doctor, and by his wife with Holmgren's wools. My use of colored lights put his case beyond dispute, much to the credit of the lantern. He confused the green and red glasses from the test case when held one meter away. His selections of skeins from Holmgren are preserved on the card of bristol board.

He was reexamined several times, and had the sympathy of his Division Superintendent, who used the stick himself, and seemed unable to understand how a color-blind could pass the red and rose examination without a fault. The man seemed more anxious to overturn the wool tests of the road than to gain any advantage for himself. He finally, at the last interview, refused to submit to any test but the stick, and cut short his examination, refusing to look at any of my lights, where he knew he would be detected. He concluded by requesting me to sell him my sets of Oliver and Holmgren to continue his education. His card of wool selection indicates *green-red* defect.

May 31, 1901. Examination of applicant for Navy, U. S. C., act. 18, was found color-blind by wools and rejected.

R = 7/5.

V. L. = 7.5.

Never conscious of any defect. With the spectroscope he sees but two colors, yellow and blue, each fading to dark, with a gray band where they mingle. With Pole's pictures of spectra he says he sees some red in the normal one. Of his three squares of color, pink, green and gray, he says they are all in color, but the pink one is the most green. With my lantern he fails to call the red except in the 10 mm. size. He calls it green and red; and calls my three "confusion colors" viz.: pink, green and

gray, all a shade of white, or off white, without color. He calls the cobalt, blue; and the same when made pink by the blue of lower disc. He calls the blue light correctly and has a fine perception for this color. The greens he does not recognize. His feeble color sense.

With the color stick he selects seven greens and three browns with the green skein, and makes but one mistake with the red. He makes no mistakes with rose and is therefore not red-blind.

With Holmgren's wools he divides them into ten piles. The fact of mixing the pinks and greens indicates green-red blindness. The results are interesting. His grays are combined with light pink and light green. The lantern gave prompt and decided results and was superior to the wool tests. He is dichromic, seeing Nature with the red and blue sensations only. His selection of wools preserved on the card indicates green-red blindness.

These cases are rare and give rise to disputes when tested with wools alone. On the color-stick they pass the red and rose tests, since their red perception is enough to guide them, and fail only on perhaps five of the green, and confusion colors for green. An examiner without the clue to the green-red blindness hesitates and does not decide against a man who is so good on his reds. These cases form a sharp contrast with the usual ones of red-green blindness—with a shortened spectrum at the red end, where red perception is absent, and all the startling and fantastic phenomena of color blindness are found—viz., red matched with green in wools, rose with blue, inability to distinguish red fruits or flowers from their leaves, mistaking blood stains for ink, and speaking of the heavenly blue of the cheek of the best girl.

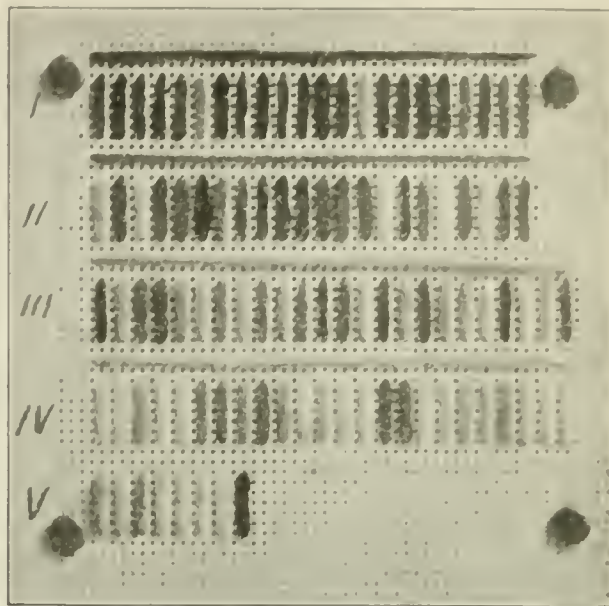
Mrs. S., the only color-blind woman of whom I have a record, I now mention to enable me to place before you her card as the best record of her defect in the wools selected and placed together from a Holmgren set. Her selection is a contrast with the others mentioned, and indicates the red-green blindness so commonly met with.

She was 50. Had been corrected for hypermetropia; full acuity of vision. From childhood color-blind. Two sisters were the same; her father and his brother, and her mother's brother were all color-blind. Of five sisters three are color-blind. Two sons are color-blind. One was tested by me with the spectroscope and had, like his mother, a spectrum of yellow and blue, both shortened at the red end, with a neutral band at the center. The mother tells me she had once bought a red dress for a black one, and could not distinguish one color from the other. Once her little daughter ran to her with blood on her white dress from a wound in the hand, and Mrs. S. exclaimed "Who has thrown that ink on your dress." Her card of preserved wools tells the story and indicates by its confusion colors with red and blue the red-green defect, which is her form of defect.

One more interesting record of a red-green railroad man remains. His selections are those usually met with in the use of the Holmgren and kindred wool tests. He was detected by the color stick, was one of the doubtful cases that demanded an expert examination, and furnished this valued record. His red indicates, as does his pink, an absence of red sensation.

Should color photography ever be perfected, such records as these, consisting of cuttings of wool selected by the five color blind described, could be not only preserved but presented for study to all interested in the subject as unique and faithful records of each case.

The use of the lantern here also disposes of all doubt of the presence of color-blindness with promptness and certainty and condemns the appli-



The long thread indicates the color to be matched, those below it those selected. The Figures I. Red; II. Yellow; III. Green; IV. Blue; V. Gray.

cant; but the diagnosis of green-red blindness requires the spectroscope, aided by a number of color screens or glasses to settle any controversies or doubts.

To conclude it appears that we may hope to render more clear the defects of the various wool tests. This seems desirable if we favor the use, where it seems proper, of non-professional examiners. My experience leads me to keep down the number of skeins in a set, and to insist on the use of tags with numbers that can be put on a written record, and submitted to the supervision of an expert on the subject. This has been done with the Color Stick and the New Wool Test, both simple forms of Holmgren's Test. Holmgren's test and instructions as usually employed presuppose that the examiner shall be able to furnish an infallible decision himself, which might be difficult for an expert of high training.

I am now of the opinion that the use of colored lights can be made by the layman to the saving of much time and needless discussion. My own conclusions have for years been formed from transmitted lights of various kinds, and I have offered a simple and effective form of a lantern for your consideration.

Queen and Co., supply the lantern accompanied by a certificate signed by Dr. Thomson of its accuracy.

A New Sign of Raynaud's Disease.—A. I. Pospeloff (*Medicinskoje Obosrenie*, June, 1901) observed a large number of cases in which Raynaud's disease was associated with biting at the nails, and he therefore concludes that a symptomatic relation exists between the two. He explains this "bad habit" by the fact that in Raynaud's disease the circulation of the matrix of the nails is disturbed, exerting pressure on the nerve terminals. This produces unbearable pain and a sensation of fullness in the nails, compelling the persons thus afflicted to bite at the latter. [A. R.]

LIGHT AND RADIANCE IN THE TREATMENT OF
DISEASE.By GEORGE G. HOPKINS, A. M., M. D.,
of Brooklyn, N. Y.

ARTICLE II.

PULMONARY TUBERCULOSIS.

Few of us realize the tremendous mortality that pulmonary tuberculosis produces in every civilized community year by year. The very best statistics taken the world over credit an average of one tenth of the entire deaths to phthisis pulmonalis.

This formidable record should awaken in every member of the medical profession a desire to investigate, and prove or disprove the efficacy of every remedy that has apparently cured some cases.

From time to time spasmodic efforts have been made to discover some specific for this disease but so far without success. Detweiler, in his strong advocacy of open air treatment with super-nourishment started the wave of medical opinion which has ever since been gaining strength, that this disease is susceptible of cure. But it remained for Professor Koch to arouse physicians from their lethargy in regard to this affection.

I, like many others, was carried away by his statements. It was my good fortune to be able to secure some of the first lymph brought to this country. I took under treatment a dozen patients, not in hospitals but in private practice. The patients were watched by trained nurses night and day. The temperature was taken every four hours. The sputum was examined daily. The tuberculin was administered in exact accordance with Dr. Koch's directions. The greatest care was taken to have everything aseptic.

In only one of these twelve cases was there any apparent improvement. The tuberculin appeared to have a germicidal effect on the bacilli; myriads of broken down germs were visible under the microscope. This was all very well, but the number of live bacilli thrown off far exceeded the number found previous to the administration of the tuberculin. Notwithstanding the extreme dilution of the lymph, and the process of heating to which it was subjected, it was surprising to see so prompt a reaction as was shown in every case.

Dr. Goetsch has been experimenting for ten years with tuberculin, in much higher dilution than that used under Koch's directions when he first gave his discovery publicity. Now Dr. Koch approves of this infinitesimal dilution of Dr. Goetsch.

But the weak point of all this is that Dr. Goetsch will only treat cases that have not shown any febrile reaction. That is he must secure them at a stage of the disease when patients have no suspicion of having the disease, and physicians seldom see them. Send such cases to Detweiler or Trudeau and they will cure them without tuberculin.

Be tuberculin valuable or not, the world owes to Prof. Koch a debt of gratitude that can never be paid, in that he has awakened the medical profession all over the world to an active search for some specific to cure this white plague and to the belief that there is a possibility of securing such a remedy.

The blue glass treatment was another step in the right direction and where sunlight can be had, I

should expect a cure in every case in the stage of the disease treated by Dr. Goetsch.

The injection of the cavity in a diseased lung with a mixture of carbolic acid and iodine, as so successfully practiced by Dr. J. Blake White, is a remedy of great power. I have used it myself with some degree of success and without the least danger to the patient. The catalytic effect of medicines has been tried; but with this I have had no experience nor does it appeal to my judgment.

The X-Ray has been and is being tried; but as it has so much boney substance to pass through before reaching the diseased structure within the chest, there is great danger of doing damage to the superimposed tissue of the chest, if sufficiently hard tubes are used to penetrate the diseased lung. So I have not thought it safe to use the radiance in this lung affection.

But light is a powerful germicide and the actinic rays will penetrate even the deep tissue. In order that the patient may be able to tolerate a sufficiently powerful light to destroy the germs of disease some method had to be devised to eliminate the heat rays. This is done in Finsen's apparatus by quartz crystal and in a less degree by blue glass or a watery solution of alum; so that the patient can be exposed to a powerful electric light for an hour at a time with comfort, and will even sleep during the treatment.

That I might test the light treatment, I purchased a 50 ampere electric lamp with a 20 inch condensing lens and had this arranged with an adjuster so that at a distance of 15 ft. the light could be concentrated on a surface an inch in diameter if it should be desired. With this concentration the heat is so great that it fractured a strip of $\frac{1}{4}$ inch plate glass two inches in width at two feet distance and a strip of $\frac{1}{8}$ inch blue glass of the same width at six feet distance.

In using this powerful lamp a screen made of strips of blue glass is interposed between the patient and the lamp to cut out some of the heat rays. The chest of the patient is bared and the light concentrated to a circle from fifteen to twenty inches in diameter according to the tolerance of the patient. The exposures vary from half an hour to an hour and are given daily.

The first effect of the light is a diminution of cough and temperature within forty-eight hours. In most cases the temperature is down nearly to normal within the first week of treatment. I am accustomed to judge somewhat of the improvement by the gain in weight; this is taken the day of the first exposure and subsequently every two weeks. In every case the amount of expectoration is perceptibly diminished and the number of bacteria to the field very much diminished within the first week of treatment. This indicates a reduced tax on the system, as the reduction of the number of bacilli to the field and the smaller quantity of expectoration makes a smaller army of microbes to be fed at the expense of the patients system.

Several patients who on beginning treatment walked a block with difficulty at the end of two weeks could walk a mile. The beneficial effect on

appetite was always marked from the very first treatment. The cessation of the cough necessarily permitted better rest at night. It is remarkable with what rapidity symptoms are ameliorated under the influence of the concentrated rays of light.

No. 1. H. B. H., aged 33 years, born in Connecticut. Trained Nurse. Came to me November 17, 1900. Menstruation regular, urine normal. In her mother's family, grandfather, two brothers and four sisters have died of pulmonary tuberculosis. Her mother is a picture of health and has always been well. No member of father's family has had any tubercular disease. In July, 1900, while on duty at the Seaside Home, she found herself growing weak, and her duties fatigued her greatly. She had noticed a morning cough for a year past, but it did not alarm her. By August the cough became annoying and there was increased expectoration. This alarmed her and she consulted a relative who is a physician and he diagnosed tubercular infection. Sputum was first examined October 5th, and found to contain bacilli in "considerable numbers." She was then taking creasote *m xxxx t. d.* in capsules. *Tr. Ferri Chloridi m x t. d. Liq. Potas. Arsen. m viii* every other day, and Russell's Emulsion 3 ii t. d.

November 20th, light treatment was instituted. Medication was continued with the exception of the iron and Russell's emulsion, Turk's emulsion of cod liver oil in half oz. doses was substituted at the suggestion of Dr. Reynolds.

She was examined by Dr. Reynolds and myself. A cavity was detected in the apex of the right lung, but very small in size. Her pulse was rapid and weak. Skin soft and flabby. Eyes dull and heavy. Whole bearing indicated debility and malaise.

November 21st sputum was examined by Dr. Craig and found to contain bacilli of tuberculosis. December 20th he found little if any change. January, February, March and April, 1901, found them in gradually decreasing numbers. His May examination showed a few bacilli. April 23d, May 1st, May 18th, June 9th and July 16th examined by Dr. Willis S. Cummings, my assistant, and "no bacilli" found. On June 12th and 19th Prof. Van Cott made careful examinations and could not find any tubercle bacilli and congratulated the patient on the result.

The patient's normal weight previous to August 1900 was 120 lbs. Then she found that she had lost 6 lbs. On November 20th she weighed 114 lbs. She continued to gain until February, 1901, when her weight was 119½ lbs., one-half pound less than normal. Her temperature had never gone above 100°, but after the institution of treatment it began to fall and by March 1, 1901, became normal. The cough was promptly mitigated, and expectoration decreased to such an extent that it was often difficult to get a specimen for examination.

Physical examination from time to time by Drs. Reynolds, Cummings and myself indicated a gradual but steady improvement in the condition of the lung. In April Dr. Reynolds after examining the lung, pronounced it practically healed. May 12th Prof. A. Jacobi, who was visiting me, kindly consented to examine Miss B. and stated that "while there was evidence of degeneration having taken place, the process had evidently stopped."

The light treatment began with half hour exposures daily (except Sunday) on November 20th, 1900, and continued until June 15, 1901. Light treatment and creosote were discontinued at that date. July 16th her weight was 119 lb., cough had ceased, no bacilli in sputum, cavity apparently healed. The affection in this case has been stamped out and the patient cured of the results of this invasion of microbes.

No. 3. G. G. C., aged 37 years. Express Clerk. Nativity, New York. Married. Contracted cold in December, 1899. Health continued to decline and tuberculosis was diagnosed. He had his sputum examined in May, 1900 but no bacilli were found. On June 1st he had another examination made and the bacilli were present.

In spite of treatment which seems to have been intelligent and skillful he continued to decline in health. A cavity developed first in one lung and then in the other. In the fall it was thought best for him to go South and he went to Texas. The climate did not benefit him. On

the contrary he lost ground steadily till the middle of December, 1900, when he came home to die. His physician, Dr. Barnett, referred him to me on his return home. It was with great effort apparently that he came to my office on January 1, 1901.

He was greatly emaciated; there were good sized cavities in both lungs. His pulse was feeble and rapid. Temperature running to 103½ every evening. Cough distressing, expectoration free. Sputum contained large quantities of bacilli. In fact his condition was such that I was not anxious to place him under treatment. But at the urgent solicitation of Dr. Barnett I took him under treatment.

His first visit to my laboratory was accomplished with difficulty, although he had only one block to walk from the cars, which passed within three or four doors of his house, and it was only a ride of twelve blocks.

His medication was Turk's emulsion of cod liver oil, liquid peptonoids with creosote and Fowler's solution. His light treatment was daily exposures of one hour each from January 2, 1901, to June 1st.

His improvement was rapid and remarkable. At the end of the first week he walked from his house to my office without fatigue, the cough was greatly mitigated; sputum decreased in quantity; temperature not above 101°; appetite greatly improved; night sweats decreasing.

January 1st his weight was 131 lbs.; January 14th his weight was 134½ lbs., showing a gain of three and one-half pounds in two weeks. 30th, his weight was 137 lbs., a gain of two and one-half pounds in the second two weeks, or six pounds in a month. April 3rd his weight was 133 pounds, and has remained about that figure. By June 1st he was walking 5 or 6 miles a day. The sputum showed no bacilli. His lungs were clearing, and he felt perfectly well. He procured an out door position about the race tracks, and treatment was suspended.

This case is remarkable for the great and rapid improvement from the very start.

I have treated ten cases in all. In every case cough, expectoration, temperature and sudorosis have been relieved within the first few days. The appetite also has rapidly improved.

While the period of experiment has been less than a year, the success has been sufficient to warrant a continuance of the treatment. It seems to me that we are pursuing a plan of treatment that promises much in the future.

I would add a word of caution. The patients should not be exposed to cold without very careful protection for some hours after taking treatments as the pores are open. The sudden cooling of the skin after prolonged exposure to heat will overtax the kidneys and possibly produce congestion in them.

I would advise careful examination of urine in every case where treatment is being given. The treatment could be better carried on in a sanatorium. It is hoped that this paper may induce a number of the profession to try this method that its place may be determined as a therapeutic measure.

On the Treatment of Women's Diseases by Electricity. — A. N. Alexandroff, in a paper read before the Society of Obstetricians and Gynecologists of St. Petersburg (*Bolnitchnaia Gazeta Bolkina*, Vol. XII, No. 16), described a special method employing electricity devised by him as early as 1886, independent of Apostoli. By this method he treated a large number of gynecological cases with gratifying results. In five cases of amenorrhea complete recovery took place in three, while the other two became pregnant. In 4 cases of fibromyoma the growth disappeared; in the others it diminished in size. Out of 34 cases of metritis 26 recovered; endometritis was cured in 33 out of 41 cases. Out of 14 cases of oophoritis 6 were cured; of 10 cases of salpingitis 3 were cured; in 1 case of hydro-salpinx recovery took place. Thirty-three cases of perimetritis were treated, 22 were cured; 12 cases of parametritis, cured 11; perioophoritis 18 cases, cured 13; perisalpingitis 5 cases, cured 4. [A. R.]

DISCUSSION ON THE THERAPEUTIC AND DIAGNOSTIC VALUE OF TUBERCULIN IN HUMAN TUBERCULOSIS.

By G. A. HERON, M. D.,

of London, England.

In the autumn of 1890—all but eleven years ago—there took place in Berlin one of the most remarkable events that mark epochs in the history of medical science. At that time, in the beautiful capital of the German Empire, there were gathered together some thousands of practitioners of medicine. Among them were many of the highest rank in their profession, men whose names and whose works were well known to all students of medical literature. Great centres of learning, famous scientific societies, medical schools and colleges, sent their representatives. Both hemispheres, all countries of importance, were represented at this memorable gathering. The reason why the medical profession then flocked to Berlin was, not because a new method of treating tuberculosis had been announced, but because a new method of treating that disease had been made known, as the work of his own hands, by the man who shared with Lister and Pasteur the honor of having done most for the advancement of scientific medicine, and the consequent lessening of human suffering. The great gathering in Berlin in 1890 was but an expression of the admiration and respect in which Robert Koch was held; for it is certain that had tuberculin been first brought to our knowledge by a man not in the first rank of our profession the remedy would have been left to find its own way slowly—perhaps very slowly indeed—into notice.

With much enthusiasm, and with high hopes of its future usefulness, tuberculin was received in the autumn of 1890. Before the end of the following spring the remedy had to a very great extent fallen into disuse, and was damned as loudly as it had ever been welcomed. The outcry against the use of tuberculin—for it was nothing less than this—had for its chief cause the condemnation of its use by another distinguished German, Virchow. The patriarch of present-day pathologists said that, in his opinion, the use of tuberculin was fraught with danger to the patient. His reason for making this statement was that he had seen in the bodies of consumptives, who in life had been treated with the old tuberculin, evidence which convinced him that the drug caused destruction of the tissues around tubercular centres, and so set free the bacillus to do its work upon healthy tissues. Virchow maintained that, had the remedy not been used, the bacillus might have rested, harmless, encapsuled, as we know it often is, by tissues that have undergone an indurative process, and become fibrous. Now this statement of his views by a man so justly famous as Virchow at once attracted attention. There is, I think, no doubt that this expression of opinion greatly tended to deter men from using tuberculin, and to prejudice the medical profession everywhere against its use. And so tuberculin was both made and unmade in Germany!

Of Virchow's objections to the employment of

tuberculin I can only say that, in my hospital experience of its action, there has been observed no evidence of resulting spread of disease to seemingly healthy organs, or to neighboring tissues. The average stay in hospital of the first thirty-five cases treated with the old tuberculin by me extended to sixty-one days. There was, therefore, sufficient time in which to observe whether or not, in these cases, there was to be obtained clinical evidence in support of Virchow's views. In no case was this evidence found, and it was often searched for by other physicians besides those officially present in the wards.

It may be worth while to refer, in this connection, to a case treated by me with the new tuberculin in hospital, and selected for that treatment because the patient was certainly slowly dying of extensive and advanced tuberculosis of both lungs. Dr. Perkins, who is one of the honorary secretaries of this section of the Congress, and was then pathologist to the City of London Hospital, performed the *post-mortem* examination. He made special search for the presence in the viscera of centres of probable fresh tubercular infection, but found none. This patient received twenty-six injections of new tuberculin in forty-two days, and the doses ran from 0.0025 mg. up to 2.5 mg.

Koch had, in the plainest words, and on several occasions, stated that cure of tuberculosis, when it affected the lungs, could be reasonably looked for, with the help of tuberculin, exclusively in those cases where only a small portion of one lung was infected to a slight extent, and where, of course, there was no evidence of excavation of lung tissue. He also said it would be reasonable to hope for a cure when only a small portion of each lung was diseased, there being no evidence of excavation. Any departure from these types of cases, in the direction of increase of the extent of the disease, lessened, by so much, in Koch's opinion, the chances of a cure; although even in more advanced cases amelioration of symptoms was he believed, likely to result from the use of the remedy. Now hospital experience taught me that it is seldom we have there an opportunity of treating these early cases. Therefore it is not common to find in hospitals the cases in which cure of the disease can be reasonably expected. So far as my experience of private practice goes, I must say the majority of cases in which I have been asked to advise as to the use of tuberculin have been too far advanced in tuberculosis to permit of high hopes for the best result of the treatment being obtainable. But when in unsuitable cases the use of tuberculin produces no good result, blame should not rest on the remedy. In my opinion, tuberculin has fallen into discredit:

1. By its frequent use in unsuitable cases.
2. By its administration in too large doses.
3. By neglect of the rule that a dose of it should never be given until the patient's temperature has been normal for the previous twenty-four hours at least.
4. By neglect of the rule, that the dose of tuberculin should never be increased, but, on the contrary, should be diminished, when its administration has been followed by a rise of temperature.

* From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

5. By the prejudice raised against the remedy, among both doctors and patients, because of the severity of the symptoms, which not seldom follow upon its use.

Sir, I am obliged to crave indulgence of this meeting. It has been, if I may be allowed to say so, a very bitter disappointment to me, that in consequence of a long illness, which, until a fortnight ago, unfitted me for work, I was obliged to relinquish the treatment of the cases I had began to observe for the purposes of this discussion. Therefore, I am unable to present to you the new work which it was my earnest wish and intention to have submitted to you to-day, and I can deal only with work I have already published.

Since the end of 1890, fifty-seven cases have been treated with tuberculin by me at the City of London Hospital for Diseases of the Chest. Fifty-one of these were examples of tuberculosis of the lungs, and six of lupus vulgaris. Of these, five of the lupus cases and twenty-seven of the others were treated with old tuberculin.

One case of lupus, and twenty-four cases of tuberculosis of the lung, were treated with the new tuberculin.

At the end of the year 1900 seventeen of the fifty-one cases of lung-disease had been lost sight of, practically from the time they left hospital. Sixteen of the remaining thirty-four were then known to be well, and earning their living. I ask you to bear with me while I touch upon a few of the more important features—as I deem them—of these cases.

Whether consumptives leave a hospital well or ill is a very small matter compared with the answer to the really important question: How many of these people are able to work for their living, and for how long a time did they continue to gain their livelihood? I think the return to useful life of sixteen out of thirty-four cases of tuberculosis of the lungs, is not altogether an unsatisfactory result of treatment, and this result was obtained with the help of tuberculin. According to our information at the hospital, ten of these sixteen cases of recovery are known to have remained well and able to work for seven years, three for over three years, and three for nearly two years. Other patients remained able to work for periods varying from a few months to eighteen months; but as they are known to have broken down in health they are not included among these sixteen cases of apparent recovery.

Thirty-two of these fifty-one cases left hospital in 1891. Seven years afterwards—in June, 1898—the information concerning these cases, obtained, for the most part, by the assistant medical staff and nurses of the hospital, was as follows:

Eight of them were dead.

Ten were well.

One relapsed in 1897, having remained well until the autumn of that year.

Thirteen were lost sight of very soon after they left hospital.

These patients were all treated by the old tuberculin, and their cases are dealt with in some detail in a paper I contributed to Vol. XIV. of the *Transactions of the Medical Society of London*.

In addition to these thirty-two cases, five cases

of lupus vulgaris were then treated by the old tuberculin. These cases all did remarkably well up to a certain point, and then, at longer or at shorter intervals, suffered relapse. In one of the five a relapse did not set in until more than a year after she left hospital, and she would not return for treatment because she said she could not afford to give the time necessary for this purpose.

Some of these cases of lupus vulgaris relapsed while under the influence of tuberculin. It is certain that at this period of the history of tuberculin cases of lupus received unnecessarily high doses of the drug. When relapse took place in, for example, three of these cases, one of them had gained ten lbs. in weight, and was taking 400 mg. doses of tuberculin; the second was taking 1000 mg. doses, and had gained 10 lbs. in weight; the third had gained 18¼ lbs. in weight and was taking doses of 1000 mg. These large doses were given once in a week or a fortnight, and were in these cases not followed by high temperature, nor by other symptoms due to the action of the drug. The patients had been respectively 124, 128, and 135 days in hospital, and had received in that time the first-named 50, and the other two 59 hypodermic injections of old tuberculin. It seems to me difficult to believe, that these large doses could have exercised any material influence in the direction of favouring any tendency to relapse. The evils said to result from tuberculin are ascribed to its violent effects upon the tissues, by which, during severe reactions, infections of neighboring healthy tissue is, according to Virchow's observations, apt to happen. But in these cases there were certainly no reactions when large doses of tuberculin were given, beyond slight redness round the site of the lupoid patches. There were no headaches, no rigors, no high temperatures; and yet, in these circumstances, a relapse did take place, and while the drug was being administered. If the tubercle bacilli were let loose into the tissues, near the patches of lupus, as a result of severe reactions early in the treatment of these patients, then the drug should, one may reasonably urge, have had ample opportunity to exercise a beneficial influence, owing to the administration of the very large doses, which were not followed by reactions worth noticing. Certainly, in all but one of my lupus cases, tuberculin seemed, after a certain time, to lose its power for good. I confess I have never been able to understand why, in cases which had improved so much, certainly because of treatment by tuberculin, relapse should have occurred while the treatment was in full use.

Since March, 1897, I have used only the new tuberculin. During that year ten cases were so treated in hospital. Two of these cases died. One of them was the man whose case I have already spoken of as having been selected because he was certainly dying. The other eight cases of this year were made up of seven examples of tuberculosis of the lung, and one of lupus vulgaris. They all did very well, and, without exception, left hospital, urging as their sole reason for leaving their fitness for work and their wish to resume work. In December, 1900, three years after treatment, the following

was the result of the use of tuberculin in these ten cases:—

Two were dead; both of them recognized as being hopeless cases from the first;

Three were well and supporting themselves by their work;

Three were lost sight of;

One remained well until lately, and returned to hospital a few weeks because of a recurrence of disease.

No. 10 of the patients of the year 1897 is worthy of some notice. It is the only case of lupus I have treated with the new tuberculin, and it is the only case of that disease, which, in my hands, has not suffered relapse. He was a coachman, 27 years of age, admitted to hospital on April 17, 1897, with lupus vulgaris affecting the whole of his left nostril, both within and without; about one half of the anterior part of the right nostril, within and without; and the bridge of the nose between the alae nasi, excepting the tip of the nose. The left lip close to the middle line, at junction of lip and alae nasi, was also diseased. There was another infected spot of skin threequarters of an inch in front of the lobe of the right ear. This patch was about the size of a sixpence. Treatment with new tuberculin was commenced April 20, 1897, and completed August 4, 1897. Total quantity of tuberculin injected (hypodermically) 126.5 mg., given in sixty-three injections; the doses ranged from 1-300th part of a mg. to 4 mg. On July 2 scar tissue only was seen over sites of lupus patches, excepting the patch on the left lip; this had entirely healed sixteen days earlier. On February 25, 1898, I showed this patient to the Clinical Society of London. He was then free from recurrence of the disease. To complete this part of the case I may say he was quite well on June 9, 1898.

In the discussion which followed upon the exhibition of this case at the Clinical Society, it was asserted that the diseased condition I have described to you was due to syphilis, and not to lupus. In my notes laid with the case before the society, it was stated that the man had a history of gonorrhea followed by the sore throat. On his shins were two or three brownish stains, which, together with the history just mentioned, made it not improbable he had syphilis. He said he had never had skin disease until the appearance of the lupus patches on his nose. They began, he said, with a pimple. You will observe in this connection that it was stated in the hospital notes of the case, that there was on July 2, only scar tissue over the sites of the principal lupoid patches. On July 5 this patient, in going about the hospital, hit his shin sharply upon the angle of the chair. The skin was bruised and cut, and the patient suffered considerable pain in consequence. When, a day or two after the accident I saw the shin, it was very tender, and the man complained of pain. I ordered him to have gr. 5 doses of iodide of potassium, and this treatment was continued for a week. He was then free from all uneasiness, and the swelling was gone. The use of the iodide was then permanently discontinued.

It seems to me that it can hardly be fairly argued that this episode of the iodide had any effect upon

the skin disease that had affected the nostrils, but practically was cured before the iodide of potassium was first given. Another point about the case is, that the patient's temperature, taken for a week before the first dose of tuberculin was given, was normal. After a dose of 1-300th of a mg. of tuberculin, his temperature rose in twenty-four hours to 100.2°, and after a dose of 1-100th of a mg. to 100°. This patient's temperature charts show that he was peculiarly susceptible to the influence of tuberculin. Doses of 1 mg. caused temperature of over 102° on three different occasions, and $\frac{3}{4}$ ths of a mg. caused similar temperatures to be recorded. To my mind these facts are most important in helping us to a diagnosis of this case.

At this discussion of the Clinical Society of London, one dermatologist of note, and a well-known laryngologist were emphatic in their statements as to this case being one of syphilis. I hope I shall not be blamed because I attach more importance to the behaviour of this patient's temperature under the influence of tuberculin than to the expressions of opinion to which I have referred. The laryngologist was particularly convinced as to the accuracy of his observations, and that the case was one of syphilis, because, he said, he smelt dead bone in the patient's breath, and saw evidence of dead bone on inspecting the patient's nasal cavities with his laryngoscope. Four months after that expression of laryngological opinion, the patient was quite well, and had shown no evidence of the presence of dead bone in his nose or elsewhere; but whether or not his breath smelt of dead bone I cannot tell, because my nasal acumen in that direction is obviously untrustworthy, for I could not at any time detect the odor of dead bone which was so plainly revealed to the no doubt specially educated olfactory system of the laryngologist.

In 1899, ten patients, five men and five women, were treated in the wards with the new tuberculin. Of these five women two are known to be still in good health. One of the two is a domestic servant, the other is a shorthand writer and typist. Two other women are reported to have broken down in health. The fifth has not been heard of since she left the hospital.

Of the men, one continued well for more than a year after treatment, but appears to have recently had a relapse. He worked as a hawker, and so supported himself. Another seems now to be as well as he was when he left the hospital, and is said to be able to work. The third died November 16, 1900; the cause of death was not stated to us, but he was carried from his work, and two months afterwards died in his bed. Probably he died from a relapse. The fourth was reported to be very ill a year ago. The fifth is working as a photographer's assistant, but he says he had spitting of blood two months ago.

In Krause's record of his six years' experience of Koch's method of treatment of tuberculosis, he states that of twenty-seven of these cases, twelve are well, thirteen improved in health, one in *stat. quo*, one is worse. It is, of course, not possible on an occasion like this to go into details at any length; but some authors have more or less emphatically dissen-

ted from the outcry raised against the use of tuberculin, *e. g.*, Hansen, of Bergen, Osler, Gøtsch, McCall Anderson, Petruschky, Spengler, and others. Those of us who have dissociated ourselves from the outcry against tuberculin, have all expressed the view that in cases of tuberculosis, which fall within the limitation laid down in 1890 by Koch, great benefit to the patient is sure to follow upon a proper use of tuberculin, and very often there is complete disappearance of all symptoms of activity of the disease.

By far the most important communication, after Koch's own, that has yet been made to the literature that deals with tuberculin, was published by Dr. Gøtsch of Slawentzitz, on May 1, 1901. If the patient can well bear the old tuberculin, Dr. Gøtsch conducts the whole treatment of the case with it, beginning with so small a dose as .00001 gr. If this small dose should cause a rise of temperature, then Gøtsch goes back to the new tuberculin, giving it in doses of about .001 mg. Having felt his way by carefully avoiding the use of doses which would at all raise the temperature, or produce other symptoms of reaction, Gøtsch substitutes in the treatment the old for the new tuberculin. Since 1891 Gøtsch has treated 224 cases of tuberculosis, not of the lung only, but of all tissues. Of these he says he has cured 71%.

The record of these cases is most interesting, and the reading will, I think, carry, to any unprejudiced mind, the conviction that Gøtsch has given us a very important new departure in the use of tuberculin.

Responsible opinion is unanimous in its recognition of the worse than uselessness of any attempt to treat with tuberculin tuberculosis that is complicated with other inflammation. These mixed infections, as they are called, were not recognised in 1890, and it is only within the last few years that their great importance as complications of tuberculosis, whether of the lungs, of the skin, or of any other tissue, has been clearly apprehended.

Is there good ground for the belief that tuberculin, when properly used, is dangerous in any degree to the patient? From my own experience—and I am responsible for over 2000 injections of it—I am strongly of the opinion that it is, at least, as safe to the patient as is any other very potent drug.

Having said this, I will ask your attention to a statement of a case of great interest, which, in all its details, is well known to me.

A girl, seventeen years of age, was submitted to a test injection of tuberculin, because her physician had a doubt as to whether or not the girl had tuberculosis. She was thin and undersized. There was dull percussion over both lungs and abundant crepitant râles filled them both from apices to bases. Her liver and spleen were enlarged. No tubercle bacilli were found in the sputum. When the question of giving this girl a test dose was discussed, it was decided that, lest her symptoms should be due to tuberculosis, only a minute dose of old tuberculin should be given. Therefore, instead of the usual initial test dose of 1 mg., one-third part of a mg. was injected in the usual

way, and with, of course, strict attention to antiseptic precaution.

I show you an enlarged copy of this patient's temperature chart. The temperature was taken in the mouth, and the chart records in morning and evening for eleven days previous to the injection of the tuberculin. From the time of the injection onwards, the temperature was taken every four hours. Before the injection, the temperature, you will observe, ranged between two to four points below 98°; up to a point or two above 99°. After the injection the temperature never rose above 98°, and it fell on the last day to 96.4 and 97°. Respiration rose gradually from about twenty to double that rate. The heart's action became feebler and feebler, until she died twenty-seven hours after the giving of the injection. There was vomiting two hours, and again three hours after the injection. For the last twenty-four hours of life the patient had diarrhea, not bloody.

It happened that two other women, and two men each received the usual test dose of 1 mg., taken from the same bottle that had been used in this fatal case. Both of the women had moderate reactions, but one of them became jaundiced, and had a considerable amount of vomiting. The other woman had a rise of temperature of 102°, and no other symptoms, excepting only a slight sense of headache. Both the men had severe reaction with rigors, and a rise of temperature in one case of 104.4°, in the other to 102°. The man whose temperature reached 104.4 had vomiting, which, at intervals, continued for five days.

I need not say, a series of cases like this demanded a most rigid investigation as to the cause of these deplorable results, plainly associated, as they were, with the injection of these test doses.

As regards the case ending in the death of the patient: that the death was not due to tuberculin seems beyond doubt, for dangerous symptoms have, so far as I know or can ascertain, never been observed to follow a dose of less than 1 mg. The characteristic of the action of tuberculin is a rise of temperature. Here the temperature fell. Vomiting is a not infrequent symptom of a severe reaction, but here there was no evidence of reaction due to tuberculin. Excepting only this case, I have no knowledge of diarrhea having ever followed upon the use of tuberculin. But the symptoms of jaundice and vomiting in the other woman and the five days of occasional vomiting which occurred in the man, made it certain something was wrong with the tuberculin used in these cases. It was contained in one of several bottles, all filled with tuberculin of the same date of manufacture; the date being one month and eleven days previous to the giving of injections. All these bottles were sent to Dr. Macfadyean of the Jenner Institute. They were unopened, excepting, of course, that one which had already been in use. He examined their contents by every method known to bacteriologists. He says in his report: "The tuberculin was injected into guinea pigs, 1 cub. c.; 0.5 c.c., and 0.2 c.c. No toxic effects were produced, nor any noticeable symptoms." Dr. Macfadyean ends this report with these words: "I have not, therefore, been able to trace any abnormal or deleter-

ious property in connection with the samples of tuberculin. . . ."

The doses of the drug were made up by a most efficient druggist, who was well accustomed to the preparation of minute doses, dispensed with the use of the metric system of measurement. Careful enquiry made it certain there could have been no error in the dosage. Of course every effort was made to secure a post-mortem in this case, but the necessary permission could not be obtained.

One may speculate upon the cause of this death; and it may be suggested, with much force of reason, that it was due to widespread and advanced degeneration of the intestinal glands. But the absence of post-mortem evidence and the want of all help from the bacteriological examination, must, I fear, for the present, bring us face to face with a deadlock in seeking to explain this case.

The fact that this girl showed no reaction proves to the minds of, I think, all those who have much experience of the use of tuberculin as a test for the presence of tuberculosis in human and other animals that it is highly improbable she had tuberculosis. What, then, is the diagnostic value of tuberculin? That it produces its characteristic reaction wherever tuberculosis is present, there can be no doubt. That it rarely fails to react where there is tuberculosis is so true, that cases in which failure is recorded may safely be neglected. In my own experience of this use of it I have never seen any evil consequences follow its administration. It produces no evil effects in such cases as disease of the larynx, nor in kidney disease with albuminuria and granular tube-casts, nor in disease of the bladder, nor, so far as I know, in any condition of disease, whether tubercular or not. As an illustration of the practical usefulness of tuberculin as a test in cases always difficult and often impossible of diagnosis by ordinary methods, I would refer to the excellent work done in this direction by Dr. Eric France, of the London County Asylum, Claybury. His object was to ascertain, with certainty, who among the insane inmates of the asylum had tuberculosis. For this purpose he tested fifty-five of his patients with tuberculin. Characteristic reactions occurred in forty-five of these cases. Thirty-four of them eventually died, and twenty-nine of these thirty-four were submitted to *post-mortem* examination, with the result that, as Dr. France says, "Active tubercle was found in every case." Ten of the fifty-five patients did not react. Five of those died, and *post-mortem*, says Dr. France, "No trace of tubercle found in any; five still alive and healthy." Here is his expression of opinion on this matter in his own words: "I injected fifty-five cases with tuberculin, and personally I am satisfied, not only with the accuracy of its diagnostic power, but also with its entire harmlessness, both in the tubercular and in the non-tubercular."

We know, Sir, that the best, I had almost said the only, chance of cure of the consumptive is to treat him in the earliest days of his illness. It is a fact, that by no other means can we so early diagnose tuberculosis in men as we can by the help of tuberculin. It is also a fact, that we can do this with safety to the patient. Had tuberculin served no

other good purpose than this, it would have deserved our best attention, our high appreciation. I am sure the day is not distant when the discovery of tuberculin will be ranked among the most valued of the many gifts mankind already owes to Robert Koch.

PRESSE MEDICALE.

June 29, 1901. (No. 52).

1. Primary Cancer of the Bronchi. PIERRE MERKLEN and J. GIRARD.
2. The Symptoms and Diagnosis of Injuries of the Sinuses of the Dura. GEORGE LUYB.

1.—While cancer of the lung often starts in the bronchus, primary carcinoma of the larger bronchi has been observed during the past few years only. Such a case is reported, in a man of 45, whose mother died with cancer of the breast. Dyspnea was first noted about six months before death. This grew so severe that he could not swallow. His voice was inaudible, and his breathing became a roaring, interrupted by paroxysms of coughing, with bloody expectoration. The right lung showed absolute dullness upon percussion. Autopsy revealed cancer of the right bronchus almost at the bifurcation of the trachea. No air entered the right lung. Death generally follows from asphyxia. [M. O.]

2.—The main symptom attending injury of the sinuses of the dura mater is hemorrhage. Coma follows, with stertorous respiration, hemiplegia, subnormal temperature, vomiting, fecal and urinary incontinence, carpalgia, etc. The diagnosis is very difficult. Injury of the sinus must be distinguished from cerebral compression, due to the pressure of the bone upon the brain; cerebral apoplexy; concussion of the brain, and meningo-encephalitis. Even then, intracranial hemorrhage may not be caused by injury to the sinus, but by injuries to other blood vessels of the brain substance. [M. O.]

July 6, 1901. (No. 54).

1. Chronic Constipation. FROUSSARD.
2. Asepsis of the Hands in Surgery. L. LONGUET.

1.—Chronic constipation may be total, when the bowels move but once or twice a week, or dissociated, when the stools are few, small in amount, little in quantity, or very hard and dry. Associated with chronic constipation are noticed all the symptoms of dyspepsia; sometimes, too, of neurasthenia. The general health of the individual is affected and some emaciation occurs. Relaxation of the abdominal wall follows. As a rule, dissociated constipation, as in mucomembranous enterocolitis, is first noticed, and this becomes total in time. Among the cases of constipation are displacement or tumors of the abdominal organs; intestinal obstruction; changes in the intestinal contents; disease of the intestines; and atony, the most common of all causes of constipation. It is most frequent in adult or old age, in women, after pregnancy, with sedentary occupation, with lack of exercise, etc. The diagnosis is easy. For treatment these cases may be grouped into three classes:—those due to compression of the intestine; those due to intestinal atony; and those due to intestinal spasm. The first group will need operation to effect a cure. Patients with atonic constipation need strict diet; purgatives, whether mechanical, like castor oil; biliary, like calomel; intestinal, like manna or salts; muscular, like belladonna, nux vomica, etc.; or peristaltic, like rhubarb, senna, cascara, etc.; enterocolysis; massage; baths; electricity; and exercise. Patients with spasmodic constipation should have a full diet, castor oil, belladonna, enterocolysis, baths, and rarely massage. Gymnastics and electricity are contraindicated. A regular life, with well regulated mild exercise and no intellectual work, should be led. [M. O.]

2.—Asepsis has taken the place of antiseptics. All surfaces are now made sterile. Everything employed in an operation reaches this standard except the hands of the operator. It is only in the last ten years that the Germans have sought to obtain this end. England, America, and France have followed. Numerous experiments have been performed. After a detailed review of the subject, Langueit admits that as yet no good method of sterilizing the hands of the surgeon exists. [M. O.]

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Criticism of the Medical Attendants of President McKinley.—As an aftermath to the lamented death of President McKinley, there have appeared, unfortunately but perhaps inevitably, in various journals and from various sources considerable criticism on the conduct of the case on the part of the attending physicians, which has not been confined to the lay press that is supposed to be more or less uninstructed and therefore not quite so capable of judiciously criticising, but also is apparent in some of the medical journals.

The chief features that have met with criticism are three; and only these three are really worthy of notice. These are, first, that a physician presumed more thoroughly familiar with the cardiac conditions than any attendant upon President McKinley should have been called in consultation from the beginning of the case. It seems to be forgotten by these critics that in addition to Drs. Mann, McBurney, Wasdin and others, Dr. Rixey, a man who has not devoted himself exclusively to surgery, and who was probably more familiar with the physical condition of the President than any other physician, was in attendance, and we believe he was not only thoroughly competent to manage the President's case, but that he did everything that possibly could have been done. Surely no treatment that is familiar to us could have altered the fatal result; and we are not aware of any medicine that could have been employed which was better than that given.

The second point is that food, and particularly solid food, should not have been administered by mouth as early as it was. Upon this point there is no doubt that a certain amount of discussion is justifiable. The medical profession has not reached any degree of unity regarding the proper time to begin feeding after operations upon the stomach. We can conceive that the feeding may have been injurious in two ways: either by hemorrhage from or by perforation through the stomach wall at the site of the injury. As a matter of fact neither of these occurred, and there is no reason to believe from the results of the autopsy that the feeding was harmful in any way. The physicians had the

choice of two risks, either of allowing the patient to become too weak from lack of nourishment or of injuring the wall of the stomach by the administration of food. They choose the latter, and who shall say unwisely?

Finally, there is much comment upon the very favorable character of the bulletins issued during the first days after the wounding. At that time the patient was doing well undoubtedly. There were no unfavorable symptoms, excepting, perhaps, the undue rapidity of the heart's action. The physicians believed that recovery was possible, and believing this, it was their duty to the public to state the case favorably. Perhaps our knowledge that gun shot wounds of the stomach are exceedingly fatal in elderly persons might have caused them to have been a little more cautious, but that is all.

It is not too much to say that adverse criticism is premature before the appearance of the final report, and such adverse criticism from a medical journal is especially indelicate and contrary to the best recognized standards. One of our contemporaries, in its haste to record its adverse judgment, has been guilty of a remarkable solecism. Thus, the *Medical Record*, in its criticism of the case, publishes two sentences, one immediately following the other, which we reproduce in parallel columns for the sake of a more graphic effect:

"Every one knows that such an injury as existed in the President's case is uniformly fatal."	"The most favorable result that could have been expected was the healing of the wound, and the possible establishment of a fistula."
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It will puzzle the ignorant to understand how any favorable result whatever could be expected in the case of an injury which every one knows is uniformly fatal. The truth is that such cases are *not* uniformly fatal. Alexis St. Martin recovered from a severe gastric wound more than three quarters of a century ago, and Dr. William Beaumont made the case classical.

The Value of a Hopeful Prognosis.—Those who may feel inclined to criticise the surgical conduct of

President McKinley's case, should recall clearly the fact that if any error was made it was simply one of prognosis. Such an error is always on the right side of the balance, and is more to the credit than to the discredit of the human nature that is prone to show itself in a medical man when he is brought suddenly face to face with a great crisis. In the case of the President, the favorable prognosis did not and could not affect the result unfavorably. The work of the surgeons had already been done.

We take it as a well established fact in practice that a hopeful prognosis is better than despair in any case and under any circumstances whatever. There is a real and genuine asset to be derived from hope, and the individual who comes in for the biggest share of this asset is the patient. The tristful or lugubrious doctor who cannot see some silver lining to the cloud in an essentially doubtful case, should retire. He is not in the psychological mood to avail himself of all his opportunities. One of Philadelphia's ablest clinicians (now dead) once lectured on a case presenting doubtful symptoms of cancer of the stomach, and told his students that if he were the patient in such a case and his physician should make the positive diagnosis of gastric cancer, he would instantly discharge him. And this was said with reason; for of what use can a doctor be when he has abandoned hope?

In President McKinley's case the progress from the third to the fifth day fully justified a hopeful prognosis. Any other would have recklessly thrown the public into a panic, and this would have reacted disastrously upon the case itself. If these hopes were somewhat too buoyantly expressed, this was due to nothing more than the natural rebound from the frightful shock and anxiety of the first three days.

Harmony Among the President's Doctors.—The vicious extremes to which yellow journalism can go in this country were well shown last week in the attempt made by more than one New York newspaper of that stamp to stir up strife among the surgeons in President McKinley's case. It was currently reported in Buffalo a few days ago that a representative of one of these newspapers had openly declared that his paper was in possession of "interesting" facts relating to the subject, and that these facts would make splendid sensational matter now that the immediate excitement over the President's case had subsided. Anything more characteristic could not be conceived. It might be supposed that yellow journalism were sufficiently under a cloud already because of its ribaldry toward the late President, and that as a mere matter of self-preservation it would elect to lie low.

We are happy to be able to state on the direct

authority of Dr. Mann in a personal interview (supplementing what the whole staff had just said over their own signatures) that the most complete harmony prevailed all through the progress of the case. It is indeed a cause for congratulation that in a case so fraught with national sorrow, the bearing of all the physicians and surgeons has been a fine example of the force of professional esprit and tradition.

The Theory of the Poisoned Bullet.—In a case of such absorbing interest as that of our late President, it is but natural that theories and counter theories should have been advanced. The state of mind of the profession is reflected by those who have waited patiently for the result of bacteriological and chemical examinations, and the larger number who have let their imaginations take full rein and have speculated as to the various probabilities. This speculation is not without profit. Every carefully advanced theory has something to be said in its behalf. Among the many phases discussed is the theory of the poisoned bullet. Before the untoward symptoms had appeared, the question was asked, could the assassin have poisoned the bullets, and if so, what might he have used; and what would have been the effects induced? In connection with a theory of this sort, it is well to remember that the usual causes are first to be considered as by far the most probable, and the less frequent causes are only to be sought when the first are excluded. The statement is made that the most thorough bacteriological and chemical examinations have proved that the bullets were not poisoned, and thus this theory may be permanently set aside. Had this been the 15th instead of the 20th century, the conviction would have been widespread that the missile of death had been anointed with some mystic poison of wondrous strength to aid in the deadly work. We have the advantage of being able to test a hypothesis of this sort and our credulity cannot be imposed upon. Toxicologists were interested in the possible poison which might have been used by the assassin. Various pure cultures of deadly organisms were mentioned. Some thought the accidental verdigris which had collected about the bullet, might have been the cause of the gangrenous condition. Curare, another poison, was suggested, and also snake-venom, but the clinical picture which the President's case presented, lent no color to any of these theories, save that of the micro-organismal, and the chemical examination has caused this to be set aside.

The Condition of the President's Heart Once More.—Since the President's death we have had

a surfeit of theorizing regarding its cause. Now that the poisoned bullet has been eliminated we are presented with such fine-spun speculations as the possibility of injury to the solar plexus, a peculiar idiosyncrasy of the tissues preventing their healing, although their vitality was otherwise unimpaired; or the injury of the pancreas producing a general gangrene of the impaired tissues. It is hardly worth while to talk about the solar plexus as the cause of death. Deaths ascribed to injury of this structure follow immediately upon the wound and are not long drawn out, as in the President's case. It is useless to attempt to discuss an idiosyncrasy of the tissues, when we did not know certainly that it existed at all, and the assumption that it did in this particular case is purely gratuitous. As for the pancreas, as far as we can discover from personal communication from the attending physicians, glycosuria or other symptom of pancreatic disease was never present.

On May of last year a discussion was held before the College of Physicians of Philadelphia upon the effect of anesthesia in heart disease. It was shown then that in valvular disease of the heart without muscular degeneration an anesthetic has little or no injurious effect (Finney). On the other hand, there is reason to believe that in myocardial disease the anesthesia may cause a fatal termination either by producing sudden heart failure (Mayo) or by causing a sudden exacerbation of the morbid condition (Stengel), and attention was particularly called to the fact that in these cases the patient might continue in apparently good health for several days after the operation and then go into a state of sudden collapse exactly as in the case of the President.

We do not believe that enough attention has been paid clinically to myocardial disease. Whatever the actual cause of death there is no doubt, however, that the President's pulse was a just cause for anxiety from the very beginning of the case, and that the terminal manifestations of the case were collapse and heart failure. Whether these were produced by the anesthetic acting upon an already weakened heart or whether the condition of the myocardium was such that the shock of the injury was capable of causing it ultimately to become insufficient, we do not know, but at least we shall await with keen interest the histological report upon the condition of the heart muscle.

Medico-Legal Aspects of Penetrating Wounds of the Stomach.—In view of the case of our late lamented President, the subject of perforating wounds of the stomach is worthy of special consideration. The medico-legal aspect has been

considered in a communication by Dr. Glitsch, of Stuttgart (*Allg. Medic. Central Ztg.*, 1901, No. 30-37). He says: 1. If there be found in the topographical limits of the stomach a penetrating wound of the abdominal walls, we may be certain in a case of a gun-shot wound, that the stomach has been injured, and in the case of cut and stab wounds there is, as a rule, but one wound in the stomach, whereas, in the case of a bullet wound, there are in the greater majority of cases, two wounds.

2. As penetrating wounds are followed by immediate death in the rarest cases only, vital reactionary symptoms will almost always render feasible the differentiation between vital and post-mortem lesions.

3. Stomach wounds with suicidal intent are extremely rare; if they do occur, it is a question of a gunshot wound intended for the heart. In these cases the form and location of the wound, as well as the condition of the point of entrance will be helpful.

4. Hematemesis, collapse and shock are not necessarily sequelæ of a perforating wound of the stomach; on the contrary, the latter may at the beginning present no symptoms at all, but generally, in the further course alarming symptoms develop sooner or later. Of importance for the sequelæ of a wound of the stomach are the presence of food, a lesion of the larger blood-vessels and the affection of abdominal viscera.

5. The prognosis of stomach wounds is favorable only in cases of immediate surgical interference; the forensic physician is to designate these wounds as lethal, and cases of spontaneous recovery cannot alter this decision. They are to be considered the exception, the fatal termination the rule.

6. A successful therapy of a stomach perforation can consist only in laparotomy and stomach suture.

7. If a case of perforation of the stomach comes under proper care and treatment at once, complete "*restitutio ad integrum*" may be accomplished anatomically as well as in regard to the faculty of work.

8. Subcutaneous perforations of the stomach (ruptures) are generally immediately followed by the gravest symptoms. Their prognosis is much more unfavorable than that of penetrating wounds of the stomach; in all cases laparotomy offers the only prospect of recovery. From a medico-legal standpoint a subcutaneous laceration of the stomach is to be considered as simply fatal.

Herpes Zoster Ophthalmicus.—The failure opportunely to make a differential diagnosis between erysipelas and herpes zoster ophthalmicus frequently entails serious consequences. Out of five cases

reported by Bane, of Denver, at the recent meeting of the American Medical Association, three were originally diagnosed as erysipelas, and one of the cases was treated throughout its course for that disease. A recent contribution to this subject by Dr. Robert L. Randolph, of Baltimore, contains the report of a case of herpes zoster ophthalmicus resulting in the loss of the eye, and also occurring in a case which was at first thought to have been a facial erysipelas by the family physician. We should not venture to state that this case resulted disastrously in consequence of an original error in diagnosis, but quote it as illustrating the frequency with which the two affections are confounded until coming under expert observation. The usual monolateral seat of herpes zoster ophthalmicus and its location along the distribution of the nerves are valuable from the point of differential diagnosis. In Dr. Randolph's case reported in the *Archives of Ophthalmology*, Vol. XXX, No. 4, 1901, the eye was progressively destroyed until only light perception remained, and its enucleation was required on account of beginning sympathetic irritation; and all this in spite of expert treatment. The futility in this case of the most approved ocular therapeutics seems to point to the fact that the *locus morbi* must be deeper seated, it having been frequently contended that the affection is due to an irritation of the Gasserian ganglion, and especially by uric acid. In a discussion on this subject at the American Medical Association, Dr. Risley, of Philadelphia, stated that in his four cases there were rheumatic and gouty diatheses. Perhaps ophthalmic surgery will yet evolve some surgical procedure for this treacherous and often destructive lesion.

The Northern Branch of the Philadelphia County Medical Society.—We think a wise step, that promises to be fraught with much good, was taken the other evening in the organization of a Northern Branch of the Philadelphia County Medical Society. The necessity for organization in the medical profession, not alone for scientific, but also for social and legitimate political purposes, is too obvious to require discussion here, and in a city of such vast expanse as Philadelphia, it is impossible, from consideration of time, distance and occupation, for any large proportion of physicians to attend meetings at any one point, which must necessarily be at great distance from many other points. The formation of this branch should presage the organization of other branches in different and distant parts of the city, and these, it is hoped, will constitute centers of scientific activity, and good fellowship. The form of organization is a matter that will demand

most serious consideration. What is needed is a concentration rather than a diffusion of energy, so that it would seem desirable that, as is contemplated, membership in the parent society should be a prerequisite for membership in the branch organization.

Oöphorectomy for Cancer of the Breast.—The interesting paper by Abbe in a recent number of a contemporaneous journal calls anew the attention of the profession to one of the recent innovations in surgery. The honor of having first directed the attention of the medical world to the efficacy of oöphorectomy in inoperable carcinomata belongs to a Scotch physician, Dr. George Beatson, who, in an admirable paper, presented at a meeting of the Edinburgh Medico-Chirurgical Society in 1896, suggested that the exciting cause of carcinoma of the breast lay in some pathological condition of the ovaries. His suggestion was based, primarily, upon the undoubted, though occult relationship that exists between the genital organs and the breast; and secondarily, upon the fact that the breast is one of the most frequent seats of cancerous disease. It is well known that impregnation and gestation produce an influence upon the mammæ, resulting in a marked but normal evolution of those organs; and Beatson claimed that it was not unreasonable to assume that in like manner an abnormal stimulus originating in the ovaries might afford an explanation for the development of mammary carcinoma. Scouting the parasitic theory of carcinoma, as supported by Korotneff and others, Beatson held that the so-called cancer-cells would eventually be demonstrated to be in reality germinal epithelial cells.

Advancing one step further, he concluded that if it be true that epithelial cells in the ovary and testicle become germinal cells through some influence in these organs, then by natural inference extirpation of the ovaries or testicles would exert an inhibitory influence on the proliferation of epithelial cells. Instituting at once a series of investigations upon the human subject on the lines thus laid down he proved conclusively that removal of the ovaries does undoubtedly influence the growth of carcinoma, though whether only temporarily or not he could not state positively. Stanley Boyd in 1897 was the next to make a careful study of the new proposition.

He applied the treatment in five simple cases with most gratifying results. He thought that it was in the highest degree improbable that the relationship between the oöphorectomy and the atrophy of the cancer-masses was other than causal although he failed to offer an explanation as to the

modus operandi. His working hypothesis was that the internal secretion of the ovaries in some cases favored the growth of the cancer, acting either upon the epithelial cells or upon the surrounding tissues; consequently in such cases removal of the ovaries would leave the tissue better able to cope with the parasitic cell. It was but a step further to conclude that the operation of oöphorectomy might just as well similarly influence cancers elsewhere than in the breast, and at Boyd's suggestion the treatment was applied to a patient suffering from extensive cancer of the cervix and vagina. The same year Hobday, of the royal Veterinary College, obtained definite results in three cases in which the operation was performed upon bitches suffering from offensive papillomatous cancer of the vagina. Other operators, including Cheyne and Herman, adopted the method with gratifying results. It must be noted that Beatson's method includes the administration of the thyroid extract in full doses shortly after the removal of the ovaries. Investigators have found that the inhibitory action of oöphorectomy in inoperable carcinomata is more decided if at the same time as much of the cancerous growth be excised as possible.

Older women, in whom there has already occurred an atrophy of the ovarian stroma, do not respond so promptly or so favorably to the treatment as do women who are passing through the period of sexual activity. It is also noted that the relief afforded by the employment of Beatson's method appears in from twenty-four to forty-eight hours, and in favorable cases is rapidly progressive. The paper of Abbe should act as a renewed impetus to further study in this direction. Any measure that will afford additional chances of prolongation of life to these unfortunate sufferers should be given careful study in the hope that a solution of this interesting surgical problem may be reached. It is worth noting, however, that W. Roger Williams has recently expressed the belief that oöphorectomy has in reality the contrary effect to that claimed by Beatson, namely, that it predisposes to cancer in the mammary gland and elsewhere. This adds another interesting aspect to the subject and renders it all the more necessary that further careful observations be made before any dogmatic statement as to the value of this mode of treatment be advanced.

The Pain in Renal Lithiasis.—Constant describes the various localizations of the pain in renal lithiasis in the adult, in the *Bulletin Medicale*, (June 1, 1901, No. 43). He has reviewed 259 cases. With simple gravel, bilateral lumbar pain existed in 75 cases; unilateral lumbar pain in 15; and abdominal pain in 7. With gravel and nephritic colic, unilateral lumbo-abdominal pain was present in 17 cases, bilateral in 9; unilateral ureteral pain in 6, bilateral in 4; hepatic pain in 2; genito-urinary pain in 15; unilateral iliac pain in 1; crural pain in 8; urethral pain in 2; and disturbances of sensibility in 9 cases. The pain is in most cases due to the position of the calculus. [M. O.]

Reviews.

A Manual of Surgical Treatment, by W. Watson Cheyne, Professor of Surgery in King's College, London, and F. F. Burghard, Teacher of Practical Surgery in King's College, London. Volume V. Lea Brothers & Co. Philadelphia, 1901.

This volume, which will be followed by two others before the whole field of surgery is covered, discusses surgical affections of the head, face, jaws, lips, larynx and trachea. In order that the intrinsic diseases of the nose, ear and larynx should receive the requisite attention, the authors of the work obtained a specialist in rhinology, otology and laryngology to write the chapters relating to those topics. Dr. H. Lambert Luck, Surgeon to the Hospital for Diseases of the Throat, Golden Square, is accordingly the author of nearly half the book.

The method of the authors in this volume, as in the others, is to devote its pages to treatment, and to discuss pathology, symptoms and diagnosis to a very limited extent. The work is intended for the instruction of practitioners, who are supposed to know from other sources the fundamental points, and who therefore consult this book for suggestions as to the most practical and efficacious means of treatment.

The authors have done their work well. They seem to have an great love for good English as for good surgery, and to know how to write as well as teach. The text is succinct, yet clear; the construction is nearly always correct, and there is no silly attempt at ornamentation. The surgery is modern, scientific and progressive. In truth, the authors have fulfilled the promise of their preface, and given the profession a model book on surgical therapeutics—model in what it says and in the way it says it. The surgical precepts and admonitions may be followed by medical men with great advantage to their patients. The literary style will, if imitated by every prospective medical writer, work a needed improvement in current medical literature. [J. B. R.]

Manual of the Diseases of the Eye, for Students and General Practitioners. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Second Edition, Revised, small 8 vo., pp. XIII, 408, William Wood and Company, New York, 1901.

It is most interesting, that this, the second edition of this well known and favorably received work should appear within eight months' time after the publication of the first. Careful comparison shows that not only have numerous useful alterations been made in the text, but that most valuable additions have been placed throughout the subject-matter. Quite a number of new illustrations, particularly colored ones, have been judiciously inserted wherever they might prove useful.

It is quite safe to say that the author has succeeded in producing one of the most comprehensive, concise, and practical manuals of diseases of the eye that we now possess; in fact, the only one that gives so many of the certainties of ophthalmology to the special student and uninform general practitioner. [C. A. O.]

Practical Dietetics. Food value of Meat, by W. R. Latson, M. D., Editor of *Health Culture*, The Health Culture Company, Publishers, New York.

It is the object of this author to decry the use of meat as a food. "Vegetarianism and vigor" go together according to his views. He does not believe that milk should be used as a food other than for sucklings. To this man we do not suppose that whatever may be said upon the other side will appeal in the search after health and longevity. It is well to remember that tuberculosis from which one out of every seven in the population is known to perish, is extremely rare among those who use meat largely as a food, and one of the later methods of treatment of this disease, zomotherapy, is based upon feeding with muscle juice in order to increase the resistance of the organism to the disease. The urea treatment has a similar object. To those of us who are inclined to believe that a mixed diet is of greatest value, this book will not appeal, and to vegetarians we would not suggest that the work be used as a tract, for the exposition of the subject is by no means convincing. [T. L. C.]

Die Serum-, Bakterientoxin- und Organ-Praeparate. Ihre Darstellung, Wirkungsweise und Anwendung. Für Chemiker, Apotheker, Aerzte, Bakteriologen, etc. Dargestellt von Dr. pharm. Max v. Waldheim. 800. p. viii. 401 Vienna, Pest, Lelpsic. A. Hartleben, 1901.

Although the employment of blood-serum from immune animals, of the products of bacterial activity and of preparations of various glandular structures dates back scarcely more than a decade, the field of investigation in this connection has been greatly enlarged and the practical results secured have been eminently satisfactory. Of the truth of this statement the brochure before us is ample evidence, for in it will be found discussed—in the first part—25 morbid conditions in which treatment with blood-serum from immune animals or with the products of bacterial activity has been employed—not always with the desired results it is true; and—in the second part—28 different organs or tissues, preparations of which have been employed in the treatment of various morbid conditions—likewise not always with the anticipated success. Although of the large number of disorders and of preparations considered favorable results can be recorded in only a minority of instances, the book is useful in showing the vast amount of work that has been done and it must prove serviceable to those interested in exhibiting wherein success and wherein failure has been obtained. [A. A. B.]

Medicinal Treatment of Diabetes Mellitus.—Dr. Archibald Dixon (*Medical News*, Sept. 14, 1901) reports a series of cases of this disease treated with satisfactory results. He says wisely that one or two successful cases are not enough to warrant judgment of the merits of any drug, but at the same time he claims that the combination of gold and arsenic known as arsenaurol has proved highly efficacious. He thinks the deductions made by Stucky are correct and that in the combination of gold and arsenic we have an agent which is the direct cerebro-spinal stimulant. In the combination there is developed an action entirely different from either gold or arsenic separately, which by its glandular stimulating properties aids elimination and feeds the nervous system, thereby checking waste, stimulating the cord, brain, glandular digestion, and by its reconstructive power lessens disturbances of metabolism. In a typical case the treatment was with bromide of gold and arsenic, in the combination known as arsenaurol, 5 drops after each meal, increased by 2 drops each day. The usual directions were followed as to diet. The improvement in the case was marked. The decrease in the quantity of urine passed and in the amount of sugar present was evident the first week. In three weeks there was barely a trace of sugar, and the urine was much reduced in quantity. Later the urine had become normal in quantity and the sugar had entirely disappeared. The eczema and pruritis caused by the diabetes had also disappeared. As Dixon says, the number of drugs which have been recommended for diabetes is legion, but in the one here alluded to he thinks we have found a reliable remedy. [M. R. D.]

Taylor, (*Annals of Gynecology and Pediatrics*, May, 1901), in speaking of the nausea and vomiting occurring during pregnancy, remarks that the chief causes of this complication are: (1) Deficient excretion due to carelessness in regard to personal habits; (2) Certain mechanical reasons, the pressure made upon the rectum, ureters and bladder by malpositions of the uterus, or by various tumors with or without adhesion due to previous pelvic diseases; (3) Nervous irritability. Under this heading he includes vomiting due to irritation of the vomiting-centre in the medulla oblongata, either by some lesion of the nervous system, a brain-tumor, cerebral abscess, the effects of toxins carried to the medulla by the blood as in malaria, or by reflex irritation from some portion of the body which is organically connected with the medulla and generally with some portion of the pneumogastric. The so-called pernicious form of vomiting he claims is simply an intensification of the conditions above described, due usually to prolonged neglect or ignorance. Unfortunately there are too many women anxious to avoid pregnancy who will try by every means at their command to induce some physician to resort to the operation of dilatation of the cervix or emptying of the uterus by exaggerating the amount of their nausea and vomiting. [W. A. N. D.]

Correspondence.

THE CAUSE OF THE MILDNESS OF OUR SMALLPOX EPIDEMICS.

By F. J. RUNYON, M. D., Clarksville, Tenn.

To the Editor of the Philadelphia Medical Journal:

I have seen a number of efforts intended to explain the mildness of smallpox so prevalent for the last two years. So far no satisfactory explanation has been given. I believe the type of the disease varies from unknown causes, just as does the type of measles, diphtheria, scarlet fever, typhoid fever and other infectious diseases. Furthermore, so far as known, these diseases affecting the parent confer no immunity upon the offspring. Reasoning from analogy, it would seem that smallpox (or vaccination) would prove no exception, though this theory is well presented in your issue of September 14th, by Dr. Horace S. Jones, of Kansas, Mo. To further disprove this theory I will call attention to the two epidemics of smallpox occurring in the same settlement near Guthrie, Ky. In the first epidemic (spring of 1900), several hundred had the disease, and there were no deaths. That this was genuine smallpox the marks that many will carry to their graves leave no doubt. The second epidemic, (spring of 1901), was attended by a mortality (according to Dr. LeRoy, *American Medicine*, September, 1901), of 60%. Now there is a community living under identical conditions that one year suffers the inconvenience of mild smallpox and the following year the ravages of the same disease but in a most frightful form.

AN APPARATUS FOR THE RELIEF OF BILIARY FISTULA.

By W. H. HAYNES, M. D., Brooklyn, N. Y.

Seeing quite a number of patients with the sequelae of gall stone operations, such as hernia, fistula, cholecystitis, recurring attacks of colic, and overlooked stones, my attention was particularly attracted to the pitiable condition of those with fistulae from which a pint or two of discharge drained away every day, saturating gauze, absorbent cotton and clothing, making their life so miserable that, as one patient lately discharged from St. Luke's Hospital, New York, said "He would rather be dead than to remain in such a condition." To obviate this difficulty a former patient of mine, the Rev. Dr. Wheeler, of Coatesville, Pa., before coming under my care for the treatment of his recurring attacks of colic and fistula, of which he was cured and has since remained so, had constructed the following described apparatus which not only kept him dry, but also acted as a support for the accompanying hernia, namely two saucer like disks of tin or nickel plated copper (one of which is perforated by a large hole in the center) and soldered together at their outer rim; a sponge is placed in the cavity and then applied directly over the fistula and retained by tapes, strap, or bandage. The sponge absorbs the discharge, the cavity retains it, and the whole may be emptied as often as necessary and convenient, beside acting as a truss to support any hernia present. That there is a general need for such an appliance the number of cases I see leaves no doubt.

On the Treatment of Inflammations of the Mucous Membranes by Means of Light.—E. A. Pletnikoff (*Russische Gaceta Bolikina*, Vol. XII, No. 19) employed blue light in the treatment of 5 cases of acute catarrhal inflammation of the throat with the following results: 1. The course of the disease was considerably shortened; 2. Already after the first sitting the act of deglutition became much less painful; 3. The exudate disappeared after the first, or at the utmost, the second sitting; 4. The diffuse redness of the mucous membrane disappeared speedily after the second treatment; 5. The swelling of the tonsils diminished markedly after the first sitting; the fever also subsided after the first treatment. In employing this method of treatment the author uses a blue electric lamp of 50 candle-power and 100 volts. This lamp is placed in the center of a reflector at such a distance from the patient that he experiences no sensation of heat. The rays of the light are directed perpendicularly towards the throat and the tonsils. Each sitting lasts 10-15 minutes, with slight interruptions. [A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Smallpox in Philadelphia.—The epidemic of a mild form of smallpox which has existed for some weeks in the northwestern part of Philadelphia has continued to spread in spite of the rigid disinfection and quarantine maintained by the Board of Health. During the week ending September 21st thirty-eight new cases were reported. While the great majority of these were located in the 28th Ward, there were scattered cases throughout the city. An injunction has been granted which will prevent the erection of the emergency smallpox hospital near the Municipal Hospital, so that all cases will continue to be treated within the Municipal Hospital grounds. The Public Schools in that section of the city have not been closed, nor have the health authorities any doubt that the disease will not be stamped out in the next four weeks. Orders have been issued to have all city officials vaccinated. The district vaccine physicians have begun house visits throughout the twenty-eighth Ward, offering to vaccinate all who wish it, gratis.

The North Branch of the County Medical Society.—There was a large attendance of physicians at a meeting in Bank Hall, Broad street and Columbia avenue, for the purpose of organizing a branch of the County Medical Society. Dr. Albert M. Eaton presided and made an address. Other speakers were Dr. T. H. Fenton, Dr. E. S. Perkins, Dr. A. B. Hirsch. It was decided that the North Branch of the County Medical Society shall include the physicians residing between the Delaware and Schuylkill rivers north of Fairmount avenue to Wingohocking street. A permanent organization was effected by the election of Dr. Eaton as permanent chairman and Dr. R. L. Pittfield clerk. At the close of the meeting forty-seven physicians had placed their names upon the membership roll. Permanent quarters have been secured in Bank Hall, and meetings will be held there once a month. The idea in forming the branch of the County Medical Society, it was said, is to provide a convenient meeting place for physicians living in the upper part of the city, who often, through professional engagements, find themselves unable to get to the meetings at Thirteenth and Locust streets. It is understood that a like branch will shortly be formed in the southern section of the city.

State Medical Society of Pennsylvania.—The fifty-first annual convention of the State Medical Society of Pennsylvania was held at Horticultural Hall Tuesday, Wednesday and Thursday, September 24th, 25th and 26th. There were three sessions daily. Several social entertainments were tendered the delegates by the County Medical Society, by the trustees of the Medical Faculty of the University of Pennsylvania, by the trustees and Faculty of the Woman's Medical College, by the trustees and Faculty of Jefferson College, by the Medico-Chirurgical College and by the Medical Club of Philadelphia, also by Dr. John B. Shoemaker and Dr. James Tyson.

Western University of Pennsylvania.—The following appointments have been made in the faculty of the Medical Department of the Western University of Pennsylvania: W. H. Ingram, M. D., Professor Histology, Pathology and Bacteriology. M. R. Ward, M. D., Professor Diseases of Nose and Throat. R. W. Stewart, M. D., Professor of Principles of Surgery and Clinical Surgery. J. J. Buchanan, M. D., Professor of Principles of Surgery and Clinical Surgery. S. L. McCurdy, M. D., Professor of Orthopedic Surgery. Geo. N. Munro, Jr., M. D., Professor of Legal Medicine. E. B. Heckel, M. D., Associate Professor in Diseases of Eye and Ear. T. L. Disque, Associate Professor in Genito-Urinary Diseases. E. M. Hild, M. D., Associate Professor in Materia Medica and Therapeutics. J. A. Hawkins, M. D., Associate Professor in Rectal Diseases. I. J. Moyer, M. D., Associate Professor in Clinical Medicine. C. O. Goulding, M. D., Associate Professor in Clinical Medicine. J. I. Johnston, M. D., Associate Professor in Clinical Medicine. B. M. Dickinson, M. D., Associate Professor in Clinical Medicine.

Women's Medical College.—At the opening of the 52d session of the Women's Medical College of Pennsylvania, on Wednesday, September 25, 1901, the introductory lecture was delivered by Dr. Caroline M. Purnell, clinical professor of gynecology.

Temple College Medical School.—The new medical department of Temple College was opened Monday evening, September 23, 1901, Dr. H. F. Hawley, professor of theory and practice of medicine and clinical medicine, delivering the address. The course will extend over five years, as the work is altogether in the evening. Already 25 students have registered. The amphitheatre of the Samaritan Hospital and of the Philadelphia College of Dental Surgery are to be used for clinical teaching. The faculty of the institution includes Drs. W. W. Fritz, dean and professor of anatomy; B. F. Hawley, professor of theory and practice of medicine and clinical medicine; W. F. Haehlen, professor of obstetrics and gynecology; S. Wolfe, professor of physics and clinical neurology; G. B. M. Zerr, professor of chemistry and toxicology; I. N. Salvicy, professor of materia medica, pharmacology and therapeutics; J. W. Chroskey, professor of ophthalmology; B. Reed, adjunct professor of hygiene; E. B. Gleason, professor of laryngology and otology, and H. F. Shifer, adjunct professor of physiology.

Vital Statistics of Philadelphia for the week ending September 21, 1901:

Total Mortality	379	Cases.	Deaths.
Inflammation of the appendix 2,			
bladder 1, brain 15, bronchi 6,			
heart 1, kidneys 15, liver 2, lungs			
21, pericardium 1, peritoneum 5,			
pleura 1, stomach and bowels 38,			
spine 1			109
Marasmus 25, inanition 18, debility 2			45
Tuberculosis of the lungs			42
Apoplexy 14, paralysis 9			23
Heart-disease of 17, fatty degeneration of 3			20
Uremia 7, Bright's disease 9, diabetes 3			19
Carcinoma of the face 2, breast 1, stomach 3, uterus 3, liver 1, tongue 1			11
Convulsions			7
Diphtheria	56		6
Brain-disease of 3, softening of 2			5
Typhoid fever	87		11
Old age 9			9
Scarlet fever	34		1
Abscess, pelvic 1, atheroma 1, alcoholism 1, asthma 1, anemia 1, burns and scalds 1, casualties 4, cholera infantum 7, cholera morbus 2, cirrhosis of the liver 2, croup, membranous 2, cyanosis 3, diarrhea 2, drowned 2, dropsy 1, dysentery 4, epilepsy 1, erysipelas 1, gangrene, senile 2, hemorrhage from stomach 1, hernia 1, jaundice 1, obstruction of the bowels 3, edema of the lungs 1, rheumatism 1, sclerosis, spine 1, septicemia 1, smallpox 4, sore mouth 1, sarcoma, stomach 2, stricture of the esophagus 1, suffocation 1, suicide 1, syphilis 1, tabes mesenterica 1, tetanus, traumatic 1, tumor, abdominal 1, ulceration of the stomach 1, unknown coroner case 1, whooping cough 5, wounds, knife 1			71

NEW YORK.

A Surgeon as Adjutant-General.—Dr. Nelson Herrick Henry, of New York City, at present Republican Assemblyman for the Fifth District, will be the next Adjutant-General of the State National Guard. Since the death of Gen. Edward M. Hoffman, of Elmira, last spring, this office has been filled by Assistant Adjutant-General Frederick Phisterer, who will give way to the new appointee on January 1, when Dr. Henry's term as Assemblyman expires. Dr. Henry first entered the State service as an assistant surgeon of the grade of first lieutenant, Twelfth Regiment, March 16, 1883.

By June 23, 1888, he had been promoted up to surgeon and major. On June 23, 1893, he was made Assistant Surgeon-General, S. N. Y., with the rank of colonel, and was honorably discharged on April 25, 1895. At the outbreak of the Spanish-American war, Dr. Henry was made surgeon of the National Guard with the rank of colonel, and later major and chief surgeon of division, United States Volunteers. At the close of 1898 Dr. Henry went back again to the staff of Major-Gen. Roe. This is the first time in the history of the State that a surgeon has been made Adjutant-General to the Governor.

McKinley's Physicians Make a Statement.—The following bulletin was issued from Buffalo on September 18th: "The undersigned surgeons and physicians who were in attendance on the late President McKinley have had their attention called to certain sensational statements recently published indicating dissensions and mutual recrimination among them. We desire to say to the press and public, once for all, that every such publication and all alleged interviews with any of us containing criticisms of one another or of any of our associates are false.

"We say again that there was never a serious disagreement among the professional attendants as to any of the symptoms or as to the treatment of the case or as to the bulletins which were issued. A very unusual harmony of opinion and action prevailed all through the case. The unfortunate result could not have been foreseen before the unfavorable symptoms declared themselves late on the sixth day, and could not have been prevented by any human agency.

"Pending the completion and publication of the official reports of the post-mortem examiners and attending staff we shall refuse to make any further statements for publication, and alleged interviews with any of us may be known to be fictitious.

"MATTHEW D. MANN,
"ROSWELL PARK,
"HERMAN MYNTER,
"EUGENE WADDIN,
"CHARLES G. STOCKTON."

The Assassin of the President Insane.—Before the trial of Czolgosz which began September 23d at Buffalo, it was learned that five specialists had already pronounced the assassin insane. These men were Drs. Allen, McLane Hamilton, of New York, Carlos T. McDonald, Hurd, Joseph Fowler, James W. Putnam and Floyd S. Crego of Buffalo.

A New French Hospital in New York.—Plans have already been prepared for the erection of a new hospital in New York by the French Benevolent Society, to cost about half a million dollars. A building of seven stories with accommodations for over 150 patients will be built on West 34th Street. The top floor will be devoted exclusively to tuberculous patients. In appointment and general equipment this hospital will equal, if not surpass, any hospital already in New York. The institution, which receives no aid from the State, will be non-sectarian. The amount expended was donated by the French Government and many Frenchmen both abroad and in New York.

American Electro-Therapeutic Association.—The eleventh annual meeting of the American Electro-Therapeutic Association was held at Buffalo, September 24th, 25th and 26th, 1901, under the presidency of Dr. Ernest Wende.

Dr. Gustav G. Fischlowitz has been appointed assistant attending surgeon to the New York Maternity Hospital.

NEW ENGLAND

The Fiske Fund Prize Essay.—The subject of the Fiske Fund Prize Essay for the year 1902 was announced at the annual meeting of the Rhode Island State Medical Society to be "Serumtherapy in the Light of the Most Recent Investigations." A prize of two hundred dollars is offered for the best essay upon this subject. Essays should be sent to the secretary of the board of trustees of the Fiske Fund, Dr. Halsey DeWolf, 212 Benefit Street, Providence, R. I.

A Bequest to the Massachusetts General Hospital.—The late Mr. Charles H. Hayden, of Boston, left \$100,000 to the Massachusetts General Hospital, a part to establish a bed in his name, the rest to be used or invested according to the discretion of the trustees of the institution.

A Hospital for Crippled Children.—Mr. A. C. Burrage, of Boston, whose child of nine is a cripple, has leased Bunkins Island for a period of 399 years. He will erect a Hospital for Crippled Children, with large and beautiful grounds, upon it.

Bequests to Hospitals.—The late George L. Young, of Boston has bequeathed \$5,000 each to the Children's Hospital, the Massachusetts General Hospital, the Boston Lying-In Hospital, the Massachusetts School for the Blind, and the American Unitarian Association.

A Harvard Man Wanted by Germany.—The Prussian Government has offered a full professorship in inorganic chemistry at the University of Göttingen to Dr. Theodore William Richards, assistant professor of chemistry at Harvard, but the offer has been declined by Dr. Richards, who prefers to continue his work in the Harvard laboratories.

WESTERN STATES.

Death of Dr. Abram Litton.—Dr. Abram Litton, the eminent scientist and pioneer chemist in St. Louis, who for 50 years filled the chair of chemistry, both at Washington University and the St. Louis Medical College, died at his home in St. Louis, September 22nd, at the age of 87 years.

Dr. Thomas W. Huntington, associate professor of clinical surgery in the Medical Department of the University of California, has been recently appointed professor of clinical and operative surgery by the Regents of the University.

University Changes.—Dr. Bourland is to leave the University of Michigan to accept the position of professor of Romance languages in Western Reserve University, Cleveland, and Dr. Ladd, son of Professor Ladd, of New Haven, will become the first incumbent of the Dr. Leonard Hanna chair in the Medical School of the Cleveland University.

The License to Practise Medicine in California.—A large number of physicians registered in the State of California prior to August 1st, 1901, when the new law requiring all physicians to pass an examination before the California State Examining Board went into effect. There are now about 4000 practicing physicians in California.

The Berkeley Hospital.—A site has at last been chosen near the centre of the town of Berkeley, California, for the erection of the Berkeley Hospital. The plans have already been prepared, but the \$15,000 necessary for its construction have not all been pledged yet.

A New German Hospital in San Francisco.—A prize competition has been opened for architects' plans for the new German Hospital of San Francisco, which will cost \$200,000. It will have a separate building for tuberculosis patients.

Diet Experiments.—The professors of the Rush Medical College, Chicago, will soon begin a series of experiments upon the students of the Chicago Hospital School, to determine the effects of different foods upon the mental power of the individual. The pupils of the school are all backward children.

St. Luke's Hospital, Aberdeen, S. D.—The new building of St. Luke's Hospital, which has just been completed, is said to be the finest hospital in South Dakota.

The Methodist Hospital, Indianapolis.—Land for the new Methodist Hospital of Indianapolis has been secured on Illinois Street. The new hospital will cost about \$200,000.

Rules for Barbers.—The San Francisco Board of Health requires barbers to observe the following rules: 1. Mugs and shaving brushes will be sterilized by immersion in boiling water after every separate use thereof. 2. Razors shall be wiped with alcohol before and after being used. 3. Hair brushes known as "sanitary brushes" must be used after being sterilized. 4. Razor strops must be kept clean, and never wiped off with the hand or blown upon with the breath. 5. A separate clean towel shall be used for each person. 6. Barbers shall not blow away with breath any hairs after cutting, but use a towel or bulb or hair-brush. 7. Barbers shall keep their finger nails short cut and clean. 8. Alum and other material used to stop the flow of blood shall be so used only in powder form and applied on a towel. 9. The use of powder puff, finger bowls

and sponges is prohibited. 9. No person shall be allowed to use any barber shop as a dormitory. 10. All barbers' instruments must be disinfected after using. 11. These rules shall be placed in a conspicuous place in the shops.

A Kentucky Decision.—The Kentucky Court of Appeals has decided that the State Board of Health has not the right to revoke a license to practice medicine, once granted.

Election of Officers.—The annual convention of the American Society of Obstetricians and Gynecologists, which has just adjourned at Cleveland, Ohio, have elected the following officers: President, Dr. Edwin Ricketts, Cincinnati; vice-president, Dr. Cumston, Boston; secretary, Dr. W. W. Potter, Buffalo; treasurer, Dr. X. O. Werder, Pittsburgh; Washington was chosen for the next year's convention.

Nebraska State Insane Asylum Destroyed by Fire.—The Insane Asylum at Norfolk, Nebraska, and eight adjacent buildings were destroyed by fire on September 23. Six hundred patients were in the institution at the time, three of whom are missing and supposed to have been burned to death. The patients are now quartered in an open field, and are guarded by local authorities until they can be sent to the Lincoln and Hastings asylums. The loss will reach \$200,000.

SOUTHERN STATES.

Dr. Rixey to be Promoted.—President Roosevelt has informed Mrs. McKinley, through Secretary Cortelyou, that, in pursuance of the intention of the late President McKinley, and in recognition of devoted services, as well as because of eminent fitness, Medical Inspector P. M. Rixey will be appointed surgeon-general of the navy upon the expiration of the term of Surgeon-General Van Ryeppen. The Secretary of the Navy has been requested by the President to instruct Dr. Rixey to make such arrangements as will enable him to continue, if needed, his care of Mrs. McKinley between now and the time of his appointment to his new position. The naval list shows that Surgeon-General Van Ryeppen will not retire in the ordinary course until November 14, 1902. Dr. Rixey stands No. 28 on the list of naval surgeons. Though Surgeon-General Van Ryeppen's retirement from active service does not occur for more than a year, his commission as surgeon-general, which was for a period of four years, will expire December 18, and Dr. Rixey's appointment may be expected then. Dr. Rixey has been Mrs. McKinley's physician since the beginning of the Spanish war, when Dr. Leonard Wood, who up to that time was her medical attendant, went to the front as colonel of the Rough Riders. He is well known in Washington, having been born in Culpepper, Va., hardly fifty miles away. His brother, John F. Rixey, who lives at Culpepper, represents the Eighth Virginia District in the House of Representatives. The family is an old one. Dr. Rixey has been in the navy twenty-seven years, having graduated from the Medical Department of the University of Virginia in 1873 and the Medical Department of the University of Pennsylvania two years later. The following year he received a commission in the navy as assistant surgeon. He ranks high as a surgeon, and has endeared himself by his fidelity and trustworthiness to the President's family. He not only attended Mrs. McKinley, but the President, and carried him through his severe illness last winter. Dr. Rixey was with the President and Mrs. McKinley throughout the trip to California, and the President attributed to his skill and good judgment the remarkable recovery which Mrs. McKinley made.

Dr. George S. Dare, of Rising Sun, Md., has been reappointed State representative in the Philadelphia and Baltimore Central Railroad Company by the Board of Public Works.

Appointment.—Dr. Charles M. Hazen of the Medical College of Virginia has been appointed professor of biology in the Richmond (Va.) College, his alma mater.

MISCELLANY.

Dermatitis Produced by a Caterpillar.—Dr. James C. White, of Boston, in a recent communication states: Last summer I saw at the clinic for skin diseases at the Massachusetts General Hospital a considerable number of cases of inflammation of the skin, which were undoubtedly

caused by contact with some caterpillar. The dermatitis was of the same type in all cases, and there was also a uniform history of the removal of caterpillars from the affected parts just preceding the appearance of the eruption. As such cases had not previously occurred under my observation, I concluded that the larva must be some recently introduced species. The parts affected were generally the neck, sometimes the face and hands. The efflorescence was urticarial in character, but very persistent; that is, remaining unchanged for two or three days. The lesions in some cases were arranged in long, continuous tracts, as if following the course of the creature upon the skin. The statements generally given were that the patient had been walking, or had sat under a tree, and had found the caterpillar crawling over the parts which were affected a few hours later. This season several patients have already presented themselves with the same peculiar, persistent itching, more or less confluent, urticarial eruption, chiefly upon the neck, and tell the same story. They all give the same description of the caterpillar, which is probably the larva of the brown-tailed moth, *suproctis chrysorrhæa*. The patients come from towns in this vicinity. The affection yields quickly to soothing washes."

A Worthy Departure.—One of the Buenos Ayres newspapers has a consultation room, in which the poor can daily get medical or legal advice free.

Laboratories for the Philippine Islands.—It has been enacted by the United States Philippine Commission that a biological laboratory, a chemical laboratory and laboratories for the production of vaccine virus and of serums and prophylactics shall be established and maintained by the government of the Philippine Islands.

A Second Bequest by Mrs. Whitelaw Reid.—Mrs. Whitelaw Reid has made a second gift of \$5000 to the Woman's Hospital in Manila.

The Recognition of Good Yeast.—Now that brewers' yeast is so generally employed in medicine, for the treatment of furunculosis, typhoid, gastroenteritis, etc., Jouissee has described a test for the recognition of good yeast, in the *Revue des Sciences Physiques*. He takes 30 g. of a sugar solution (1 to 10), adds 10 g. of yeast, and places this at a temperature of 30° C. In from 12 to 15 minutes a good yeast has begun to ferment.

The Antiquity of the Speculum.—It is plain from the Babylonian Talmud (*Traite Nidda*, pages 17 b. and 66 a.) that the ancient Hebrews used the speculum to determine whether hemorrhage from the vulva came from the uterus. This is noted by Dr. Schapiro in *La Province Medicale*.

Obituary.—Dr. John M. Meyer, at Danville, Ky., September 5, aged 84 years—Dr. Philip Schaffner Baker, at Asheville, N. C., September 2, aged 50 years—Dr. Alonza D. McComb, at Hawthorne, Pa., September 5, aged 47 years—Dr. Charles F. Atwood, at Winterport, Me., September 6, aged 45 years—Dr. William Washington Rigby, at Spartansburg, S. C., September 4, aged 30 years—Dr. Charles W. Adkins, at Langston, Ala., September 4, aged 60 years—Dr. J. M. Winn, at Forest City, Ill., September 5, aged 71 years—Dr. Samuel C. Edmonds, at Linwood, N. J., September 17, aged 72 years—Dr. William Morris, at Baltimore, Md., September 18, aged 65 years—Dr. John C. McKownen, at Wilson, La., September 18.

Dr. Abram Litton, St. Louis, Mo., September 22, aged 87 years—Dr. Clarence T. Stubbs, Reading, Pa., September 22, aged 31 years.

The Cause of Hunger.—A German has lately advanced the theory that hunger is caused by the absence of the blood from the gastric blood-vessels. In anemia, even when the stomach is empty, the blood-vessels of the gastric walls are congested. In health, the absence of the blood from the gastric vessels acts upon a special nerve, branches of which supply the mouth and tongue. Thus it is that a stimulus applied to the tongue creates appetite. Thus, too, disease of the mouth causes a loss of appetite, though the stomach be empty and the patient actually in need of food.

The Medical Schools of the United States.—The last number of the *Journal of the American Medical Association* gives a brief description of the 155 medical schools of the United States. It is claimed by all but two of these that a four years' course is compulsory. 26,147 students and 5,958

teachers were registered in these colleges in July, 1901. 5,444 degrees of M. D. were conferred during the past year. Canada has but 12 medical schools.

Climate and Old Age.—The *Pacific Medical Journal* is authority for the statement that the oldest living human being, Bruno Cotrim, living in Rio de Janeiro, is 150 years old. Germany, with fifty-five millions of people has 78 centenarians; France, with 40 millions, has 213; England, 146; Scotland, 46; Norway, 23; Sweden, 10; Belgium, 5; Denmark, 2; and Switzerland, none at all. Spain has 401 centenarians, while Servia, with a population of 2,250,000, has 575 people over one hundred years old. The difference in the effects of a high altitude and a warm climate is, from these statistics, striking.

The Money Value of a Woman's Life.—Legal decisions tend to show that a woman's life is worth but half that of a man. \$5000 has often been decided upon as the value of a man's life, as many decisions of the courts show, while the judgments recently allowed in two separate States, for damages for the deaths of women, amounted to \$2500 each. The Supreme Court of Maine reduced a judgment for \$3500 to \$2500, claiming that the former sum was too large to pay for the death of a woman who had only supported her husband and five children. The Supreme Court of New Jersey also reduced a verdict for \$5000 for a woman's life lately to \$2500. It is truly an odd view of life that is gained from the court room.

Suicide in Childhood.—It is a fact that suicide is continually increasing among the children of civilized people. A hundred years ago it was an almost unheard-of occurrence for a child to kill himself. Now, while suicides are commonly reported among the children of France, England, Italy, Switzerland, and the United States, Germany heads the list in the number of juvenile suicides. In Prussia alone, from 1869 to 1898, 73 boys and 20 girls under the age of ten years, and 1173 boys and 342 girls between the ages of ten and fifteen years, committed suicide. The younger children, in many cases, were totally ignorant of what they were doing. Of the causes for the prevalence of suicide in childhood, Baer, in a most interesting book just published in Germany, states that the most important are mental disturbances, such as the insanities and the emotions, love, hatred, jealousy, etc. In some cases alcohol was a distinct predisposing factor; while the tendency to commit suicide may be inherited. Poverty, hunger, fear, the early development of puberty, lack of education, etc., all lead to suicide. Baer lays especial stress upon society, balls, theatres, etc., which early awaken the sexual passions of growing children, especially of those about the age of puberty. A direct appeal is made to parents and physicians to help in the prevention of this growing evil among children, by a more careful attention to their education.

Population Statistics.—The *Review of Reviews* states that the population of Canada is rapidly increasing, since, among the French-Canadians, families of fifteen to twenty children are not uncommon, the average being over ten. From the latest English data, the decline in the birth rate in England is greater even than that of France. The condition in the United States is disguised by the number of immigrants continually arriving. In Italy the population has grown so rapidly that the United States attracts thousands of Italians annually. This is due to the fact that agricultural conditions are so much more favorable here than in Italy. Belgium and Switzerland not only hold their own, but are gradually increasing in the number of their people. In these countries the emigration and immigration almost balance.

Longevity of the Various Races.—It has often been remarked that while nothing is so uncertain as the duration of any given human life, nothing is more certain than the aggregate of years which may be assigned to a group of one hundred persons or more at any particular age. The expectation of life at a given age, to use the actuarial phrase, differs considerably, as might be expected, in different countries, and Englishmen may be surprised to learn that they are not the longest living among the white races. At the age of 20 an Englishman in average health may expect to live forty-two years, and any life office will grant him a policy based on that prob-

ability. The American's expectation is for a slightly longer period. On the other hand, a German lad of 20 can count upon little more than thirty-nine years and a half. It would seem, therefore, that the restlessness attributed to the American temperament does not necessarily conduce to the shortening of life, nor the composure of the German to its prolongation. Possibly the better feeding and clothing of Americans in the lower classes of the population is the principal cause of their greater longevity. Their position is, at any rate, maintained in later as well as in earlier years. The American who has reached 60 may look to complete fourteen years more, while the Brit- isner's expectation is only about thirteen years and ten months, and the German's as nearly as possible twelve months less. Both at 20 and at 60 the Frenchman's prospect is a little better than the German's and a little worse than the Englishman's.—*London Globe*.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended September 21, 1901.

SMALLPOX—United States.

		Cases.	Deaths.
ILLINOIS:	Freeport	Sept. 7-14	1
	Peoria	Aug. 1-31	21
	Portland	Sept. 7-14	1
MAINE:			
MASSACHUSETTS:	Boston	Sept. 7-14	2
NEBRASKA:	Omaha	Sept. 7-14	1
NEW JERSEY:	Newark	Sept. 7-14	4
NEW YORK:	New York	Sept. 7-14	3
PENNSYLVANIA:	Erie	Sept. 7-14	1
	Philadelphia	Sept. 7-14	25
UTAH:			
WASHINGTON:	Soft Lake City	Sept. 7-14	4
WISCONSIN:	Green Bay	Sept. 1-8	1
	Green Bay	Sept. 8-15	1

SMALLPOX—Foreign.

AUSTRIA:	Prague	Aug. 24-31	1
BELGIUM:	Antwerp	Aug. 24-31	3
COLOMBIA:	Panama	Sept. 2-9	12
FRANCE:	Paris	Aug. 24-31	7
GREAT BRITAIN:	London	Aug. 24-31	74
INDIA:	Bombay	Aug. 13-20	1
	Calcutta	Aug. 10-17	1
	Madras	Aug. 10-16	9
ITALY:	Messina	Aug. 24-31	3
MEXICO:	City of Mexico	Aug. 25-Sept. 1	1
RUSSIA:	Moscow	Aug. 17-24	2
	Warsaw	Aug. 17-24	2
URUGUAY:	Montevideo	July 18-25	10

YELLOW FEVER.

CUBA:	Matanzas	Aug. 25-31	2
HAITI:	Port au Prince	Aug. 19-26	1

CHOLERA.

INDIA:	Bombay	Aug. 13-20	11
	Calcutta	Aug. 10-17	7
	Madras	Aug. 10-16	76
JAPAN:	Yokohama	Aug. 3-17	3

PLAGUE.

INDIA:	Bombay	Aug. 13-20	201
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GREAT BRITAIN.

The English Medical Schools.—The *Medical Press* states that there are 11 medical schools in London and 9 in the provinces, none of which themselves confer degrees. Besides these colleges, there are six universities: Oxford, Cambridge, London, Durham, Victoria, and Birmingham, which confer two degrees in medicine, M.B. and M.D., and two degrees in surgery, B.Ch. and M.Ch. The medical students who have been matriculated in London or the provinces come before the Conjoint Board for examination. This Board confers the degrees of Licentiate of the Royal College of Physicians (L.R.C.P.), and Member of the Royal College of Surgeons (M.R.C.S.). The Society of Apothecaries also confers the complete diploma in medicine, surgery, and midwifery.

Typhoid Fever in Belfast.—The epidemic of typhoid fever in Belfast in June is at last beginning to abate. 217 cases were reported in June, 505 in July, and only 345 in August. At a meeting of the City Corporation held

upon September 1st, no single cause for the epidemic could be found.

Middlesex Hospital Chapel.—After ten years of work, the interior decoration of the chapel of the Middlesex Hospital has been finished. Those who have been privileged to see it state that it has a most beautiful example of marble and mosaic work.

CONTINENTAL EUROPE.

A Nursery for the Children of Lyons.—The late M. A. M. Rémond left his entire estate, valued at \$200,000, for the erection of a nursery for the use of the children born in the Maternity Hospitals of the city of Lyons.

Dr. Leopold Javal, the eminent ophthalmologist and member of the Paris Academy of Medicine, has been appointed an officer of the Legion of Honor.

A Centenarian.—In Nertschinsk, Russia, died a certain Mendel Berkovitch at the age of 110, leaving 119 grandchildren. The deceased has never been sick and died without any preceding illness.

The New Moon as a Hair Tonic.—In accordance with a superstition prevalent in certain parts of Russia and Germany girls cut their hair as soon as the new moon makes its appearance. The hair removed is rolled into a ball and thrown on the roof of the house. This, they believe, makes the hair grow to an unusual length. This superstition, surprisingly is shared by educated (?) women.

A Victim of Kneipp's Method of Treatment.—A woman who is a blind follower of Kneipp subjected one of her daughters, who fell ill with fever, to the following treatment. The girl was given a cold bath, enveloped in a cold wet sheet, and placed in a cold barn. The poor girl died on the following day. It is a wonder that such crazy fanatics are not taken care of by the law.

A Specimen of French Criticism.—The *Echo de Paris* publishes a medical expert's opinion on President McKinley's case. He declares that the operation was not properly carried out, because it was incomplete. It would have been better, he says, not to operate at all. Mr. McKinley, the expert states, had a chance of life before the incomplete operation, but none afterward. The expert concludes that the cause of death was peritonitis.

Busts of Chassaignac and Maisonneuve.—On September 26, 1901, busts of Chassaignac and Maisonneuve were unveiled in the court of the Hôtel-Dieu Hospital in Nantes, Professor Guyon presiding.

Dr. Korteweg, Professor of Surgery at Amsterdam, has been appointed Professor of Clinical Surgery at the University of Leyden, replacing the late Dr. J. E. van Iterson.

Dr. I. Novi, extraordinary Professor of Materia Medica, has been made ordinary Professor of Materia Medica and Experimental Pharmacology at the University of Bologna.

Dr. Heinrich Kionka has been appointed Professor of Pharmacology at the University of Breslau. **Dr. H. Sachs** Professor of Neurology at the University of Breslau.

Dr. G. Corrado, extraordinary Professor, has been made ordinary Professor of Medical Jurisprudence at the University of Naples.

The Incineration of Cadavers in Paris.—It is only recently that the Faculty of Medicine in Paris has begun the erection of a crematory for the incineration of the cadavers which have left the dissecting-room.

A French Commission for the Study of Yellow Fever.—The French Chamber of Deputies and Senate have unanimously voted the sum of \$20,000 to pay the expenses of a commission, consisting of three or four physicians, for the study of yellow fever. This commission, under the direction of the Pasteur Institute, will probably leave for Brazil in October next.

An Accident to Dr. Calmette.—Dr. Calmette, Director of the Pasteur Institute in Lille, was bitten by a snake recently, while collecting venom. A large amount of antivenomous serum was immediately injected. Though his hand and wrist were greatly swollen and he had high fever, he recovered rapidly.

The New Autopsy Amphitheatre in the St. Antoine Hospital, Paris.—In the St. Antoine Hospital in Paris, a new autopsy room has just been inaugurated. The walls are of white tiles, while the floor is in mosaic. The bodies lie in the cellar below, and are brought up upon an elevator in the vestibule, closing with a trap-door. Everything is scrupulously clean.

Swiss Mountain Climate.—Seven professors, some from Berlin and some from Vienna, supplied with a large scien-

tific outfit, have spent the last summer in the mountains of Switzerland experimenting upon the effects of the climate upon their circulation, assimilation and other physiological processes. Detailed reports will be published later.

THE JOURNAL OF NERVOUS AND MENTAL DISEASES. August, 1901. (Vol. 28. No. 5.)

1. A Case of Peripheral Pseudo-tabes with Exaggerated Itellaxes. Autopsy and Microscopical Examination Showing Degeneration of the Peripheral Nerves and no Lesions of the Spinal Cord.

CHARLES. K. MILLS.

2. A Study of the Insanities of Adolescence.

WILLIAM PICKETT.

3. A Large Subcortical Tumor of the Oculipital Lobe, Producing Right-Sided Hemiparesis and Right Homonymous Hemianopsia, together with Wernicke's Pupillary Inaction Sign as A Distance Symptom.

F. X. DERCUM.

4. A Case of Asternognosis Resulting from Injury of the Brain in the Superior Parietal Region.

WILLIAM H. TELLER and F. X. DERCUM.

1.—C. K. Mills says that the term **pseudo-tabes** has been applied to a variety of spinal and neural affections with symptoms closely simulating those of true tabes spinalis. The symptoms in pseudo-tabes are neuralgic or lightning pain, anesthetics, incoordination, bladder disturbances and lost knee-jerks, and if the sciatic distribution is affected, lost Achilles jerk. More or less marked atrophy may be present. In many cases the disease may be traced to some toxemia or infection, such as alcohol, arsenic, lead, dlatetes or syphills. The clinical diagnosis between these different affections and true tabes is made by a close study of etiology, of previous history and of the progress of the case, and is much helped by attention to a few symptoms which are usually present in the one case and absent in the other. [T. M. T.]

3.—F. X. Dercum reports a case of the above condition in which, at autopsy, the following was found: As soon as the calvarium was removed, it was noticed that the brain bulged considerably in the left occipital region, as though it had been under pressure. When the brain was removed a large hard mass could be distinctly felt lying deeply within the occipital lobe. It could be easily made out there through the lateral and mesial surfaces. The brain was subsequently hardened in formation and the exact situation of the tumor ascertained by horizontal section through the left hemisphere. There was found a hard yellowish white tumor, oblong and irregular in outline, 1.2 cm. below the lateral surface, 3 cm. from the apex of the occipital lobe, from 1.4 to 3.5 cm. below the mesial surface and 3.5 cm. from the basal surface. It was 7.4 cm. in its greatest width. From its situation it had evidently destroyed the fibres of the optic radiation. It did not, however, involve the optic thalamus or the quadrigeminal bodies. Its proximity, however, to these structures was such that they were probably influenced by pressure and it is extremely probable that the Wernicke's symptom observed upon one occasion in this case was a pressure symptom. The hemihyperesthesia and hemiparesis which were also present on the right side were evidently due to slight involvement and pressure upon the posterior limb of the internal capsule. [T. M. T.]

Investigations of the Plague.—D. Zabolotny (*Archiv Biologicheskikh Nauk*, Vol. VIII, No. 4) performed a series of experiments on a large number of monkeys, reaching the following conclusions: (1) In apes the principal clinical forms of the plague, the bubonic and pulmonary, can be easily reproduced. (2) A well marked infection can be cured by antiplague serum. (3) Injections of small doses early in the disease are preferable to large doses late in the disease. (4) Recovery from the plague is accompanied by phagocytosis in the bubos. (5) To establish a fixed active immunity repeated injections of the serum are necessary. (6) Injection of toxins or dead cultures is always accompanied by a marked leukocytosis. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

September 7, 1901. (No. 2123.)

1. What is Intussusception: How Should It Be Dealt With? EDMUND OWEN.
2. Introductory Remarks on Opening the Section of Diseases of Children. FREDERICK EVE.
3. Discussion on the Treatment of Intussusception in Children. BERNARD PITTS, D'ARCY POWER, W. M. ECCLES, A. H. TUBBY, F. C. ABBOTT, J. P. BUSH, SINCLAIR WHITE, LEWIS MARSHALL, C. F. CUTHBERT, A. F. FOXSIE, E. M. SYMPSON, A. McPHERDAN, A. D. BLACKADER, F. E. BATTEN and FREREICK EVE.
4. On Essential or Toxicemic Dropsy: Dropsy Without Albuminuria. W. P. HERRINGHAM.
5. Results of Tendon Grafting in Infantile Spastic Paralysis. A. H. TUBBY.
6. Ultimate Results of Tendon Grafting in Infantile Paralysis. SINCLAIR WHITE.
7. Discussion on the Early Diagnosis of the Acute Specific Fevers. F. F. GAIGER E. W. GOODALL, H. ASHBY, F. J. POYNTON, W. J. TYSON, P. W. WILLIAMS, LOVELL DRAGE, E. M. SYMPSON and T. FISHER.
8. The Value of Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children. J. H. THURSFIELD.
9. Intra-uterine Rickets. F. C. ABBOTT.
10. Radical Cure of Inguinal Hernia in Children. H. J. STILES.
11. Two Cases of Chronic Hydrocephalus in Infants Treated by Tapping and by the Introduction of Aseptic Air in the Place of the Fluid. WILLIAM EWART and W. L. DICKINSON.
12. Diagnosis of Suppurative Pericarditis in Children. F. E. BATTEN.
13. Observations on Suppurative Pericarditis in Children. G. F. STILL.
14. Introductory Remarks on Opening the Section of Tropical Diseases. RONALD ROSS.
15. Filarial Abscess. J. P. MAXWELL.
16. Some Points Connected with Human Filariasis. J. E. DUTTON.
17. Some Remarks on Asylum Practice in Singapore. W. G. ELLIS.
18. An Epidemic of Zinc Poisoning Through Drinking Contaminated Water in the Tropics. J. D. GIMLETTE.

1.—Intussusception means the catching up of one piece of bowel within another piece. The intussusception always occurs from above downward because the peristaltic action of the circular fibres of the bowel is from above downward, and it is by the energetic contraction of these circular fibres that the intussusception is produced. Anything that will excite vigorous peristaltic action is apt to produce intussusception. The symptoms of the condition are: (1) sudden abdominal pain, (2) vomiting, (3) the passage, with much straining, of a stool containing mucus, blood and scanty liquid feces, and (4) the presence of a tumor in the region of the ascending colon. Owen believes that medical treatment can afford no trustworthy means of curing this condition, and that prompt abdominal section is the only practical and scientific way of affording relief. [J. M. S.]

3.—Pitts opened the discussion on the treatment of intussusception in the Section of the Diseases of Children of the British Medical Association. After a study of 115 cases of intussusception, the author concludes that the following rules may be considered as covering the best method of treating the disease: (1) Try inflation only when the case is seen within a few hours of the onset and is not of a very acute character. In the great majority of hospital cases it is better to open the abdomen at once. (2) Inflation may be tried in certain other cases for the purpose of reducing the main portion of the intussusception, so that the incision may be made directly over the cecum. (3) When reduction is found impossible in chronic cases a resection may be generally done through an incision in the ensheathing bowel. (4) In acute cases, if gangrene is present or the condition of the bowel requires

its removal, a wide resection should be undertaken as rapidly as possible, and the ends brought outside the abdomen; continuity should be restored at a subsequent operation. (5) In exceptional cases of enteric intussusception resection and immediate restoration of continuity gives the only chance. Between 1860 and 1890 D'Arcy Power has seen 113 cases of intussusception. His experience with these cases has convinced him that the best method of treatment is to perform an abdominal section at the earliest possible opportunity, and to reduce the intussusception, if possible, without bringing the tumor into the wound. If, however, there is the least difficulty in reduction, it is necessary to make a very large incision, and to bring the intussusception outside the abdominal cavity. Eccles believes that immediate celiotomy is indicated for the relief of the condition. He believes that it is unwise to put a nursing child to its mother's breast within a short time after such an operation, because the act of sucking tends to stimulate the peristaltic movements, thus, it would seem, rendering recurrence liable. For the same reason he is an advocate of the use of small doses of tincture of opium after the operation. Tubby believes that the frequent recurrence of intussusception after irrigation or inflation is due to the fact that the condition was not entirely relieved by the process, although the palpating hand could detect no further tumor. He also believes that the patient stands a better chance if abdominal section is performed at once. In fatal cases, there is often a rapid rise of temperature just before death; this, he believes, is due to septic thrombosis in the tributaries of the mesenteric veins, due to some septic infection originating in the damaged condition of the bowel. Abbott believes that in hospitals, where the conditions are always favorable, operation is indicated in intussusception; but, in private practice, it is permissible to try to relieve the symptoms by inflation and injection first, and later to send the patient to a hospital. He explains the rise of temperature after the operation by the passage of fecal matter over the damaged mucous membrane. The symptoms often resemble those of tuberculous peritonitis. Bush believes in the importance of early operation in cases of intussusception. He is not in favor of irrigating an infected peritoneal cavity. White believes that the hyperpyrexia following operation is due to some trophic disturbance of the thermogenic centres. He believes that if the country practitioners gave morphine to arrest peristalsis after reducing the tumor that lesion would not be so likely to recur. The president, Eve, said that the unanimous opinion of the speakers was against the employment of inflation or injection, with the exception of Pitt, who would allow those measures in cases seen within a few hours of the onset. The arguments advanced against inflation and injection are: (1) They are very rarely efficacious; (2) they are not infrequently followed by partial reduction; (3) they are unscientific. [J. M. S.]

4.—Cases of general anasarca are occasionally met with, chiefly in children, but sometimes also in adults, which exactly resemble cases of Bright's disease; but in which there is no albumin discovered in the urine, and no abnormal condition of the heart to account for the dropsy. These have been called cases of essential or idiopathic dropsy. Herringham believes that it is not the loss of blood cells in anemia nor the failure of excretion in nephritis that produces this toxic condition, but that there is some original toxic poison, such as that of scarlet fever, which produces not only the nephritis or the anemia, but also the edema, the latter being coincident with, but not consequent upon, the inflammation of the kidneys, or the loss of blood cells. Scarlet fever is certainly a toxic disease, and it is possible that a chill is also due to micro-organismal invasion. It is then reasonable to suppose that in certain cases the toxic condition may produce dropsy without inflaming the kidney. [J. M. S.]

5.—Tubby says in selecting a muscle for grafting, one whose action is most nearly allied to that of the paralysed muscle should be chosen. Any faulty position of the foot should be corrected before operation. He has noticed that the circulation improves and the warmth of the foot increases after these operations and in winter chilblains do not occur. He has operated upon 11 cases. Four were for calcaneo-valgus; two for talpes-calcaneus; one for equino-valgus; three for equino-varus; and one for calcaneo-varus; and also on four cases of spastic paralysis of

the forearm and hand, by transplanting the tendon of the pronator radialis teres, with sections of the flexor tendons of the wrist. Of these 11 cases six have shown good and five fair results; in no case has failure resulted. The results of the four operations in the forearm have been good in three and partial in one. Tendon grafting is useless in ball-like joints where all the muscles are badly affected, and it should not be employed in slight cases of paralytic valgus or varus or in slight equinus. [F. T. S.]

6.—White has operated upon 11 cases, one of which concerned the extensor muscle of the thumb, while the rest were examples of foot palsy. Lengthening the tendo-Achilles with the transference of a slip from its outer side to the tendons in front of the ankle formed an essential part of each operation. The next most frequent procedure was to detach the tibialis posticus and to bring it in front of the internal malleolus where it was attached to the tendon of the extensor proprius pollicis or to the long extensor of the toes. The case of thumb palsy was treated by attaching the tendon of the flexor carpi radialis to the paralysed extensor tendons. But slight improvement followed. Of the ten foot cases one has been lost sight of; two have been operated on recently; and of the remaining seven six are greatly benefited. One case should be considered a failure. The following operation illustrates the method most frequently practiced. The tendo-Achilles was exposed and divided longitudinally into three equal parts; the two inner parts were used for lengthening the tendon by dividing them at opposite ends and allowing them to slide on one another until the requisite length was obtained, when they were sutured together. The outer third was severed as the os calcis, and sutured to the tendon of the extensor longus digitorum. The tendon of the tibialis posticus was united to the tendon of the extensor proprius pollicis. A tunnelling under the skin is made by a fine pair of Kocher's artery forceps to convey the active tendon to its place of surgical insertion. [F. T. S.]

7.—Caiger opened a discussion on the early diagnosis of the acute specific fevers in the Section of Diseases of Children of the British Medical Association. He thinks that there is no question as to the paramount value of Koplik's spots as a factor in the diagnosis, not only in respect to the early recognition of measles, but also in its differentiation from other affections that are liable to be mistaken for it at an early period of illness. These diseases are German measles, laryngeal diphtheria, catarrhal laryngitis and the morbilliform erythema following the injection of antitoxin. On the strength of these spots alone, the author has on several occasions been able to successfully isolate a patient in whom neither pyrexia nor the slightest indication of catarrh in the mouth or elsewhere could be detected until twenty-four hours had passed, and, in case of the rash, until the lapse of four days after the spots were first seen. In the early diagnosis of whooping cough from an ordinary bronchial cold, several authorities have claimed value for a minute bacillus that can be isolated from the grayish mucous pellets that are separable from the sputum after standing. The organism stains in a granular fashion, and can be grown on coagulated hydrocele fluid. In the bacteriological diagnosis of diphtheria there are, as is well known, several factors that lessen the value of the results. The author holds that when bacilli apparently conforming to the Klebs-Löffler bacillus both morphologically and in culture are found in a case in which the clinical aspect is negative, the bacteriological examination cannot be regarded as conclusive unless it includes the result of animal inoculation. When bacilli are found that conform to the Klebs-Löffler bacillus in their microscopical, cultural and staining characters, and the clinical appearances of the case are consistent with diphtheria, the bacteriological evidence may be held sufficient to establish the diagnosis. Failure to detect the Klebs-Löffler bacillus in a case which, from the clinical standpoint, is negative, is sufficient to exclude the diagnosis of diphtheria, provided the negative result has been confirmed by at least one subsequent examination. On the other hand, failure to detect the Klebs-Löffler bacillus, even though subsequent examination should also prove negative, cannot be held to exclude diph-

theria, should the clinical appearances be distinctly suggestive of that disease. The author wishes to attest the value of Nelisser's double stain in differentiating the Klebs-Löffler bacillus in ordinary cover-glass preparations. In the differential diagnosis between scarlet fever, tonsillitis and diphtheria, the condition of the throat is helpful. In scarlet fever the throat presents a tumid, velvety appearance, and the association of a raw, clean tongue is a combination not seen except in scarlet fever. In tonsillitis the exudation is usually limited to the tonsils, while in diphtheria it spreads to the surrounding parts. The differentiation between the rash of scarlet fever, measles and German measles is made from the period of incubation, the occurrence of vomiting, suffusion of the eyes and the condition of the glands. Ashby believes, with Dukes, that there are two diseases often included under the term rubella; the usual one with the long period of incubation, German measles, and a rare one, only diagnosable when it occurs in epidemics, which resembles scarlet fever. Poynton referred to an experience of an epidemic of an eruptive disease that broke out in a large boys' school which was diagnosed "fourth disease," but he was not prepared to say that the cases were not mild cases of scarlet fever. He referred to the resemblance between the rash produced by iodoform poisoning and the rash of scarlet fever. Williams is of the opinion that there are two types of German measles, the morbilliform and the scarlatiniform, and that the latter is distinct from "fourth disease." Sympton said that the circumoral pallor, mentioned by Calger, was an early symptom of great value in the diagnosis of scarlet fever. He is of the opinion that acute pneumonia should be put in the list of acute specific diseases. [J. M. S.]

8.—Thursfield studied the serum reaction in 100 children in the Hospital for Sick Children, Great Ormond Street. Of these 42 gave positive reactions. Of the 42 cases of typhoid fever that gave the reaction 40 gave it on admission; one case alone had the reaction delayed later than the first week of the illness, the other presenting it within the first week. Of the cases that failed to give the reaction not one had typhoid fever. Although the number of cases is small, the author believes that in children a positive serum reaction is trustworthy evidence of the presence of typhoid fever; that a negative reaction later than the tenth day of an illness is strong, but not absolutely convincing evidence of the absence of typhoid fever, and that repeated negative reactions are trustworthy evidence that the case is not typhoid at all. He believes that the test is of greater value in children than in adults. It is possible that the reaction occurs earlier in children than it does in adults. He believes that simple continued fever is a distinct disease in children. [J. M. S.]

9.—Abbott reports the case of a female child, aged 14 months, who presented an enormous cranium, prominent eyes, toothless jaws and deformed limbs. The chest showed a deep, longitudinal groove on either side at the outer part of the line of the costal cartilages, with prominence of the sternum and inner part of the costal cartilages and rachitic rosary. The spine showed one large posterior curve. The child was pot-bellied. The alae of the iliac bones were flattened and thickened, the clavicle, the humerus, the radius, the ulna, the femur, the tibia and the fibula were curved as in rachitis on both sides. Both feet were in the position of extreme varus and calcaneus. The child, which was one of twins, died. It was born of healthy parents, the mother having given birth to seven living children and having had eight miscarriages. The other twin lived, but presented to a less degree the deformities of the one that died. The author believes the case to be one of intrauterine rachitis, and, since the curves of the bones are the natural curves assumed in the intrauterine position, thinks the changes due to intra-uterine pressure. The curves presented by this baby are the usual curves of rachitis that are usually supposed to be due to muscular traction or to methods of progression and support of the body weight. This raises the question whether these curves have not more often really commenced at this early period and merely become more marked after birth. The question of congenital syphilis must be considered as possibly responsible for the bony changes *in utero*, and as a predisposing cause of the subsequent rachitis, especially in the light of the history of miscarriage. However, the absence of teeth, the large cranium, the pot-belly and the general kyphosis point to rachitis, and the author considers the case as the most conclusive yet published, from the

point of view of the curves being due to intra-uterine pressure. The post-mortem specimens presented the characteristic changes of rachitis. Sklagraphs were shown.

[J. M. S.]

10.—Stillés has operated upon more than 100 *herniae in children*. He says that in a large proportion of hospital cases the truss is unsatisfactory because of the ignorance of the parents, its inconvenience, the long duration of treatment and its uncertainty in bringing about obliteration of the funicular process. If there be any difficulty in keeping up a hernia he proceeds to operation even though the child be but a few months old. He says the operation is not only simpler but also less likely to be followed by recurrence than in adults. Out of 78 cases in which it was reported in 72 the sac did not communicate with the tunica vaginalis. The operation he performs is as follows:—Exposure of the cord, its coverings, and the pillars of the ring. Isolation, ligation and excision of the funicular process, closure of the ring by passing the sutures of cat gut through the inner pillar and conjoined tendon on the inner side, and through Poupart's ligament on the outer side, care being taken to leave room for the cord; and suture of the wound. Seven of the 100 cases were strangulated, the youngest two weeks old. There were seven cases of cecal hernia, and in three cases the sac was found to be tuberculous. Two cases have thus far recurred. [F. T. S.]

11.—Ewart and Dicklson report two cases of *chronic hydrocephalus in infants* which were treated by tapping and by the introduction of aseptic air in the place of the fluid. The authors draw the following provisional conclusions: (1) With due precautions the fluid of chronic hydrocephalus may be completely evacuated from the yet unclosed skull of infants, and aseptic air may be allowed to take its place. This operation may be repeated without detriment, and with scarcely more risk than belongs to the usual method of paracentesis. (2) In favorable cases of moderate effusion, such as case 2, a single operation may suffice. Continued oozing from the puncture for a few days after the removal of the tube is not unfavorable. (3) In case of considerable effusion an obvious indication is to relieve the brain from weight and from the pressure of the fluid. The evacuation is facilitated by the introduction of aseptic air. In the first case reported this method of treatment has proved to be of decided advantage. By a timely repetition of the operation a hydrocephalic infant may be enabled to carry the weight of the head, and, if the treatment is begun sufficiently early, permanent damage to the brain tissue may be averted and a normal development may, perhaps, ensue. (4) In large heads, whilst hydropneumencephalus persists, a considerable splashing sound is readily obtained. There is obvious risk in eliciting this sound by forcible succussion, and, for the same reason, any abrupt movement of the head should be avoided. [J. M. S.]

12.—Hatten finds that *suppurative pericarditis* is present in nearly 3% of the deaths in the records of the Children's Hospital. The paper in hand is based on six cases. The cause of the disease was fixed in all cases. In two it followed measles, while in the remaining cases it had followed pneumonia or bronchitis. There is no particular temperature curve that can be considered characteristic, although sudden falls, attended with collapse, are common. The pulse is almost uniformly rapid and out of proportion to any distress or discomfort that the child may exhibit. The respiration is usually increased, but maintains about its normal ratio to the pulse. Severe attacks of syncope are frequent; there is not necessarily any increase in the area of cardiac dulness; the apex beat may be in its normal situation, and no adventitious sounds may be heard. The subjects of the disease resemble those who suffer from empyema. [J. M. S.]

13.—Out of 769 necropsies on children under 12 years of age there were 65 which showed non-rheumatic lesions of the pericardium. In 57 of these there was tuberculosis of the membrane and in 28 there was pericarditis, apparently due to pyogenic infection. Out of the latter 28 cases, 11 presented actual pus or seropus in the pericardial cavity, and in 17 the pericardial fluid was only slightly turbid. In some of the cases in each group bacteriological examination showed the presence of pyogenic organisms, and in others the presence of associated lesions made the exist-

ence of those organisms almost certain. The organisms found by bacteriological examination were the pneumococcus and staphylococcus pyogenes albus. The pneumococcus predominated, and it seems to be the organism most frequently concerned in the production of purulent pericarditis in children. Pleuritis is a very common associated lesion, and probably antedates the beginning of the pericarditis in the majority of the cases. It, in turn, is usually dependent upon a pre-existing pneumonia. The presence of lymph or of turbid serum in the pleura involves the risk of *suppurative pericarditis* no less than it does an actual empyema. Furthermore, the infection of the pericardium may occur within a few days after the onset of the pneumonia or not until several weeks have elapsed, and only the empyema or pleurisy remains. In any case, therefore, in which exploration of the chest shows turbid serum or pus, especially if on bacteriological examination the fluid is found to contain the pneumococcus, free drainage by resection of a rib should be performed with as little delay as possible in the majority of cases.

[J. M. S.]

15.—Maxwell refers to the case of a Chinaman, whose scrotum was little more than a bag of pus. Fifteen days before he was seen he had been seized with a violent chill, which passed into fever, which persisted, in about ten minutes. A part of the scrotum sloughed, but the patient eventually recovered. In studying the cause of these cases the author was able to exclude gonorrhea, injury and the bites of insects. After examining the blood of the patients affected it was found that each patient was suffering from filariasis. Abscess formation may occur as an incident in the course of filarial disease, or as the first symptom of that disease. It may occur in any situation in which there is loose connective tissue, rich in lymphatics, and it is not always necessary for the abscess to form in the situation of the primary inflammation. The author does not believe that every case of abscess of this character is caused by the death of the parent worm, and is inclined to attribute the formation of the abscess to the blocking of lymphatic vessels. Filarial abscesses may affect the scrotum, where they may be found as suppurating hydroceles, as abscesses of the cord or as abscesses below the testicle. They may also attack the limbs or they may be intra-abdominal or intrathoracic. The temperature in this condition rises rapidly, following the chill; it remains high for from one to three days, and then falls by lysis, provided an unopened abscess is not left. [J. M. S.]

18.—Gimlette reports an epidemic of zinc poisoning among the soldiers stationed at Pahang, which was caused by drinking water collected from roofs covered with galvanized iron. The water had become contaminated with zinc in such proportion as to cause disease. The diseases were characterized by the fact that the gastric symptoms predominated over the nervous symptoms. [J. M. S.]

MEDICAL RECORD.

September 21, 1901.

1. Pathological Physiology of the Animal Heat Economy and Its Relation to the Modern Theories of Fever. ISAAC LEVIN.
2. Foreign Bodies of the Nose and Ear. PERCY FRIDENBERG.
3. Some Ultimate Results of Gunshot Wounds caused by Mauser Bullets During the Late Spanish-American War. MEDWIN LEALE.
4. A New Operative Procedure for Treating Inflammation of the Posterior Part of the Eye. S. BUSHY ALLEN.
5. The Disadvantages of Copper Sulphate in Diseases of the Conjunctiva and Cornea. CORNELIUS WILLIAMS.

1.—Isaac Levin discusses the pathological physiology of the animal heat economy and its relation to the modern theories of fever. Pathological physiology of animal heat is closely allied with the normal physiology of the same subject. Food, or rather the process of its metabolism, is practically the only source of animal heat in the normal state of the organism. A number of physiologists have shown that a lesion of the corpus striatum near the nodus cursorius raises the temperature of the body three or four

degrees. This increase of the temperature may last for three or four days, and does not depend upon the temperature of the medium surrounding the animal. He has studied the pathological increase of animal temperature, fever. Under the influence of some pyrogenic cause, the small arteries of the skin contract, thereby lessening the amount of heat coming to the surface from the internal organs, as well as the amount of heat dissipated. This is in the first stage of fever. At the height of the fever the loss of heat is even increased sometimes, but the production is so much increased that it covers the increased loss, while in *stadio decrementi* the loss of heat is higher than the production, and as a consequence the temperature falls. Heat economy pathologically seems to resemble general metabolism inasmuch as it is the result of the joint work of many organs of the body; and fever, the most pathological state of heat, is in most instances a special kind of intoxication due to some substances not as yet well defined. Further work will have to show us the precise nature of these substances, and also to decide the question whether there is some central apparatus conducting all the complicated works of the heat economy, and what the nature and office of such an apparatus, if it does exist. [T. L. C.]

2.—Percy Fridenberg presents a paper on the recognition of foreign bodies of the nose and ear. The symptoms of nasal and aural obstruction are familiar, but it is surprising how patiently they are often borne. The method of diagnosing foreign bodies of the nose and ear are given at length and the treatment detailed, and the importance of the subject to the general practitioner is emphasized. [T. L. C.]

3.—Medwin Leale furnishes some ultimate results of gunshot wounds caused by Mauser bullets during the late Spanish-American war. The notes of 15 cases are furnished. In these cases with the exception of two, it is to be observed that, owing to the great velocity and rapid rotary action, the hardness of the outer shells, the shape and width of the bullets from modern small-bore rifles, and the long ranges generally maintained in warfare, most of the wounds on account of their trivial nature (the wounds of ingress and egress being usually small), heal rapidly, in the majority of cases, without suppuration. Tearing and laceration of the soft parts are usually slight and when bones are struck they are more often punctured than broken or splintered, which was the cause of the old leaden bullets with their great explosive effect and slight penetrating power. Primary and secondary hemorrhages are correspondingly reduced. [T. L. C.]

4.—S. B. Allen presents a new operative procedure for treating inflammation of the posterior part of the eye. He proposes to use Tenon's capsule for reaching the nerve and its head, for hot water injection. In this operative procedure, there are two sources of danger. First, the technique, opening the capsule, passing the catheter back to the nerve and maintaining it there with pressure of the water. Second, the temperature of the water. The method has been successfully tried on the rabbit's eyes with no appreciable disadvantages. [T. L. C.]

5.—Cornelius Williams discusses the disadvantages of copper sulphate in disease of the conjunctiva and cornea. He says that the objections to copper sulphate are so great and its advantages so much less than those of other and safer remedies, that it should be banished from our list absolutely. He believes that bichloride of mercury is far superior to copper sulphate in all conditions in which the latter drug is indicated. His conclusions are as follows: 1. Copper sulphate in ocular affections is maleficent in its effects. 2. Any good effect following the application of the solid copper sulphate in any disease of the eye may be obtained with the use of safer and practically painless means. 3. Trachoma is most successfully treated with weak solutions of silver nitrate, together with frequent

irrigation with weak bichloride solution in normal salt. 4. No application to an inflamed conjunctiva which produces a lasting pain should be countenanced. 5. Expression is not absolutely essential, yet much hastens the cure of trachoma. 6. A mydriatic should be used in every disease of the eye involving corneal lesions. 7. Copper has ruined more eyes than it has ever benefited. [T. L. C.]

MEDICAL NEWS.

September 21, 1901. (Vol. LXXIX, No. 12.)

1. The Case of the President.
2. Disappearing Tumors. A. S. WARTHIN and W. A. SPITZLEY.
3. The Dilatation of the Cervix Uteri in Obstetric Practice. HENRY J. GARRIGUES.
4. The Pantherapist and Neotherapeutics. C. H. KERNOTT.
5. A Case of Double Penis, Combined with Exstrophy of the Bladder and Showing Four Urethral Orifices. CARL BECK.
6. A Case of Congenital Absence of Internal Genitals; Fusion of Kidneys; Single Ureter. ALLEN J. SMITH and WILLIAM GAMMON.
7. A Few Remarks on a Generally Unrecognized Ear Disease (Otitis Media Mucosa). HENRY A. ALDERTON.
8. The Local Treatment of Gonorrhea. E. O. BARDWELL.

2.—A. S. Warthin and W. A. Spitzley conclude in the article on disappearing tumors as follows: (1) That in spite of skillful clinical observation, the ultimate behavior of a tumor is seldom to be determined except by microscopical examination, and that many seeming malignant neoplasms are taken to be such when really they are but the outcome of an inflammatory condition; (2) That probably no true neoplasm, malignant in nature, ever disappeared except through retrograde changes induced into itself through infection of the tumor tissue, or through affections or infections of other parts of the body having, by reason of toxins, practically the same effect. To this there are extremely rare affections in which the disappearance of the growth takes place by an excess of retrograde processes over those of growth; (3) That we must look to the inflammatory process, acute or chronic, for the explanation of the appearance and disappearance of these masses of tissue which before and even during exploration appear to be actual new growths. [T. M. T.]

3.—H. J. Garrigues, in the Dilatation of the Cervical Uteri in Obstetrical Practice, reviews the following methods: The drugs that are used consist of an ointment of belladonna smeared on the cervix, but, on account of the danger of infection, is very little used at the present time. A good substitute is atropine dissolved in sterilized water, injected into the tissue of the cervix in the dose of 1/40 grain; cocaine, 10% solution, painted inside and outside; chloral hydrate, grains xv, every twenty minutes for three or four doses; antipyrin, grains x, every half hour until three doses are given; strychnine, 1/30 grain, repeated every twenty minutes until 1/10 has been given. Quinine in 10 grain doses is also used. Ipecacuanha, grains ii, repeated every twenty or thirty minutes, is very excellent, although it is very disagreeable. The mechanical means are numerous, consisting of (1) tampons; (2) manual dilatation; (3) dilatable bags; (4) expanding metal dilators; (5) deep surgical incisions. The author favors manual dilatation, and says that a cervix toward the end of pregnancy may be so dilatable that in fifteen or twenty minutes it may be fully dilated. It is opened by pressure with the index finger and then dilated by lateral pressure exercised with the crossed thumb and fingers, using the flexor muscles.

[T. M. T.]

7.—H. A. Alderton gives certain systemic remedies in the above condition which seem to be beneficial, for example:

the iodide of potash in increasing doses. But the treatment *par excellence* consists of incision and evacuation of the tympanum, repeated if necessary and always accompanied by regular politerization and conscientious treatment of the nasopharyngeal condition. The relief is immediate, and while subject to temporary setbacks, permanent for the current attack. Before incision the external auditory canal should be made as nearly aseptic as possible by syringing with a tincture of green-soap solution, following this with instillation of absolute alcohol and then syringing with 1-2000 bichloride solution. The canal is then packed with aseptic gauze and the patient sent back to the waiting-room for half an hour to await the subsidence of the increased hyperemia necessarily induced by these procedures. The patient is then subjected to thorough cleansing of his nasopharyngeal cavities. The gauze packing is removed and under good illumination a thorough incision is made with a sterilized knife along the inferior segment of the drum membrane just internal to its attachment to the annulus. The ear is inflated and the mucus removed by means of sterile cotton pledgets. Finally, the canal is again packed with aseptic gauze, covered outside by a cotton pad kept in place by adhesive plaster. A mild astringent application of solution of silver nitrate or glycerite of tannis and carbolic acids is applied to the post-nasal mucous membrane. The patient must be seen in from twelve to twenty-four hours and the ear again gently inflated and the gauze packing renewed. After this, a treatment once in every two or three days is all that is usually necessary. Often the drum membrane may have healed by the first dressing. Should the exudate persist in reforming, a solution of nitrate of silver $\frac{1}{2}$ to 1 grain to the ounce of boiled distilled water acts favorably, both injected into the Eustachian tube and instilled into the tympanum through the incision. [T. M. T.]

7.—E. O. Bardwell, in the **Local Treatment of Gonorrhea**, states that the use of strong injections is uncertain, unsatisfactory and dangerous and should never be attempted; at any rate, in a first attack and in a mild case, using injections or irrigations of more than ordinary strength can do no good and is very likely to be productive of injurious results. He advises the use of copaiba and oil of sandal wood separately or in combination, especially in the first stage of gonorrhea. When copaiba cannot be tolerated, the use of spirits of turpentine, two or three drops in combination with cubeb in an emulsion, taken largely diluted, has seemed to have a beneficial action. It is well-known that if the above drugs can be given in large enough doses that they do some good, but they almost invariably derange the stomach. There appears also in all these cases an undue acidity and concentration of urine that requires the use of a mild, bland, uniritating diuretic, especially in the first stages of the disease, and for this purpose ten to fifteen grains of eltrate of potash will usually give good results. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

September 21, 1901. (Vol. LXXIV, No. 12.)

1. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
2. The Clinical Diagnosis of Carcinoma of the Esophagus and the Techniques of Gastrostomy.
CHARLES GREENE CUMSTON.
3. A Study of the Temperature, Pulse and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain. J. T. ESKRIDGE.
4. Conjunctivitis from X-rays; Incipient Retinitis apparently due to the same cause; Report of a case.
J. W. SHERER.

2.—C. G. Cumston, in his article on **Clinical Diagnosis of Carcinoma of the Esophagus**, states that gastrostomy may be effected under two different conditions. In the first

class, gastrostomy is performed at an early date in the course of the disease, while the patient is still able to take nourishment by the mouth, and when this is the case, the general rules of feeding after any operation may be carried out. Food by the mouth or directly through the gastric opening should only be given the day following the operation, progressively increasing the quantity at each feeding. In the second class of cases, and it is this class that the author has particularly in view, gastrostomy, for some reason or other, has been put off until late in the progress of the disease. In these cases the patients have not been able to swallow any food for a number of hours, and even liquids, which could previously be taken are rejected. The necessity for feeding is here an urgent indication. [T. M. T.]

3.—In **A Study of the Temperature, Pulse and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain**, J. T. Eskridge states that the temperature in apoplexy is due to embolus or thrombus. In cases of hemorrhage into the brain substance unattended by hemiplegia, but in which the shock has been sufficient to cause loss of consciousness, there may be, and probably is, an initial depression of the bodily heat. In case of Ingravescient apoplexy the author has found the temperature slightly elevated, although he has seen two such cases within two hours after the patient first began to complain. Exceedingly high temperatures have been observed in hemorrhagic and other lesions of the lenticular nucleus. Apoplexy from a thrombus or an embolus is attended by only a slight variation of the temperature from the normal during the first two days. Exceptions are found in lesions of the pons and medulla. There is no perceptible initial lowering of the temperature; at least, the author has been unable to detect any. In the severest cases there may be a slight rise of temperature by the second day. In the vast majority of severe cases there will be a rise of temperature from the third to the fourth day. A rise of temperature at this time denotes softening. The lighter cases have no rise of temperature at any time, and the prognosis is favorable as far as life is concerned, and, to a greater or less extent for complete recovery. An elevation of two or three degrees above normal denotes extensive softening and renders the prognosis most grave. Cases in which the temperature remains above normal for weeks or months, although it may not go above 99°, will probably end in death from extensive softening. In the violent maniacs the temperature was nearly always slightly elevated above normal, and sometimes the thermometer registered 103° in the axilla. In the majority of melancholia cases the temperature is normal or slightly below. In the agitated melancholics the temperature frequently rises to 101° or 102°. A temperature two or three degrees above normal maintained in melancholia is of the gravest omen. The author has seen three cases in which the temperature ranged from 102° to 104°. They all proved rapidly fatal, only one running a course of four weeks. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

September 19, 1901.

1. The Use of Gynecology by the General Practitioner.
EDWARD REYNOLDS.
2. Movable Kidney; with Special References to its Consequences and its Etiology, Etc.
FRANCIS S. WATSON.
3. A New Factor in the Etiology of Visceral Pilels, etc.
AGNES C. VIETOR.
1. The Home (Sanitarium) Treatment versus the Climatic Treatment of Consumption.
VINCENT Y. BOWDITCH.
2. Eosinophiles as Constituents of Pus.
EDWARD T. WILLIAMS.

2.—Watson protests against the view too often held by medical men, that movable kidney is, with the rarest exceptions, a harmless condition. The condition sometimes results in such serious consequences as hydronephrosis

and pyonephrosis, in fixation in an abnormal position and in gangrene of the organ. The latter condition is produced by the occlusion of the blood vessels from rotation on the horizontal axis of the organ. The author reports 2 cases in which a previously movable kidney became fixed in an abnormal position. Both cases occurred in men; and in both the right kidney had become fixed on a level with the anterior superior spine of the ilium. He believes that nephropexy gives satisfactory results in the majority of cases; out of 6 cases that he operated on in his private practice, 4 remained permanently relieved. The author has noted that the position occupied by the kidneys in the recumbent position is from a half-inch to an inch and one-half higher than the position occupied by them in the upright position of the cadaver. By the examination of various cadavers he has demonstrated to his own satisfaction that the structures concerned in maintaining the normal position of the kidneys are those that form the attachments between the posterior and upper aspect of the tunica propria or perirenal fascia and the fascia covering the lumbar muscles and the peritoneum covering the diaphragm, aided by the less essential ones connecting the anterior surface with the peritoneum overlying it, and that any deficiency in the areolar tissue forming this fascia will lead to the development of movable kidney.

[J. M. S.]

3.—In a large number of cases of **visceral ptosis** the lumbar spine is in a condition of more or less marked lordosis, or, as is more frequently the case, it is more or less straight and is accompanied by lessened obliquity of the pelvis. This straightening of the lumbar spine and lessened obliquity of the pelvis, Victor believes, is both a cause and an effect of visceral ptosis. She describes the changes brought about in the abdominal viscera by the development of the young woman and the influence exercised on these organs by the adoption of corsets and long skirts and by the first pregnancy. She concludes that the treatment of ptosis should begin in infancy and should never be lost sight of at any age. She describes a corset for visceral support. [J. M. S.]

4.—Howditch defines his position concerning the **home (sanitarium) treatment versus the climatic treatment of consumption**. 1 From his own experience in New England he is strongly in favor of the erection of sanatoria for the treatment and cure of consumption wherever that disease prevails. 2 He does not think that we are in a position to judge fairly at present the relative results to be obtained by this method in favorable or unfavorable climates. 3 At present he thinks that better results can in all probability be obtained by this form of treatment in the western sections of the country than in the eastern sections.

[J. M. S.]

5.—Williams has found **eosinophile leukocytes** in every specimen of **pus** examined, in large proportion. He believes that the granules are precipitates of the cellular protoplasm. If these observations are correct it is clear that the eosinophile cell can no longer be called a specific cell. It is a purely pathological product, resulting from a natural alkaline decomposition of the body of a common leukocyte. In other words, it is a necrotic cell. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

September 21, 1901.

1. A Method of Teaching Relational Anatomy.
C. M. JACKSON.
2. The Aim of Medical Education, and its Relation to Research Work by Medical Students.
W. S. CHRISTOPHER.
3. Necessity of a Practical Knowledge of Dietetics, Hydrotherapy and Physio-Mechanical Therapeutics, Etc.
FENTON B. TURCK.
4. The Seminar Method in Medical Teaching.
BAYARD HOLMES.
5. Medical Education. J. R. JONES.

1.—Jackson has worked out the following plan for instruction in **relational anatomy**. Hardening of cadavers by the injection of 50% formalin solution into the arterial system; study of surface form, laying special stress upon

land marks, etc.; making of sections through the body in planes separated by short intervals and carefully studying and making drawings of these sections; a search of literature for points involved and a carefully written report of the results obtained. [F. T. S.]

2.—Christopher directs our attention to the aim of medical education and particularly its relation to research work by medical students. He contends that research work should be undertaken by the medical man when his experience has become sufficiently ripe for him to determine his own problem. This line of investigation should not find a place in the short and well occupied medical course of to-day. [F. J. K.]

3.—Turck discusses the necessity of establishing a course of instruction in dietetics, hydrotherapy, and physio-mechanical therapeutics, in the medical curriculum. The sentiment voiced by the medical institutions in the United States seems to be in favor of establishing courses in these subjects. [F. J. K.]

4.—Holmes says that **seminar** is a method in which each member of the class does independent laboratory, clinical or library work, on a sub-topic of general interest to the class, this sub-topic being chosen by the student or assigned by the teacher. It is a meeting of the students and teacher to criticize the work of individuals. The seminar presupposes an elective course; in no other way can a student have time for exhaustive study. The student must also have a preliminary literary training and an ability for research work. [F. T. S.]

AMERICAN MEDICINE.

September 21, 1901.

1. The Significance and Treatment of Floating Kidney in Woman. HENRY D. BEYEA.
2. Wounds of the Thoracic Duct Occurring in the Neck. Report of Two Cases. Résumé of Seventeen Cases.
DUDLEY P. ALLEN and C. E. BRIGGS.
3. The Practical and Scientific Value of Blood Examination to the Medical Man and Surgeon.
ROBERT N. WILLSON. (Concluded.)
1. The Therapeutic Value of Alcohol.
LEON L. SOLOMON.
5. The Lane Lectures on the Social Aspects of Dermatology. No. II. MALCOLM MORRIS.
6. Intraspinal Cocainization, Etc.

BURDETT ATKINSON TERRETT. (Concluded.)

1.—Beyea mentions the great frequency of **floating kidney** in women and the fact that the suffering induced by it is often treated as indigestion, hysteria, etc. From his own experience he would give ten or fifteen per cent. as the proportion for floating kidneys producing symptoms. He classifies pathological mobility of the kidney as movable kidney, floating kidney, and floating kidney with enteroptosis. The treatment is medical, mechanical, or surgical. The movable kidney without symptoms needs no treatment or needs measures directed towards the condition of the general health. If it produces symptoms it should be treated mechanically by the application of a simple elastic binder which supports the lower two-thirds of the abdomen, of the application of a long, straight front, modern corset. The ordinary kidney pads are not only useless but harmful. Cases with severe and persistent symptoms should, in the well-to-do, be placed on medical treatment and the kidney be maintained in position by a mechanical support. If this fails nephropexy should be performed. In the poor it is best to resort at once to nephropexy. In cases complicated with enteroptosis, particularly gastropexy, nephropexy and mechanical supports give much relief, but the treatment of the future is nephropexy followed later by the operative shortening of the gastric hepatic omentum and the gastric phrenic ligament. In an operation for holding the kidney in place direct injury to the parenchyma or capsula through cicatricial change as must occur in suturing, the Senn and Deaver operation, and any capsule splitting operation, should be avoided. The principle sought in the Harris

operation is the correct one. Heyea proposes the following operation which was first planned and practiced by Dr. C. B. Penrose: A longitudinal incision is made in the lumbar region for a distance of three and a half inches; the perirenal fat is exposed and excised, opening the space of Gerrotta; the kidney is then delivered and a point at the hilum of the kidney in the perirenal fascia, which is free from blood vessels, and about 1 cm. above the ureter and renal vessels, is perforated by a rubber drainage tube of sufficient length to surround the kidney and protrude from the wound. A second tube is introduced below the ureter and vessels and brought out of the wound in a similar manner. The drainage tubes being surrounded by the perirenal fascia are prevented from changing their position and slipping over the convex end of the kidney or from interfering with the ureter or vessels. The kidney is now replaced and the wound closed, leaving a small opening for the tubes. A piece of gauze is placed over the wound and the rubber tubes tied. At the end of ten days the sutures are removed; the tubes are allowed to remain in for three weeks, forming two connective tissue cords which support the kidney. This operation has been performed in eight cases, three of whom were operated upon two and a half years, three two years, one one year, and the other six months ago. All have been examined recently and in all the kidney is fixed in position. [F. T. S.]

2.—Injuries to the thoracic duct occur as the result of disease as tuberculosis or cancer, from serious traumatism like fracture of the spine, and from accidental and operative wounds of the neck. Two cases are reported. One followed the removal of tubercular glands from the neck and was recognized by a sudden spurt of greyish-white material into the wound. The torn duct was stitched with fine cat gut and a small amount of gauze packed over the point from which the fluid had escaped. No subsequent leakage occurred. The second case occurred during an operation for the removal of carcinomatous glands, and was not recognized until after the operation, when the discharge became chylous. This finally ceased. A résumé of 15 other cases is given, of which two only were due to accident and thirteen to operative injury. The authors next review the anatomy and physiology of the duct and analyze the reported cases. In six of the cases injury to the thoracic duct was not suspected at the time of operation, while in the remaining eleven cases it was known to have occurred. The subclavian vein was injured in two cases and the internal jugular in two cases. The discharge of lymph when it occurred at the time of operation was slight in two cases, moderate in five, and quite profuse in four. The treatment of the 11 cases where the injury was recognized at the time of operation was by packing, suture, and ligation. Packing was employed in five cases, suture in four, and ligation in one. The cases, that were packed, with one exception continued to discharge from the first. In the cases in which suture was employed leakage occurred in two. The case of ligation showed no leakage. Secondary operation was resorted to in three instances, the leaking point being clamped in two and ligated in one. Constitutional effects from the lymphatic discharge was seen in three cases. Only one death is recorded. The value of packing in the treatment of these wounds is unquestionable but it must be accurate and firm. After operation the nourishment should consist solely of proteids and all fat should be avoided, thus reducing the material passing through the thoracic duct to a minimum. The authors suggest inducing the absorption of fat during operations in the neighborhood of the thoracic duct in order to guard against its injury. Four to six ounces of cream should be given about three hours before operation. In case of injury of the duct it should be sutured with fine silk or catgut if possible. All discharging lymph radicals should be ligated unless they be of considerable size, when the ligation should be delayed until the integrity of the thoracic duct is demonstrated. When suturing is impossible gauze packing should be applied. The head and neck should be kept at rest and morphine used if necessary. [F. T. S.]

4.—Leon L. Solomon treats of the therapeutic value of alcohol, and goes over the ground emphasized by others who advocate its use in medicine. He emphasizes the point that alcohol must be in a state of dilution before it can be absorbed. He concludes that by using it in its

proper therapeutic application, the utmost discriminating judgment and extraordinary care are necessary. [T. L. C.]

6.—Terrett gives a summary of the literature of medullary narcosis as applied to general surgical procedure without adding anything especially new. [F. T. S.]

9.—Robert Willson discusses the practical and scientific value of the blood examination to the medical man and surgeon. The article is to some extent a reply to Dr. John B. Deaver's recent contribution on this subject to the Philadelphia Medical Journal. [T. L. C.]

VRATCH.

June 9, 1901. (XXII, No. 23.)

1. From Clinical Lectures. PH. K. GEISLER.
2. A New Modification of the Bandage for Fracture of the Clavicle. M. G. TCHERNIACHOVSKI.
3. A Case of Gaseous Sub-diaphragmatic Abscess (Pyopneumothorax subphrenicus, Abscès gazeux sous-diaphragmatique). N. D. STRASZESKO.
4. The Treatment of Ulcers by Caution. G. I. A. TARABRIN.
5. Abas-Tuman as a Climatic Station, from the Standpoint of the Mode of Life. P. L. ABRAAM.

1.—Geisler reports in one of his lectures, delivered before the students of the Military Medical Academy on a case of primary malignant disease of the left lung, in a man 43 years old, presenting obscure thoracic symptoms. The differential diagnosis was to be made between aneurysm of the aorta, pulmonary tuberculosis, actinomycosis, pleurisy, syphilis, malignant disease and, possibly, echinococcus. A careful analysis of the symptoms led the author to the conclusion that the case was probably one of primary malignant disease of the left lung. The patient died, and the autopsy revealed a lympho-sarcoma of the left lung, with metastasis into the lymphatics of the anterior mediastinum and the liver, tubercular foci in both lungs, pleuritic adhesions, emphysema and bronchiectasis. [A. R.]

2.—The description of the new bandage can be best understood by referring to the illustrations which accompany the original paper. [A. R.]

3.—Straszsko reports a case of subdiaphragmatic abscess in a man 38 years old. The patient was loading timber, when he suddenly experienced a sharp pain in the right half of the abdomen. This was followed by nausea and vomiting and a gradual development of a swelling in the epigastric region. Percussion over the swelling elicited a mixed tympanitic and dull sound, indicating the presence of gas and fluid. By means of a hypodermic syringe a little of the fluid was removed at the seventh intercostal space, and was found to be thick, ill-smelling pus. A bacteriological examination revealed the presence of streptococcus and a bacillus belonging to the colon group. An operation was performed, but the man died from catarrhal pneumonia and exhaustion. The autopsy showed no perforations of either stomach or intestines which could account for the formation of the abscess. The supposition is made that, under the strain of lifting heavy timber, a hemorrhage took place between the liver and the diaphragm, followed by the invasion of the streptococci and colon bacillus, which were the factors in the formation of the abscess and the production of gas. [A. R.]

4.—Tarabrin recommends the following method of treating ulcers: A Paquelin cautery is heated to redness and the point of the cautery kept at a distance of 5 to 6 cm. from the ulcer. If no pain is experienced the distance is shortened to 3 or 2 cm. Having found the distance which causes the least pain, the cautery is applied for two or three minutes. The ulcer is cleansed before each sitting, and covered with cotton and any dusting powder after it. The treatment is repeated every day or every other day. The author employed this method in 11 cases of soft chancre, 4 of bubo, 2 of chronic ulcer and 1 of indolent ulcer, with the following results: One case of chancre was cured after 2 sittings, 2 after 3, 4 after 4, and 4 after 5; 1 case of bubo was cured after 9 sittings, 1 after 10, 1 after 12 and 1 after 15; 1 case of chronic ulcer was cured after 11 sittings and the other after 16. An indolent ulcer of fourteen months' standing was cured after 19 sittings. The suggestion is made that this method may also prove useful in the treatment of lupus, rectal fistula and any other forms of ulceration. [A. R.]

Society Reports.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fiftieth Annual Meeting Held at Philadelphia, September 24-25, 26th, 1901.

FIRST DAY.

The Society convened at Horticultural Hall and was called to order at 9.30 A. M. by the President, Dr. Thomas E. Davis, of Pittsburg. After a short address Dr. Davis called upon the Reverend Henry C. McCook, D. D., who made the invocation. The register of delegates was then presented by the secretary, Dr. George Erety Shoemaker, President of the Philadelphia County Medical Society, next welcomed the organization to Philadelphia, followed by Mayor Ashbridge of Philadelphia who welcomed the delegates to the city. The morning session was devoted to the report of committees, and the presentation of resolutions deploring the death of President McKinley, and containing a condemnation of anarchistic doctrines, the resolutions being adopted by a rising vote. The Secretary's report showed that the present membership had increased 110 during the year. The State Board of Medical Examiners deplored the illiteracy which existed among candidates for licenses to practise medicine. The Committee on Pharmacy recommended resolutions against furnishing medical attendance and free medicine to many patients who are well able to pay for the same.

Afternoon Session.

The first paper read in the afternoon session was the *Address in Otology*, by Dr. E. U. Buckman, of Wilkesbarre, Pa., who after reviewing some of the progress that had been made in aural surgery, referred especially to the performance of incudectomy in progressive failure of hearing. Regarding mastoiditis he believes that abortive treatment usually fails. The mastoid cells are more or less involved in middle ear disease; but whether the mastoid is involved or not operation should be prompt and complete, even if there is apparently but little involvement of the mastoid cells, the danger with operation then becoming practically nil. The treatment of mastoid disease is now one of the most satisfactory procedures in otology. Speaking of the symptom of tinnitus aurium, Dr. Buckman's observations show that the patients frequently complain more of noises than of deafness. He has not been able to definitely determine the cause of this symptom either from literature or from personal observation. In many cases there are strictures, sometimes of the eustachian tube with the consequent prevention of the ventilation of the ear, and the interference with free vibration. The treatment has been the introduction of bougies and artificial ventilation by means of inflation, but the author has always feared that the bougies would break off, and furthermore they do not cure the strictures. He has found massage of use in his cases, but he emphasizes that it must be kept up for some time. He has employed electricity, especially in obstructive cases resisting treatment, having employed Kennedy's method for a period of four months. On account of this brief period of observation absolute conclusions have not yet been drawn by him, but he believes that Kennedy's claims are not extravagant. The syringe, a most useful appliance in the treatment of ear disease, is very valuable, when used in suitable cases.

Some Aural Complications of Influenza was the subject of the paper by Dr. S. MacCuen Smith, of Philadelphia. After a review of the epidemic and pandemic invasions of influenza, the author stated that the disease is not so much feared per se as are its local complications. He believes it hard to draw a clinical picture of the changes caused in the upper passages, with the exception of one condition, namely, hemorrhagic otitis, supposed by many to be the chief symptom of influenzal otitis. There is no doubt that this condition occurs in these regions as in other tracts, notably, the gastrointestinal, and the genitourinary passages. After discussing the quickness and virulence of this form of complication the following symptoms are mentioned: Severe myringitis, hemorrhagic

in character, with bluish extravasations that tend to coalesce, and which as Politzer states, also tend to collapse and discharge a serosanguinous fluid before rupture. In many cases there is mastoid involvement, and an unusual large number of cases require operation. The pain is usually alleviated in ordinary cases when the fluid is evacuated. But in influenzal otitis the pain continues, and one should be on his guard for lateral sinus thrombosis, intracranial and extracranial abscesses, and meningitis. The demonstration of the exciting organism is important, but in a short time a mixed infection results by the invasion of staphylococci and streptococci, which supplant the germ of influenza. It is a mistake to determine the virulence of such conditions by the odor or chronicity of the discharge, for nonpathogenic cases may retain an odor; hence the value of microscopical examination. Of 23 cases reported by the author 9 were distinctly hemorrhagic; in 11 the tympanic membrane ruptured spontaneously in 42 hours with a continuance of the fever and mastoiditis; in 6 the membrane was freely incised before the time of spontaneous rupture, relieving pain and decreasing temperature; meningitis was present in 2 cases before operation, and one case suffered severely from otitis before rupture. Regarding the treatment Dr. Smith called attention to prophylaxis which is familiar to all. He advocates as treatment absolute rest in bed, properly conducted diuresis, mild and restricted diet, a two to three day fast sometimes doing more good than all other procedures together. For the influenzal earache the instillation of a hot boric acid solution will do no harm, and may even be palliative, but as a rule hot drops do very little good; when they do prove efficacious the good results are to be attributed more to the influence of the heat than to medication. (This paper will appear later in the Philadelphia Medical Journal.)

Dr. Charles H. Burnett in discussing Dr. Smith's paper stated that he had never seen any symptom in influenzal involvement which he had not seen in other cases of mastoiditis, and whatever treatment is of use in these cases is also of use in the condition under discussion. He called attention to the fact that in measles there are also swelling and hemorrhagic spots, and he did not see how there was anything specific in influenza as an exciting factor of middle ear disease.

Incudectomy in the Treatment of Progressive Hardness of Hearing, Tinnitus Aurium and Ear Vertigo, by Dr. Charles H. Burnett, of Philadelphia. The speaker believed that progressive hardness of hearing was the result of a trophoneurosis, and not a purely catarrhal process, notwithstanding that it cannot be denied that one does sometimes meet catarrhal progressive hardness of hearing. In the cases under discussion the tympanic membrane is usually found more retracted than in ordinary changes, such as for instance the hypertrophic ones. In describing attacks of ear vertigo, which in the majority of cases depend upon a chronic sclerotic otitis, the author stated that they may be monolateral, although both sides may be affected. He calls attention to the differential diagnosis between ear vertigo and epilepsy. The sudden vertigo and tinnitus aurium which may last for a few minutes to a half-hour, causing the patient to take hold of some object or to sit down, usually without vomiting and nausea at the first attack, and which may result later in collapse, but without loss of consciousness, are important diagnostic points. The patient reels toward the affected side, and if both sides are affected the patient cannot walk and his condition is frequently confounded with alcoholism. He calls attention to the employment of the term "Meniere's symptom" and not "Menier's disease" to this symptom-complex. The first attack is usually light, and attributed to gastric derangement, and treated as such. The second seizure may not come for a short time, but then they increase in frequency; and still the true cause may be overlooked. The surgeon should be on his guard to overcome the retractive power of the tensor tympani, as surgical interruption in these cases often arrests the progressive hardness of hearing.

A Few Reasons for Early Operation in Acute Mastoiditis, by Dr. Wm. H. Dudley, of Easton, Pa. The author of this paper believes that the medical profession as a whole has not yet seemed to grasp, that acute mastoiditis is dangerous unless operated on early, and quoted a case of mastoiditis followed by meningitis, which was attributed by the author as being directly due to delay in operative inter-

ference. The various symptoms and indications for operation were discussed. In discussing this paper Dr. A. Randall, of Philadelphia, stated that no one statement will cover the ground regarding operative interference. While several hundred cases may be reported without operation, and another few hundred that had to be operated upon, a hard and fast line, nevertheless, could not be drawn. Many cases are not due to caries of the mastoid, and do not need operation. A great many clear up under proper measures of medication, rest and hygiene. He believes that a serious error will be made if we do not realize that many cases exist, not in the sense that bacteria have penetrated, but that the condition is concurrent with the middle ear affection, and would result fatally even with operation. Dr. Chas. H. Burnett, when asked concerning the diagnostic points that indicate operation, replied that they are pain, pyrexia, and prolapse of the drum membrane.

Some of the Ocular Affections of Childhood Associated with Impaired General Nutrition, by Dr. S. D. Risley, of Philadelphia. Dr. Risley quoted several cases as illustrating the ocular involvement that may be present in affections of childhood associated with impaired general nutrition and derangement of metabolism. One case was that of a child who complained of a blurring of the page while reading, red eyes, and tenderness, and in whom a high hypermetropic astigmatism was present. After correction of the refractive error, the child returned with petit chorea. Examination showed that the refractive error had now changed from a hypermetropic astigmatism to a myopic astigmatism; the disks were overcapillary, and their edges indistinct on account of hazy retinal fibers; there were areas of absorption in the fundus, and granular changes in the macula and between the macula and the disk; the tonsils were hypertrophied; the turbinates were boggy; the urine was high colored, and of a specific gravity of 1028, but without sugar; there was intermittent albuminuria. Under a strict hygienic regime the eyes improved, and the eye changes gradually disappeared, all that was left being the absorption signs. The other case was that of a girl of 11 years of age with acne, dry and yellowish white hair, and a listless and apathetic manner. The turbinates were boggy. There was photophobia, the caruncles were swollen, the retrotarsal folds thickened, and both the bulbar and palpebral conjunctivae were congested. The vision was 6/12. Ophthalmoscopic examination showed a swelling of both nerves, the edges of the disks being hazy, the veins large and dark, and areas of pigment absorption, especially between the nerves and the macula. There was a low hypermetropic astigmatism. The visual fields for form were concentrically contracted, and the color fields reversed as in hysteria. Small quantities of albumin were found in the urine. Under a general treatment consisting of tonics and alteratives the general condition gradually improved, the reversal of the color fields increasing, but at no time reaching the normal. At 12 years of age a scanty menstruation occurred, causing an exacerbation of the ocular symptoms at each menstrual period. The hypermetropic astigmatism now changed to a myopic astigmatism. Dr. Risley believed that much unnecessary punishment is inflicted in children with apparent ungovernable tempers and allied conditions, on account of overlooking such manifestations. Each of his cases were characterized by symptoms of faulty metabolism such as headache, general malaise, precarious appetite, variable temper and the asthenic symptoms. He believes that the stretching of the eyeball would not have occurred as readily in the absence of the faulty metabolism.

Gumma of the Ciliary Body.—By Dr. Edwin Stieren of Pittsburgh, Pa. is of the opinion that syphilitic involvement of the deeper ocular structures, especially in the acquired form usually calls for a guarded prognosis. He reports the case of a woman aged 20, with a negative family history, but in whom when first seen a diagnosis of tertiary syphilis was made. The patient later presented herself with a deeply seated and spreading ulcer involving the cartilaginous septum of the nose and the upper lip. In spite of large and rapidly ascending doses of potassium iodide ocular involvement set in one week later, consisting in extreme photophobia, marked ciliary injection, discoloration of the iris, cloudy aqueous humor, followed by extensive leukocyte hyphema, and a small pupil which was inactive. The usual treatment for iritis, consisting of hot fomentations, the instillation of atropine solution, large

doses of potassium iodide, and $\frac{1}{4}$ gr. calomel every hour, was instituted. A diagnosis of gumma of the ciliary body was made later, the tumor being of a purplish color, symmetrical in outline, and intensely painful on the slightest pressure. The pain became more acute and constant, ciliary injection more intense, and vision destroyed up to light perception. The cornea soon became hazy, preventing even a fundus reflex from being observed. Under extremely large doses of potassium iodide a paralysis of the right external rectus muscle, which had existed, now disappeared, resulting in a perfect excursion of the eyeball in all directions. All that was finally left of the gumma was a slaty discoloration of the sclera, the misplacement of the pupil, and some fine deposits at the periphery of the anterior capsule of the lens. Under proper refraction fairly good vision was obtained. He believes that such cases do not call for a hopeless prognosis, even if vision is considerably reduced, potassium iodide even doing good where a disorganization of the vitreous has occurred; but there is no accurate dosage of the drug in such cases, as it should be pushed until visible signs of improvement are obtained.

Contagious Disease of the Eye and Their Treatment.—By Dr. S. Lewis Ziegler, of Philadelphia. The speaker reviewed the treatment of pink eye, trachoma, ophthalmia neonatorum and other contagious disease of the eye. He believes that it is safe to regard every discharge from the eyeball as contagious and treat it as such.

Address in Mental Disorders. Paresis from the Standpoint of the General Practitioner, by Dr. Robert H. Chase, of Philadelphia. The speaker stated it is a mistaken idea of the family physician to believe that only the specialist is to observe and treat this treacherous affection, which is really first encountered by the family physician himself, it being a mental breakdown of middle life. Early treatment is necessary to stay its progress, and its complexity may be appreciated when we consider that throughout its course there is no mental function which is exempt from its ravages. The dominating symptoms may be either cerebral, bulbar, or spinal in character, but many observers are of the opinion that the cerebral cortex is that portion which is primarily involved. The literature on the subject, and especially regarding prognosis, was freely consulted. He called attention to the symptoms which are of the greatest value, namely, the tremor, the uncertain gait, the pupillary phenomena, the weakened intellectuality, and the delusions of grandeur. He called attention that during the initial stages of the affection there is not a uniform progression of the symptoms, as is also the case in many other neuritic affections. The different forms that the disease may assume are of importance, as they may be dementive, expansive or depressive. The symptoms were then more thoroughly discussed, as well as the physical signs, the latter being indefinite, as they may indicate neurasthenia with or without hysteria, or cerebral asthenia. The author quoted the exhaustive therapeutic measures that have been instituted against this affection. The treatment in the early stages must be directed toward the causes and their removal. Cofion, alcohol, worry and strain, should be avoided, and both physical and mental work reduced. Hygienic principles should be rigidly observed. The diet and the bowels should be looked after, and in selective cases hydrotherapy and electricity may be of avail. The specific manners of treatment were then individually discussed. Especial attention was called to the frequent futility of prolonged travel with its attendant inconveniences and excitement, although a change of surroundings is indicated; should the latter interfere with salary, etc., a reduction in the amount of work is imperative. The speaker exhorted the practitioner to keep in mind his duties as a conservator of public health and his duty to take part in the eradication of hereditary tendencies. While this is more imperative in other forms of insanity, paresis nevertheless leaves its stamp on succeeding generations with unremitting force. (This address will be published later in the Philadelphia Medical Journal.)

Two Cases of Progressive Muscular Dystrophy in Brother and Sister.—By Dr. A. A. Eshner, of Philadelphia. The first case reported was that of a boy aged 14, presenting the typical picture of progressive muscular dystrophy of the hypertrophic variety. The family history was particularly interesting, as a sister of 32 was also afflicted with the same disease, and in a more advanced stage. The

father, aged 70, when a boy, had fallen and struck his head, requiring trephining. The father had three sisters, all of whom were living, and weighed between 225 and 300 pounds each, and a fourth sister, who is dead, had weighed 250 pounds. Nearly all of the 15 children had been inordinately large. Of 20 cases reported by the author, the disease existed in only two in the same family. He quoted the cases of Gowers where, among 118 cases, the affection involved 39 families, Gowers even quoting a case where 8 brothers were affected. The disease first appears in the first decade of life; in the author's 20 cases it was present in 2 at birth, in 8 cases during the first five years, and in 10 cases during the second 5 years. It is more prevalent in males, 16 of the author's cases being males. It is rare in the negro, if it occurs at all. The essential lesion consists of a degenerative change in the muscle fibers with more or less hyperplasia. The etiology is obscure. He quotes a case where in addition to the muscular changes there were changes in the anterior cornua of the spinal cord. Regarding treatment he has found thyroid and thymus extracts of little or no value. Massage may be tried. When deformity occurs tenotomy may be justifiable. Intelligently conducted exercise is of value. (This paper will be published later in the *Philadelphia Medical Journal*).

The Use of Hyoscine in the Treatment of Chorea.—By Dr. W. Brown Ewing, of Pittsburg, Pa. In the absence of the author this paper was read by title.

Prognosis in Neuritis.—By Dr. F. Savary Pearce, of Philadelphia. Dr. Pearce believes that there are signs and symptoms of neuritis which are indicative of its probable ultimate result. Pressure neuritis is to be distinguished from the occupation neuroses. Pressure neuritis per se will, as a rule, recover with massage and galvanism within a few months, but its liability to relapse should be considered and the patient so informed. Septic cases are usually favorable after eradication of the primary seat of infection. He calls attention to suppurative cases of Pott's disease, which are seldom followed by complete paresthesia. Stablemen seem to be especially liable to neuritis. The prognosis of alcoholic neuritides, and also those caused by metallic poisons depends upon the frequency and gravity of successive attacks. Diphtheritic neuritis is apt to be fulminant, and according to the author is worse in cases that have been treated with antitoxin. Chronic gastrointestinal disturbances are liable to cause neuralgia, which is often the forerunner of neuritis. The lithemic, rheumatic and gouty diatheses give rise to local neuritis, due to the imperfectly oxidized aggregation of by-products. The author has had more success in treating rheumatic neuritis with drugs than any other form. Regarding neuromata, he reports a case of chronic sciatica due to a neuroma involving the plantar nerves, there being no pain, however, in the tumor itself. Gonorrheal neuritis is usually local, and, according to the experience of the author, is confined to the anterior tibial region.

The meeting then adjourned, and was followed in the evening by the annual address, which was delivered by Dr. Thomas D. Davis, president of the Medical Society of the State of Pennsylvania, who gave a historical review of the pioneer physicians of Western Pennsylvania, among them being Gen. Hugh Mercer, Arthur St. Clair, Edward Hand and William Erwin, of the Revolutionary Army. A reception by the Philadelphia County Medical Society of the State of Pennsylvania, guests and visiting ladies, in the foyer of Horticultural Hall, then closed the programme of the day.

(To be continued.)

A Massive Carcinoma of the Liver.—Landrieux reported a case of massive cancer of the liver in a woman of 66, who died two days after admission to the hospital. 5 months ago ascites first developed. Jaundice appeared four days before admission. She was emaciated, slightly jaundiced, with marked edema of the legs and ascites. There was acholuria, and the bowel movements were clay colored. Landrieux had diagnosed gastric cancer with metastasis to the liver. She died in coma. The autopsy showed a massive primary carcinoma of the liver. The gall-bladder was white in color, and no bile existed. There was absolute acholia, the main symptom of massive carcinoma of the liver. (*Bulletin Medical*, June 12, 1901, No. 46). [M. O.]

TWENTY-NINTH ANNUAL SESSION OF THE AMERICAN HEALTH ASSOCIATION.

The American Public Health Association held its 29th Annual Session in the Armory of the 71st Regiment, Buffalo, N. Y., September 16-20, the principal topics for discussion being tuberculosis, yellow fever and the re-establishment of the army canteen. An appropriate memorial meeting, upon the death of our beloved President, was also held, at which fitting resolutions and addresses were presented.

"Report of Committee on Animal Diseases and Animal Food." Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, Washington, D. C. The doctor referred to the extent and rapid increase of bovine tuberculosis in various countries during recent years, and that this fact should cause alarm, irrespective of the question of direct communicability of tuberculosis from animal to man. The consumption of food thus infected has always been considered harmful. Even if Koch's theory were correct, and even if it were admitted that it is not essential to adopt measures against this disease in cattle in its relation to infecting human beings, there is nothing plausible in the belief that the products of these diseased animals are harmless and should be allowed to be consumed. This should not permit of any influence towards the non-condemnation of infected meat, but it does seem as if already Koch's theory has been allowed to stand as an excuse for the dissemination of tuberculous, diseased products. Dr. Koch had made two assumptions: 1. That human tuberculosis differs from bovine tuberculosis and cannot be communicated to cattle. 2. Mankind is insusceptible to bovine tuberculosis. Dr. Salmon does not give to Dr. Koch the credit of any originality in his hypotheses. "The Bureau of Animal Industry has distributed hundreds of thousands of doses of tuberculin made from human bacilli, and this tuberculin has been used by State authorities in various parts of the United States for diagnosing the disease of cattle, and has been found extremely reliable and satisfactory for this purpose. There is no contagion which affects so many and such widely separated species of animals as does the bovine bacillus and which is not at the same time pathogenic for man. Bovine tuberculosis is communicable to horses, cattle, sheep, swine, dogs, cats, guinea pigs and rabbits. This is a very extensive range of pathogenic power. What other pathogenic germ is there which is virulent for so many and such widely separated species and which is not virulent also for man? Surely a germ which is pathogenic for so many species of animals as is the bovine tubercle bacillus should be considered as a germ dangerous to man until positive evidence has proved its innocence." The Doctor then takes up a further discussion of the subject under four different heads: 1. Accidental inoculations with bovine bacilli. 2. Clinical evidence of individuals infected with milk. 3. Statistics of intestinal tuberculosis. 4. Results of post-mortem examinations.

Dr. Jesus Chico, Jalisco, Mexico, spoke upon the effect on the internal organs of eating tuberculous meat, and in referring to the transmissibility of the disease from infected animals, cited several cases. A healthy stage driver and his wife, who were both previously healthy, had eaten of the lungs of a tuberculous cow. In a little more than a year out of a family of seven, five had the disease.

"Tuberculosis" was the subject of a paper by Dr. Felix Formento, (New Orleans). The Doctor prefaced his paper by stating that while he did not for a moment deny the importance of bacteriology, yet the study of man in health or disease is often sacrificed to that of the infinitesimal microbe. He believed that the discovery of the bacillus of tuberculosis was one of the events of modern civilization, it has demonstrated that the disease is communicable from man to man and from animals to man; it has shown that

the sputum of consumptives, loaded with tuberculous bacilli, is the great carrier of infection, and that one of the first steps for the eradication of the disease is the destruction of the sputum and everything that may have been contaminated by its contact. The author asked whether the profession is not going too far in preaching the erroneous doctrine that heredity plays no part whatsoever in this transmission. The neglected factor is: Heredity or predisposition or, in other words, the soil necessary for the development of the germ. Heredity does play a powerful part and this has been demonstrated already, for numerous instances could be cited showing the influence of heredity. Some cases of direct transmission of tuberculous to the fetus in the utero have been observed. Who has not known families in which tuberculosis was plainly hereditary for several generations? Dr. Fannig, of Norwich, recently declared at the London meeting that 52% of all cases treated in private sanatoria in England descended from tuberculous parents. The air swarms with microbes; those predisposed alone succumb. Whether heredity transmits directly the disease or furnishes a soil which renders the subject most liable to the least exposure, the result is the same. In both cases tuberculosis should be considered as hereditary. In order that the seed may properly develop, two conditions are required—a live, active seed and a proper soil. The same is true of a diseased germ, whether the proper soil be found in the living organism or in the special conditions of a locality. Predisposition is not always hereditary. It may be acquired. All debilitating causes, unhealthy trades and occupations, want of pure air and sunlight and insufficient alimentation affect nutrition and predispose the strongest men and children alike to the ravages of tuberculosis. Low, damp, dark, badly ventilated houses render persons living in them more liable to contract the disease by lowering the system, by diminishing its power of resistance; they are, at the same time, a most favorable *nidas* for the development of the bacillus. The abuse of alcoholic drinks is a powerful predisposing cause to the disease. The Doctor strongly advocated as the means of exterminating the disease the destruction of the sputum, the disinfection of rooms occupied by consumptives, and likewise a most rigid inspection of the milk and meat, in spite of the most recent claims of Koch. In this connection it may be said that the theory advanced by Koch, that bovine tuberculosis is different from human tuberculosis, so much so that it cannot be transmitted from animal to man, has not been accepted by the scientific world. The author urged that international measures be adopted to disinfect steamers, railroad trains, hotels, etc., and the enforcement of all known laws of public and private hygiene. In order to carry out all necessary prophylactic measures, the first condition is a law or ordinance requiring that all case of tuberculosis be reported to the proper authorities.

Dr. Frederick Montizambert, of Canada, was then called upon to present his report of the International Congress on Tuberculosis which convened in London recently. He very interestingly recited incidents in the proceedings, which are so well-known to the readers of this journal, through its extensive reports of the Congress, that they do not bear repetition.

Dr. E. A. de Schweinitz, of Washington, was called upon to open the discussion. He referred to the excellent paper of Dr. Salmon, which so thoroughly covered the subject that there was very little left for him to say. In speaking of tuberculin, he said that tuberculin—solution of the products of the tuberculous germ—which will produce characteristic reactions in tuberculous cattle, as well as in men who are tuberculous, can be made and is made, to a very large extent, from human germs, which is perfectly innocuous when injected into the animal body.

Dr. P. H. Bryce reminded his hearers that through the insufficiency of the legislation in the matter of governing the milk supplies of our cities, we are constantly facing an increase in tuberculosis in children, and also the pres-

ent danger of the transmission of such diseases as scarlet fever, diphtheria and typhoid through infected milk from cattle.

Prof. Brewer, suggested whether there was not a change going on in the physiological or anatomical structure—if the bacillus can have any anatomy—of the culture, while its chemical functions remain essentially the same. He claimed that our knowledge of the chemical products of bacteria is wonderfully meagre compared with its importance, and that our bacteriologists study bacteria hardly from the chemical side.

Dr. A. C. Abbott said that during the last few years the conceptions of the bacteriologist and the lines of work followed by him have been fundamentally lines concerning the important question of variation, and particularly lines of work in which chemistry has played an important part.

Dr. Sehriener said that perhaps while we do not all agree with that great light on tuberculosis—Dr. Koch—still what he did say may result in great good, for the very reason that we will continue to investigate this subject more thoroughly and more effectively than we would have done if he had not delivered that address and made such startling statements to the world. Therefore, let us continue an investigation of this great subject.

Dr. Chapman thought that we were teaching too much that tuberculosis was non-hereditary. He believed that there is a tendency in every one who comes of a tuberculous family to heredity and tubercular taint.

Dr. Gibson said that he was not prepared to accept the statement, that he had seen enough to satisfy him that human and bovine tuberculosis are identical, or virtually so, and that they are transmissible.

Dr. Durgin said, in speaking of the care of the tuberculous subject, that he believed in placing and holding him intact from the rest, in order to prevent spreading of the element of infection, and that there was no reason why they should not be isolated the same as smallpox and scarlet fever.

Dr. Wm. Foster Smith, Executive of the Superior Board of Health, of Puerto Rico, said that neither the Board nor the physicians of Puerto Rico recognized the claims of Dr. Koch upon the subject of the non-communicability of bovine tuberculosis to human beings. He could enumerate many instances of the communicability of bovine tuberculosis to man. The prevalent form of the disease in that island is pulmonary and intestinal. Before Gov. Allen's departure he had appropriated a sum of money for the Board of Health to use in inspecting cattle.

Dr. Lindsley could not conceive how it would be possible for tuberculosis in the lungs to be produced by the use of food, unless it first appeared as an intestinal form. He made the remarkable statement that tuberculosis, during the last ten or twenty years, has diminished in Massachusetts, Rhode Island and Connecticut; that it is diminishing in England, and, in his opinion, throughout the world.

Dr. Leonard was of the opinion that the foundations of tuberculosis were laid in infancy in the nursery, in the sleeping room and in the school-house to a far greater extent than it is possible to imagine. It is not milk and meat alone that give tuberculosis to the boy or girl or young man or woman; the absence of vitality on the part of the man and woman, the boy and girl is what renders them susceptible to the disease.

Dr. Moser deplored the stooping posture of school children with hollow chests and the standing on one foot, usually the right, thereby shortening the space between the hip and shoulder. Michigan, she said, was full of tuberculosis. Damp cellars and houses without cellars are contributory cause to the disease. In Norway, where the air is so dry and crisp that the tubercular germs could not exist, the inhabitants are extensively afflicted with tuberculosis, because the occupants of the houses permit no ventilation.

The Executive Committee recommended the adoption of the following resolution:

"Resolved that this body deplores any action in curtailing the operation of army canteens or post-exchanges and in the interest of general and military sanitation and temperance recommend their establishment as formerly existing in the United States." (Carried.)

Capt. Munson, U. S. Army, was called upon to speak of the good effects of the canteen system.

Quoting from official figures, he said that drunkenness and alcoholism had materially decreased. Delirium tremens and insanity had likewise decreased. The deposits of soldiers' savings had increased, while desertions had decreased, convictions by court martial for drunkenness and causes arising therefrom had diminished.

Dr. Ghon spoke enthusiastically on the subject and hoped the Association would pass the resolution.

(The resolution was unanimously carried, with applause.)

The following resolution was recommended by the Executive Committee, and, upon vote, carried:

RESOLVED, that notwithstanding the advances of sanitary science the mortality from tuberculosis continues to be appalling, it has been demonstrated by the application of proper measures this mortality may be diminished rapidly and to a great degree;

THEREFORE, every effort should be made by sanitarians to carry into effect all reasonable methods which have been shown by experience and research to be efficacious towards this end;

RESOLVED, that the increase of tuberculosis in cattle and swine, as shown by the investigations of recent years and by late inspection-statistics, is a serious matter from a commercial, as well as a sanitary point of view and calls for more systematic attention of those responsible for the integrity of the food-supply and for the protection of the public health;

(To be Continued.)

CANADIAN MEDICAL ASSOCIATION.

Reported by

DR. GEORGE ELLIOTT.

Our Special Correspondent.

(Continued from page 478.)

A Few Notes on the Treatment of Typhoid Fever.—Dr. J. L. Bray of Chatham discussed this subject under medicinal, dietetic and hygienic headings. The first he thought might be eliminated, except in cases where complications arise, and he thought a certain amount of medicinal treatment useful during the initiary stages. He was in the habit of employing calomel. Tympanites could be avoided to a great extent by a proper diet. In feeding he now gives very little milk, but that little always peptonized. He believes in making the patient drink two or three quarts of pure water in the twenty-four hours. Albumen water with sugar may be given from the first, after the first two weeks he gives liquid peptonoids, or some of the numerous preparations of beef, jellies, mutton broth or a soft boiled egg.

As regards the hygienic treatment, the bedding and the night clothes should be changed daily. The room should be kept thoroughly ventilated, admitting plenty of fresh air and sunshine. The patient should be sponged frequently with tepid water, and you get just as good results from tepid water as from sponging with very cold water or the cold bath, and it is not so distasteful to most patients. In hospital practice, Dr. Bray used the electric fan after using the tepid water. He has found this plan very satisfactory, especially in young and sensitive children.

Dr. Russell Thomas discussed the paper and said that he had found the ice-cup beneficial, that it did not disturb the patient and had a decided effect in reducing the temperature.

THIRD DAY—AFTERNOON SESSION.

The Address in Surgery.—This was delivered by Dr. O. M. Jones, Victoria, B. C., and it proved a very able, masterful effort. He opened his address with a reference to surgical disease in Western Canada as compared with those in the East, and stated that he had often found Western sufferers more impatient which often demanded severer methods. He illustrated this by citing a humorous incident. A lodging-house keeper, on learning that one of her lodgers was to have an operation performed on a Wednesday, wrote to the surgeon asking that it might be postponed until Friday, as her daughter was to be married on Thursday, and they didn't want the corpse home until after the wedding. The address dealt mainly with surgery of the stomach and related the deductions Dr. Jones has arrived at from his own experience of twenty-six cases. His first operation upon the stomach was in 1893,—a case of pyloric obstruction in a wily woman. Senn's plates were used. This patient died in three days, the result not being encouraging; Dr. Jones attributed the failure to the use of catgut instead of silk sutures. The introduction of Senn's plates and the Murphy button gave a great interest to intestinal surgery, as before 1899 operations on the intestines were rare. He then discussed the preparation for operation and first spoke of gastrotomy, an operation which he had performed five times for ulcer of the esophagus. In four of the cases the operation was performed with very excellent results. He then discussed the cases in which pylorotomy is indicated and said that rapidity of operation in these cases is the very important factor; prolonged operation has generally proved fatal. A suitable case should be cancer of the pylorus. The time occupied in performing the operation is not great. In one of his cases he performed posterior gastro-enterostomy. This patient still lives and it is now nearly three years since the operation. Gastro-enterostomy was next discussed. This Dr. Jones considered the most important and most interesting part of the whole subject. It is the most frequent and the most useful and the simplest of all the operations performed upon the stomach. It is performed for pyloric cancer, ulcer and stenosis and for gastric ulcer, dilatation etc. Nothing can be simpler than this operation performed with the Murphy button. Dr. Jones has used it in fourteen cases and in only one case was there any trouble. Of two of his cases, which died from shock, he examined one and found perfect union. He has found that the passage of the button has taken from fourteen days to four months; and in several cases he has not been able to obtain the button. A recital of several cases followed which proved very interesting. Dr. Jones closed his paper with a few words on perforating duodenal ulcer.

Dr. F. J. Shepherd of Montreal, proposed a vote of thanks, Dr. A. A. McDonald of Toronto, seconded this; Sir James Grant of Ottawa, supported the motion which was unanimously passed by the Association.

A Surgical Procedure for the Relief of Ovarian-Tension Pain.—Dr. Henry Howitt, Guelph, Ontario, read this paper. Is not pain frequently, if not usually, caused by tension on some nerve filament? In Dr. Howitt's opinion the answer should be in the affirmative. The operation Dr. Howitt employs is quite simple. The ovary is exposed and then a number of cross-sections are quickly made through the tense capsules in such a manner as to divide it. Then the larger Graafian follicles are opened. These are merely touched with carbolic acid. If the capsules are thickened a portion should be removed. Hemorrhage has never been troublesome. Adhesions give rise to no complications. Dr. Howitt recited the histories of two or three cases in support of the operation.

Dr. Laphorn Smith stated he had never heard of this operation before and considered that it was original with Dr. Hewitt.

(To be continued.)

New Instruments.

A NEW RECTAL FISTULA-KNIFE, TENACULUM,
AND HEMORRHOIDAL CLAMP.

By DWIGHT H. MURRAY, M. D.,

of Syracuse, N. Y.

Proctologist to Woman's and Children's Hospital and Syracuse Free
Dispensary

In the *Philadelphia Medical Journal* of June 22, I noticed a new hemorrhoidal clamp devised by Dr. G. Milton Linthicum, of Baltimore. I wish to endorse this clamp most heartily, as I found the same trouble with other clamps, including Gant's clamp, that Dr. Linthicum did; namely, the imperative use of the thumb-screw to obtain sufficient pressure to hold the tissues, thus prolonging the operation. I also find that the handles are so close together when the clamp is closed on the tissues that it is difficult to close the hand tight enough to maintain a good grip.

On account of such trouble, I devised a clamp which to all practical purposes is about the same as that of Dr. Linthicum. In my clamp I used the main principles of the lock in the parallel-jawed pliers, which are shown very well in the cuts supplied herewith. I have been using this clamp now for considerably more than a year, and am perfectly satisfied with it. The clamp was made for me by Mr. George Curry, of Syracuse. In all other clamps the difference is so manifest that it is not necessary to describe it.

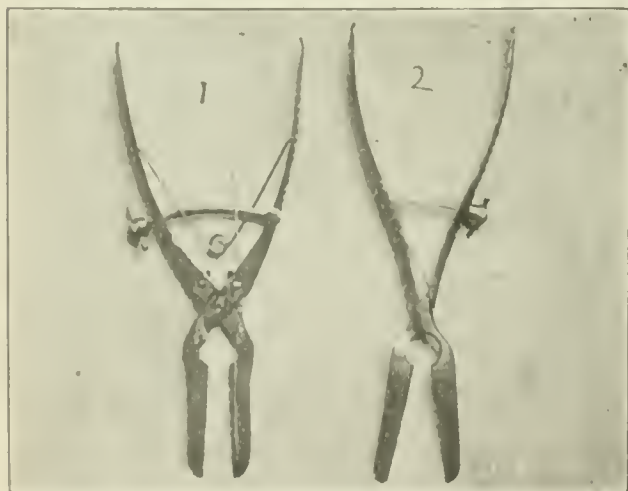


FIGURE 1

Plate I, Fig. 1, shows my clamp; Fig. 2, the Kelsey clamp. Plate II Figs. 1 and 2 A represent the same clamps nearly closed, demonstrating that the fault in Fig. No. 2 A is that the clamp closes at the heel on the tissues while it allows them to slip out at the other end.

Plate II.—I desire at this time to present to the profession a new instrument which I may call a fistula-knife. It is used for the cutting out of all pockets and fistulæ about the rectum which point downward. The advantage of this over having to stop and cut at the point of the director, then split the tissues up, making two motions instead of one as with this instrument, is readily seen.

Fig. 4, in Plate III, is Gant's director for blind internal fistula which I use with my fistula-knife. I wish to commend this instrument as being the best

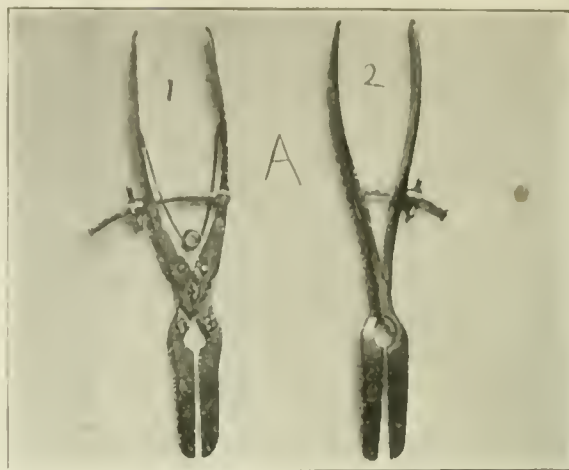


FIGURE 2

for this purpose of anything that I have seen. The use of the fistula-knife shortens the time of operation and has the advantage that the hand of the operator is not in his own light. In my early practice in rectal work, I had much trouble from this source until I began to devise instruments which were bent or offset in such a manner as to throw my hand entirely out of my own light. This is well accomplished in this instrument. Its knife is detachable, and different lengths of knives can be used (Plate III, Fig. 2, or different shapes, as in Plate III, Fig. 3, which has a cutting edge all around and is advantageous for dividing strictures for almost any purpose where a knife may be needed about the rectum.

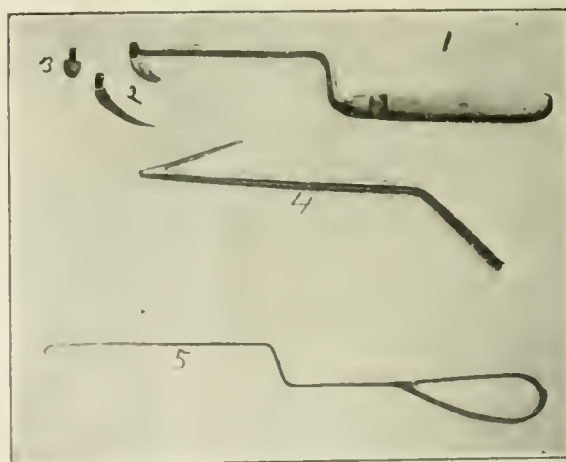


FIGURE 3

Plate III.—I also present, in Plate III, Fig. 5, a new tenaculum embodying the same principles as the fistula-knife handle. Its advantages will be obvious, since they are the same as those mentioned above. I have them made with the ring in the handle like this, so that they can be easily held on one finger while we work with the other fingers. The distance of the offset can be increased or diminished according to the needs of the operator. I also have them made of different lengths from the offset to the hook. These tenacula were made for me by Mr. George Ermold, and the Kny-Scherrer Co., of New York.

Original Articles.

THE TECHNIQUE OF MAJOR AND MINOR AMPUTATIONS.*

By ROBERT H. COWAN, M. D.
of New York.Professor of Operative Surgery, New York School of Clinical Medicine.
Assistant Chief Surgeon, N. & W. R. R.

If I allow myself more latitude than the title of this paper might seem to justify, it is because there are certain points in connection with this subject, of the importance of which I have been so often forcibly reminded that I feel some consideration of them should precede the question of technique. Indeed, I felt that this paper would not only be lacking in interest, but absolutely incomplete were I to confine myself to the mere technique of amputation. My discursiveness will, I fear, very shortly convince you this apologetic explanation is not without reason. I only trust the wisdom of the decision which is responsible for that discursiveness may appeal to you with equal force. At all events, I shall, without further apology, proceed to discuss the subject of amputation, and in order to do this intelligently, it may, I think, be well to divide amputations into two classes.

(1). Amputations on account of acute injury.

(2). Amputations necessitated by some pathological condition.

It should be remembered that the very different conditions surrounding the two classes necessitate, in many respects, entirely different management. In traumatic cases, we have shock and hemorrhage with which to deal. We have had no time to give a purgative, or to have the stomach practically empty. In short, no time to prepare our patient for an operation. In the other class, the case is different. We can, at least, get our patient in the most favorable condition possible, both for the operation, and what is probably as important, for anesthesia.

Amputations on Account of Acute Injury.

Science has, to-day, taught the surgeon that, under proper care, limbs may be saved, which in the past, had been hopelessly sacrificed; and while this is true, while we save limbs, not only after injuries, for which the older surgeons would have deemed amputation unavoidable, but, even after some of a far graver nature than any they had to deal with, I doubt if there ever was an age when as much amputating was done as now. This is, of course, due to the introduction of modern machinery on our railroads and in our factories.

Railroad injuries, particularly, are characterized by features essentially their own. These features are largely due to the force and momentum of the destructive agent, and are very much more marked since the date of higher speed, and heavier rolling stock.

Crushing injuries of every degree, but almost invariably of more or less gravity, are common to-day; and, indeed, constitute by far the greater proportion of our cases. But, even in the graver class of these injuries, a surgeon's first thought should

be—can amputation be avoided? Of course if a limb is literally levered, or vessels and nerves evidently destroyed, there is but one alternative. Under no circumstances should the member be sacrificed until we have thoroughly convinced ourselves that an attempt to save it would be futile. Let us "make haste slowly" about this matter of amputating. Even if we are devoid of conscience, a one-legged or one-armed patient is not a good advertisement at best, and then, there is a medico-legal side that must not be forgotten. There are suit-inspiring attorneys, ever on the scent of personal injuries, and while nine times out of ten, the suit against the surgeon is unjust, it would be decidedly unpleasant to have our patient constitute the one justifiable case. Indeed, in this enlightened age, it is unpardonably bad surgery to deprive a fellow-being of a limb unnecessarily. The zealous gynecologist, who ruthlessly snatches a woman's ovary—he whose surgical instinct leads him to the appendix at the first symptom of pain in the right abdomen—or the enthusiast who remorselessly fixes kidneys which need no fixing—is dealing, to a great extent, with a hidden problem. The case is different with us. Though frequently problematical, we have, in most cases, the privilege of ocular inspection. At all events, our mistakes are far more patent. If the subject of a pelvic or abdominal operation live, error in diagnosis is concealed, but the maimed victim of our handiwork is a walking advertisement of the surgeon's knife. In many cases of injury, particularly those due to railroad accidents, the question of amputating, or of saving the limb, presents a most serious problem. As an illustration, I recall the case of a man to whom I was summoned, who, some ten days previously, had received a mash of the fleshy inner part of the thigh, which had been caught between the deadheads. There was no fracture of bone. The integument was unscathed, and the injury had been deemed trivial. When I saw him, gangrene or mortification had taken place. The femoral artery, and perhaps other vessels, had been destroyed. I have treated several compound dislocations, with fracture, of the ankle joint, and extensive injury to the soft tissues, saving, in each instance, not only a useful limb, but one in which the normal functions seemed almost completely restored. To these may be added injuries involving the shoulder, elbow and wrist joints, in which a like result was obtained. It was impossible for me to say, just after these injuries, whether an amputation was necessary. The extent of the injury to the soft tissues, I believed time would reveal. Hence, a temporary dressing was applied, with the result, the doubtful point in the diagnosis was cleared, and the limbs were saved. Frequently in these injuries, the skin escapes injury, betraying not even a scratch. The bone, too, remains intact, and yet, every underlying structure, save the bone, is completely disorganized. Again, I have seen mashes, where, while the skin was intact, there were multiple fractures of the bone. But as the subsequent history proved, there had been no injury, sufficient to require amputation. Time alone can determine for us the proper course in such cases. It is true, an exploratory incision may help us. Indeed, it may be necessary, not only to aid diagnosis, but if

*Read before the New York School of Clinical Medicine, June 14, 1901.

order to enable us to remove large blood clots, and secure bleeding vessels. About this, though, as a rule; I think it best to temporize. In this connection, I would like to call your attention to the wonderful resistance or resilience the integument frequently exhibits when subjected to pressure. I remember on one occasion, I was present when a man was run over by a heavily loaded box-car, the wheels passing over the upper part of the abdomen. There was but slight abrasion of the skin, though the spinal column was completely severed, and he died in a few minutes. This is but one of many instances where I have had occasion to note this wonderful property of the integument. I have seen numerous cases of mashes of every description and degree of severity, involving injury to the underlying structures, with a practically unhurt integument. This has been especially true of mashes of the arm.

But you will, perhaps, think I am "making haste slowly." This paper is supposed to deal with cases in which amputation has been decided unavoidable. Let me, then, take you where I have often been, out with a wreck-train. An accident has occurred, and several men are injured. Here is one poor fellow whose leg has been run over by the car wheels. The wheels have traversed it obliquely—almost longitudinally—from foot to knee-joint. The various structures are crushed into an almost unrecognizable mass. Incidentally, it may be well to mention here that soiled clothing, axle grease, dirt from the tracks, and, indeed, germ-bearing material of many kinds have been ground into the tissues, and it is a question whether the germs, undoubtedly present, should not be met with active germicidal agents, rather than with simple sterilized water. While this reflection may be a little premature, in a systematic treatment of one subject, it is a question of so much importance, I shall make no apology requiring amputation. The anxious expression, clouded mentality, the pallid and clammy skin, the slow (sometimes rapid) feeble compressible, or almost imperceptible pulse, tell us we have fearful shock with which to deal. The patient is restless, seemingly unable to locate the seat of pain. He begs to be placed, first in one position, then in another. He asks that the limbs be raised, then lowered. He constantly cries for water. There are others to be cared for, but a rapid examination convinces us that their injuries are not so serious. We leave them, for the present, in charge of an assistant. Our first patient needs immediate attention, and our first efforts are directed to relieving shock and restraining hemorrhage, and we defer amputation until there is decided evidence of reaction. Now let us look at the others. The next man has a compound comminuted fracture just above the ankle. The soft tissues are badly mangled; little or no shock. The third man has a terribly swollen arm. The bone is evidently comminuted. There is absolutely no pulse, but, strange to say, the integument is intact. The diagnosis in this case is not absolutely clear. The chances are an amputation will be necessary, but we will give the man the benefit of the doubt. Time may indicate more clearly our

proper course. While we wait, we amputate the leg of the second man—taking care we cut well above all tissue of doubtful vitality. This being done, let us again examine the mashed arm. Complete destruction of muscular tissue, with rupture of the vessels, seems almost certain. But perhaps we err in our diagnosis. There may yet be sufficient blood supply to warrant an attempt to save the limb, while that which has escaped into the tissues, becoming clotted, and thereby mechanically interfering with vessels yet intact, may account for the absence of circulation. We make an exploratory incision, and find nothing but pulped tissue and blood clot. Our only recourse is to amputate. Has our treatment of these three cases been correct? I think so. In the first case, shock was so profound that I am satisfied the additional shock of anesthesia and operation would have killed the patient. Of the other two injuries, that of the man with the mashed arm was treated last because the diagnosis was not quite clear. In the second case, a very slight operation, it could be quickly done, and was obviously required. But, in order to make my position with regard to these injuries more clear, it will be well, at this juncture, to discuss at some length the principles governing amputations done on account of acute trauma.

In every case of severe injury requiring amputation, there are three questions which usually confront the surgeon. They are as follows: The treatment of shock. When to amputate. Where to amputate.

The Treatment of Shock.—In the discussion, following a paper on Shock, which I read before the Fifth Annual Meeting of the New York State Association of Railway Surgeons, Dr. George Chaffee, of Brooklyn, said: "Just what shock is, we do not know." Dr. Estis, in his paper, mentions the psychical element and hemorrhage. We may get profound shock without the loss of a drop of blood, or we may get it from hemorrhage alone, and notwithstanding this idea is very much opposed by some, I am sure, if not the sole factor in its production, hemorrhage, in some cases, at least, plays a very considerable part in maintaining and increasing shock. I may be permitted to quote from my own paper, to which I have referred: "In shock, a systemic disturbance, characterized by general vascular relaxation, stagnation is naturally marked in the abdominal circulation. The feebly supported vessels, readily yielding, become the receptacle for the bulk of the circulating fluid, in consequence of which we have a condition of anemia from hemorrhage into the veins, as decided as though the blood were withdrawn from the body. Should the injury be complicated by external bleeding, this condition is simply aggravated." Shock may be of psychic origin, solely, as in cases of sudden fright. Whatever be its origin, however, *shock is a condition of anemia*. The anemia may be due to external hemorrhage, or to slowness of the venous return, and consequent insufficient supply to the heart. That organ is, in turn, unable to supply the arteries. The anemia is, probably, an effect—the pathological condition, if I may so call it; not an etiological factor in the production of shock. It is not the etiol-

ogy, however, which so much concerns us here. The condition we find is one of acute anemia, and of nervous exhaustion, and our treatment should consist in an effort to stimulate and tone up the depressed nerve centers and restore the circulation, and thereby relieve the anemia of heart and brain. Nitrate of strychnia should be used hypodermically, and with the exception of nitro-glycerine and nitrite of amyl, which on account of the rapidity of their action are valuable, I know of no other drug which proves useful in shock. Whiskey is, for the most part, worse than useless. Its secondary effect is to depress the vital forces, and to lower the temperature. Nor must we forget the inability of the stomach to digest, and the danger of over-loading that organ, producing nausea, and thereby increasing the depression. The intravenous, or intracellular injection of a hot saline solution is one of the most valuable means we possess for combating shock. Possibly the *most valuable*. An important point, and one of which we should not lose sight, is the importance of keeping the patient warm. The hot operating table, now in common use in all thoroughly equipped railway hospitals, is a most excellent thing. An old-fashioned custom was to pack hot water bottles about the patient's extremities. I never quite understood the *rationale* of that treatment. I fancy a hot water bag over the heart would be of more service.

When to Amputate.—In deciding this question, the surgeon must, to a great extent, be governed by the degree of shock, both systemic and local, and here let me say, in my experience, an operation done under profound shock almost invariably results fatally. Where a limb is well-nigh completely severed, and the splintered bone, irritating the torn tissues, may increase and prolong shock; it is well with a sharp knife or scissors to sever the remaining structures, secure bleeding vessels, and apply temporary antiseptic dressing, but our main efforts should be directed to relieving shock.

I have spoken of *local shock*, by which I mean a devitalization or lowering of resistance of tissues to a point more or less distant above and below the apparent site of the injury. Every surgeon of much experience in railway trauma recognizes this condition, and is well aware that the amputation, in all probability, will have to be done much higher than one uninformed would suspect. This condition is readily recognized in the pallid integument, and in the bluish deadened appearance of the muscles. The temperature of both structures is decidedly lower than that of immediately adjacent tissues. In certain cases, these apparently dead structures will, in a few hours, give evidence of returning vitality; the skin will show the blush of health, and the muscles regain their normal color and temperature. In others there is no change, but the line between the dead and healthy tissues is more clearly defined. I do not refer, of course, to the line of demarcation occurring in what we call mortification. It is too early for that. In an experience of nearly twenty years of railway surgery, I have not yet learned to decide, with certainty, immediately after an injury—at least in many cases—exactly what amount of tissue is permanently dead, or to what extent a mere lower-

ing of resistance, or temporary local shock may be followed by healthy reaction. Let me repeat: let us go slowly. A limb may be sacrificed if an immediate amputation be made, whereas, a reasonable delay would have convinced the surgeon that the tissues possessed sufficient vitality and reparative power to warrant, at least, an attempt to save the member. On the other hand, should he do an immediate amputation, he will most likely find to his chagrin that he has cut too low—the entire flap badly sloughing. I presume I have made sufficiently clear my position with regard to immediate amputation. If not, let me say, in a very large proportion of injuries to a limb, I am *most emphatically opposed to immediate amputation*—always in profound systemic shock, and not infrequently in the absence of systemic shock, in certain cases where we are in doubt as to the extent of injury to contiguous tissues. I believe it is good surgery, and a duty we owe to our patient, to give the tissues a little time. I am well aware a number of most excellent surgeons, men, too, of vast experience, will take issue with me here. They insist on immediate amputation, even under profound shock. They claim the anesthetic acts as a stimulant, and the sooner the limb is off, and the wound nicely dressed, the better for the patient. As far as any beneficial stimulant effect is to be derived from the anesthetic, I am sure it must be very transient, and surely followed by depression, and most frequently by a nausea which must add to the depression. That the lacerated muscles, torn nerves, splintered bone, and oozing vessels, all exposed to the air, may keep up shock, certainly seems reasonable, and I believe it is good practice to cut off ragged tissue, secure bleeding vessels, and indeed, where this can be done, completely sever the limb, which under grave shock is usually painless, and only means the division of a small amount of more or less deadened tissue. The wound can then be cleansed, and a temporary dressing applied.

Unquestionably hemorrhage adds to shock, and it is far better to secure the individual vessel or vessels with ligature or hemostatic forceps (or in the case of the smaller ones, torsion) than to apply an Esmarch, which is always attended with danger if kept *in situ* too long, as well as causing much discomfort to the patient.

Where to Amputate.—This is a question of most serious import to the patient, and on our decision will depend the future usefulness of the mutilated members. We are about to perform an operation which has been called "the op-probrium of surgery." We are about to sacrifice a limb, to complete, though, in a more skillful manner, the unfinished work of the injuring agent. We are forced to this butchery, because, in the present state of our knowledge, it is the best we can do. In thigh amputations it should be remembered the further we keep away from the trunk, the greater the patient's chance of recovery. It may be laid down as a general rule that every inch should be saved that is possible. This rule, however, is by no means without its exceptions. Naturally the great *désideratum* is to provide a stump that will afford the greatest possible use. For instance, in an

injury about the knee, it may be better surgery to go just above the joint, thereby enabling the patient to wear an artificial limb with more comfort than if it were simply disarticulated at the knee joint. Again, in an amputation between the ankle and the knee, it may be better to sacrifice an inch or two, in order to avoid a split in the bone, or to secure a good flap; or, again, to get rid of doubtful tissue; the difference in the site of amputation making, practically, no difference in the wearing of a prosthetic appliance. In dealing with injuries to the hand or fingers, we should use the utmost conservatism. Every finger, or part of a finger, that can, should be saved. A short time since I had to amputate a man's right arm, and the left hand was so badly injured I was only able to save the little finger and one phalanx of the thumb. You can readily imagine what a boon even that remnant of hand is to him. Where but one finger is injured, and that one certain to be ankylosed, I think amputation the wiser plan. For he can better afford to lose one finger than to have a stiff and practically useless digit in his way. I have frequently been applied to, by workmen, who have found such a member, whether put up straight or partially flexed, a most serious annoyance.

Amputations Undertaken on Account of Some Pathological Conditions.

Some reference to the pathology in the various diseased conditions for the relief of which amputation is often necessary, seem unavoidable in any discussion of the subject, but it must, in this paper be necessarily brief.

I shall take up first, Amputations for Traumatic Gangrene.

While for some reasons these might be more appropriately classified with amputations on account of trauma, I have preferred, inasmuch as the amputation is done for a *pathological* condition which has supervened, and not on account of the original injury, to consider these operations with those done for other pathological conditions. Gangrene may result from almost every variety of injury; the essential factor in its production being interference with the nutrition of the part, and this may be due either to interference with the arterial supply and venous return, or to a stasis in the capillaries, complete or partial section of a large vessel (either artery or vein) or, indeed, any wound of a vessel may cause this condition, not only because the vessel is no longer capable of carrying blood, but the blood, poured out, and clotted in the tissues, forms a mechanical obstruction to both the arterial supply and the venous return. In extensive crushing injuries so common in railway cases, while no large vessel may be severed, gangrene not infrequently occurs as the result of a hyperemic and stagnated condition of the capillary vessels, due to the intensity of the inflammation which is prone to set in.

A wound of very limited extent, becoming infected with micro-organisms, may complicate this condition, producing disastrous results, the gangrene spreading with great rapidity. Dr. Thomas H. Manley makes, what seems to me, a very proper distinction between gangrene and mortification. "Mortification, naturally, means the death of the

part. Gangrene, a pathological condition, not necessarily terminating in mortification." Manley enumerates "the pathological conditions most obvious in the tissues, after great violence," as follows: (1) "Suspended animation, or asphyxia. (2) Inflammatory changes. (3) Gangrene. (4) Mortification." He also divides gangrene into "acute and sub-acute." In the acute form, necrosis of the tissues takes place with such frightful rapidity that there is, usually, little time to lose in an attempt to save the limb. Amputation should be done well up the limb, indeed, it is, I think, seldom wise to wait for a line of demarcation, in any case of gangrene of sufficient severity to render amputating necessary. It is not to be inferred, however, that I would advise amputation in every case of extensive gangrene occurring in a limb. I have frequently seen large masses of tissue become gangrenous, necrotic, and finally separate from the underlying healthy tissue. Gangrene is, of course, not necessarily the result of trauma. Emboli or thrombi may occlude the arterioles, or pathological changes producing thickening of the intima may cause a stagnation in and final occlusion of smaller arteries, as occurs in senile gangrene. Then, we have a very intractable form of gangrene, which occurs with such frequency in the subjects of diabetes and albuminuria that we speak of diabetic gangrene or albuminuric gangrene. Exposure to excessive cold is another cause of gangrene. The cold contracts the arteries. Thrombi are formed, and, finally, the smaller vessels become obstructed. In amputations done for diabetic gangrene, or any form of gangrene resulting from a depraved condition of the general health, our prognosis should be made with great caution. The results in these cases have not been gratifying, and, in fact, it may be laid down as a general rule, that whenever amputation has been decided upon, whether for traumatic or idiopathic gangrene, "if 'twere done, 'twere well 'twere done quickly," and we should be sure we get sufficiently beyond the dead or diseased tissue to minimize the danger of sloughing of the flaps, a very common occurrence, and one necessitating a second amputation.

In osteosarcoma, occurring in a limb, we are frequently called upon to operate. An early recognition of the disease, and a timely operation may give a gratifying result in some cases, but I do not think successes here have been strikingly brilliant.

Osteomyelitis, so frequently of tubercular origin, so insidious in its approach, and so frequently unrecognized until too late to save the limb, is another condition for which amputation is sometimes necessary, and if done in time, has, in my experience, given good results.

In all these conditions the patient, usually being in a very low state of health, the rapidity with which we operate becomes a matter of first moment. This is especially true in operations for diabetic, and in fact, every variety of gangrene. The lowered vitality, too, of the tissues, renders the flaps peculiarly liable to slough; hence, with a view to saving as much tissue as possible, and to getting through the operation quickly, the transfixion operation by which we secure a musculo-cutaneous flap, is to be preferred. Before performing any operation our in-

struments, towels and surgical dressings must be carefully sterilized. We are then ready to anesthetize the patient, and I want to say a few words here; first about the instruments, then the anesthetic. In emergency surgery our armamentarium should be as simple as may be consistent with the requirements of accident cases. I am speaking now, more especially, with reference to cases treated remote from a hospital; in a private house, possibly a hut or cabin off in the country. Our instruments, dressings, etc., must be carried in a hand satchel, as we do not wish to burden ourselves, or take up valuable space with aught that is unnecessary. Senn says: "Very few instruments are required for even complicated operations, provided proper selection is made, and the surgeon knows what he should about operative technique." Only two scalpels of moderate size are included in the list which he gives for an emergency case. "The old-fashioned, sword-like amputating knife" is rarely seen now, "as all surgeons have abandoned the transfixion method, and make all amputations with a medium-sized scalpel." At all events, it is undoubtedly true that too great an array of instruments, in emergency work, may prove as embarrassing as too few. It may sometimes happen we are called in to do operations with a very scant supply of instruments, and it is in just such emergencies our resources are most severely tried. We should endeavor to be equal to the occasion. Some years ago, one dark rainy night, I was called to see a man whose leg, including the knee and lower part of the thigh, had been frantically mangled. I had nothing with me but a satchel containing gauze, cotton and bandages. I had no instruments save a number of hemostatic forceps, which happened to be in the satchel. I had been to dress a case of amputation, and my instruments were at home—forty miles away. The place was in the mountains, remote from any town. No surgeon could be obtained. The country doctor whom I found with him had no instruments. The man was suffering greatly, reaction was good, and there was considerable hemorrhage. The only assistants to be had were three or four section men, and the place for operation was a cabin, containing one small room and a smaller kitchen. One lamp and two or three lanterns afforded light. I had them get ready an ample supply of hot water. I then borrowed a good-sized pocketknife from one of the men, a large needle and some stout linen thread from the woman of the house, and a new carpenter's saw from a neighboring country store. Having sterilized my instruments as best I could I did a thigh amputation, which in its mechanical execution and after-result was as successful as though done with every facility possible. I have mentioned this case because I think it instructive, showing that, if forced to it, we can do good work with very limited resources. I have had other experiences not unlike this. We now come to the question of anesthesia, and about pulmonary anesthesia I shall say but little. I have already expressed my conviction that an anesthetic should never be administered to a patient under profound shock, and to this I will only add that its administration should be entrusted to an experienced and watchful person whose entire

attention should be devoted to the anesthetic. Now I want to call your attention to the use of cocaine as a local analgesic, not merely in minor amputations, for all surgeons use it in such cases to-day, but in the more serious operations. I did my first major amputation with cocaine, in 1890, and since that time have done twenty-five major amputations, including three of the thigh, using cocaine injected hypodermically: first, just beneath the integument, and then more deeply into the tissues. I use the Esmarch, as advised by Corning, but I invariably apply it before injecting the cocaine, which is, I fancy, far safer than to inject before its application. My experience with this drug has been satisfactory in every instance, both as regards its analgetic effect and the after condition of the patient. Nor have I been able to notice any toxic effect. I have thought cocaine particularly applicable in cases where, though shock was great, an immediate amputation was for any reason deemed advisable. In such cases it has proved, in my hands, most satisfactory. Time will not permit me, here, to say more about cocaine, and as I have already published reports of my cases, I will go on to the actual technique of amputations.

The Technique of Amputations.

The patient having been anesthetized we proceed to prepare the field for operation. The part is first cleanly shaved, then thoroughly scrubbed with a reliable antiseptic soap, then washed well in sterilized water, or, perhaps, in some cases, with a bichloride solution. Then with ether, and lastly with alcohol. An Esmarch bandage is next applied, and we are ready to operate. In any case of traumatism requiring amputation between the joints, that is, in the continuity of the shaft of the bone, I should unhesitatingly advise the circular operation, in which an incision is first made through the integument and subcutaneous areolar tissue, which is dissected and turned back like a cuff. Then, while the cuff is held firmly back by an assistant, with a sharp scalpel we encircle the limb, cutting through the muscles to the periosteum. I do not think it well to waste much time in the effort to dissect back a periosteal flap. Doubtless, when it can be done, there is some advantage to be gained in covering the end of the bone. I think, though, as good results are obtained where this is not done. Having sawn through the bone, with a strong cutting forceps, which should be very sharp, we *slightly* bevel the edges of the bone, and our amputation, as far as regards the severance of the limb, is done. The vessels are then caught in the grasp of a hemostat; in order to find them it is sometimes necessary to loosen our Esmarch a little. The larger vessels should now be tied with medium-sized catgut (very strong). Torsion will suffice for the smaller and is by some surgeons the only means employed with any vessel. Silk, in my estimation, should never be used; for a ligature left hanging from a vessel, so that it may be removed, is liable at any time to be subjected to undue strain, and tearing from the vessel may cause secondary hemorrhage. Not only this, but as it sometimes remains a long time, it may, acting as a foreign body, produce ulceration with danger of hemorrhage. Nor is this all. The silk ligature, an absorbent material, may prove a

ready means of carrying in septic material, which may interfere with the normal physiological process which seals the vessel.

In tying the vessels we can not be too careful to exclude any portion of nerve or nerve fibre. I have known several instances where much acute suffering was caused the patient from the inclusion of a nerve in the ligature. The nerves should now be found, and carefully and squarely clipped, being gently drawn down for that purpose, so that when cut they will retract well within the muscular tissue. The inclusion of a nerve in the cicatrix means a painful stump, and may even prove so painful as to require another operation.

The operation I have described is that for circular amputation. The older, transfixion operation (in operations after injury) possesses no advantage that I can see over the circular method, while I do see serious objections to it. Vessels and nerves are cut through obliquely, and are often difficult to find. Then we have a large musculo-cutaneous flap which is in no way desirable. We have abundant proof that the muscular tissue in such flaps is always absorbed, and consequently an operation done with a view to obtaining a cushion of muscle for the end of the bone is unscientific, and possibly productive of harm. Truax says: "In performing an amputation that will best serve the interests of the patient all superfluous and useless bone and tissue should be removed that they may be replaced by artificial material that will be of service and value." A non-adherent flap consisting merely of integument with underlying connective and cellular tissue, is the ideal flap when an operation is done on account of acute trauma. In arm amputations the transfixion method gives a very neat looking stump immediately after the operation, but I think that is about all that can be said in its favor. It is, however, less objectionable than when done in the thigh. In operations rendered necessary on account of some pathological conditions, particularly in diabetic gangrene, and in any depraved constitutional conditions, we are very apt to have sloughing of the flap—as has been mentioned above—owing to the low state of vitality of all the tissues. For this reason, and also because of the expedition with which this operation can be done—which is a very important matter—I believe the transfixion operation the most satisfactory. While, if the patient survives, the muscular tissue will undergo, undoubtedly, absorption, it at least temporarily serves as a nidus for the ramification of vessels that may nourish the cutaneous flap. It often happens that in injuries in which there is much contusion or laceration of the integument we are forced to make our flap where we can obtain healthy skin, and this may necessitate a long flap, anteriorly posteriorly, or from one side of the limb. Hence, no fixed rule can be laid down as to the selection of the flap in such cases. Some surgeons lay much stress on the shape of the integumentary flap. I do not believe, however, it matters much if we secure sufficient healthy integument to cover the bone and raw surface. The important point is to see that the edges of the flaps are nicely approximated, so as to avoid the production of granulation or scar tissue, which

does not bear pressure well. It must be remembered, however, that in modern prosthetic appliances the pressure is not received by the end of the stump, but is distributed over the surface of the limb in its entire circumference.

Presuming, now, we have done a circular amputation, vessels have been tied or subjected to torsion, and nerves severed well up in the tissues, we are ready to close the wound, provided there be *no oozing*.

Should there be oozing, pads of gauze soaked in very hot water should be successively applied to the raw surface. It is sometimes well, with a large pad, to produce considerable compression. The pad must be retained in apposition with the raw surface for some minutes. What we want is a *dry* wound, and we should not close it until this condition is secured. Having arrested all oozing, in thigh or arm amputations, or wherever there is much muscular tissue, several silk worm gut sutures should be carried through the skin, deeply into the muscular tissue, and out through the skin on the other side. These sutures should be drawn tightly enough to obliterate the dead space which would otherwise exist between the severed ends of the muscle and the integumentary flap. They also serve to prevent an undue degree of tension on the superficial sutures. They should be slotted when in position.

Finally the integumentary flaps are closed, either by running or interrupted sutures. I prefer the interrupted sutures, for, if from any cause one suture gives way it does not mean the gaping of the entire wound as might occur with the other. The sutures should be of catgut or some absorbent material and may be embedded or not, as the operator may think best.

I have no use, in these cases, for silk sutures, and should only use them when I have no hope of primary union. I have not referred to drainage, because, if we have a clean wound, and get that wound thoroughly dry, before closure, and then apply a proper protective dressing, I think the drain is only in the way, and can but irritate, and possibly prove a source of infection. At all events it is certainly unnecessary. After having closed our wound under the strictest asepsis, *dry* sterilized gauze should be applied, so as to entirely cover the part. This should be held in place by gauze bandages, then the whole should be enveloped in sterilized cotton, and this in turn secured by a nicely fitting cotton bandage. After an amputation of a lower limb, especially the thigh, a well-padded splint should be applied posteriorly, and the limb elevated. It is hardly within the scope of this paper to give a detailed description of the various amputations devised by different surgeons, and yet no paper on amputation would be complete without some reference to Wyeth's bloodless method of amputation at the hip joint, where hemorrhage is controlled by means of transfixion pins, and rubber tubing, which is equally applicable in amputations at the shoulder. By this method Wyeth recently reported the death rate in amputations at the hip joint has been reduced to less than ten per cent. in cases where the procedure is necessary from causes other than acute trauma."

A number of ingenious operations have been devised, prominently among which may be mentioned Symes, Pirigoff, and Chopart. I shall not attempt a description of these operations, nor of the different methods employed in those of the shoulder and hip joint. With these you are as familiar as I, and in cases of trauma, and not infrequently in diseased conditions, no orthodox plan can be followed, and the surgeon's ingenuity must decide where to cut, and how to fashion his flaps. I can only say in conclusion, I should never, unnecessarily cut away any portion of a limb which I believed it possible to save, provided always the part saved will prove useful. In the foot, if the toe must be sacrificed, I would simply disarticulate at the metatarso-phalangeal joint. Or were there reasons requiring me to go higher I would do a medio-tarsal amputation. In the hand, as I have said before, I would save every finger, or part of a finger possible.

LACERATION OF THE CERVIX UTERI*.

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Gentlemen: In presenting this paper on laceration of the cervix uteri before you, I do not wish to enter upon an exhaustive discussion of the whole subject of laceration of the cervix, but to consider practical points in the pathology, symptomatology and treatment of this disease, which after a large experience, I have found, are not generally recognized and fully appreciated by the medical profession. Sufficient importance is not attached to lacerations of the cervix uteri as a cause of suffering in women, nor is sufficient attention paid to certain details of the operative technique, the understanding and practice of which are so very necessary for the relief of such suffering.

A large number, I think, perhaps the majority, of the women upon whom I operate for laceration of the cervix tell me that they had been previously advised by one or more physicians that there was no uterine disease which required operative treatment. Or, they very frequently tell me that they have been told that there was an ulcer of the neck of the womb, which could be cured by local applications and vaginal douches. For these raw looking surfaces are still generally called ulcers, notwithstanding the fact that Emmet has been teaching the true cause of this so-called ulceration since 1869, and that Ruge and Veit and many others have shown their true pathology; that the apparently raw surface is covered with cylindrical ciliated epithelial cells, and is in no sense an ulceration. Emmet tells us that at least one half of the ailments among those women who have born children are to be attributed to laceration of the cervix uteri. It is my belief that most and often all of the symptoms complained of by this proportion of women are caused by such an injury and its secondary pathological lesions.

What are the most important of these ailments?

The usual form of laceration which we see is a bilateral tear which results in a separation or a rol-

ling out or an eversion of the anterior and posterior lips of the cervix. The cervical mucosa is no longer contained within a closed canal where it is protected. It is exposed to friction and pressure against the posterior vaginal wall at all times, but most when the woman is on her feet and the heavy uterus sinks toward the floor of the pelvis. Being a true mucous membrane containing racemose glands, the Nabothian glands, the lining of the cervical canal does not become hardened or toughened by such exposure. After the elapse of years it may become converted into cicatricial tissue, but until that time it is a constantly irritated surface, just as a prolapsed mucous membrane of the rectum or an ectropion of the conjunctiva. The surface epithelium undergoes hypertrophy and hyperplasia, the proliferation of the cell elements resulting in an extension of the mucosa beyond the normal limit. The mucosa grows over the lacerated surface to the right and left on each lip and often onto the portio vaginalis, presenting the appearance erroneously called ulceration. The rolling out of the lips of the cervix obstructs the circulation at the base of the lips in the neighborhood of the internal os, continuous passive hyperemia or chronic congestion results in swelling and hypertrophy of the glandular and stroma tissue and the cystic changes we are familiar with. The large number of racemose glands of the cervix become inflamed; they proliferate, the orifice of the ducts becomes occluded, so that the whole hypertrophied vaginal cervix in extreme cases becomes a mass of cysts, varying in size from a mustard seed to a pea. In the stroma tissue immediately surrounding these glands or irregularly distributed is more or less small round cell infiltration and infiltration of polymorphous leukocytes. The stroma cells show hypertrophy and hyperplasia. The blood vessels the usual hyaline degeneration. In the more chronic and very chronic cases localized or diffuse areas of cicatricial fibrous connective tissue is seen. The condition from beginning to end is one of eversion or ectropion of the cervical mucosa with hyperplasia of all structures, secondary inflammatory changes. The extent of inflammatory change being only slight, or advanced to extensive cicatrization. It is never in the usual case of laceration of the cervix an ulceration, and only very rarely is it an erosion, for by an erosion we mean a loss of substance.

So much for the cervix, now for the uterus. Lacerations of the cervix take place in a uterus enlarged by pregnancy, and for this reason lesions occur which would not occur if a simple bilateral incision were made in the cervix of a non-pregnant woman. Subinvolution follows, and the lesions are those incident to subinvolution, glandular endometritis, retrodisplacement, general pelvic congestion and very frequently secondary chronic catarrhal salpingitis and chronic oophoritis.

Finally, I wish to particularly call attention to the very significant result of continuous irritation from the split of the cervix, from the inflammatory change I have described, namely the involvement of the pelvic lymphatics, the presence of a persistent metro and perilymphangitis and lymphadenitis. A condition which it is customary for me to describe as a

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retro-sacral cellulitis; the lymphatics and tissues of the retro sacral ligaments being inflamed and thickened. None of us will underrate the suffering, the disability accompanying this condition when we recall the lameness accompanying an inguinal lymphadenitis, due to such a small cause as a minute sore upon the penis or an irritating corn. Similar lameness is caused by the pelvic pain resulting from lymphadenitis excited by a fissure or an irritating surface upon the neck of the uterus.

Admitting all of these lesions as results of the laceration, what symptoms would we expect to find produced by them?

Backache, sideache, headache, leucorrhea, menorrhagia, sometimes dysmenorrhea, neuralgia in any part of the body and reflex nervous symptoms caused by the pelvic focus of irritation, constantly nagging and exhausting nervous energy.

We recognize similar reflex nervous disturbances and acknowledge the cause in the case of such an irritating lesion as a fissure of the anus, while some of us are slow to admit that much disturbances may be caused by an irritating lesion of greater physical dimensions in the neck of the uterus. All of the symptoms described, in various degrees and combinations, accompanying lacerations of the cervix uteri of even small magnitude, and these symptoms are due primarily to the laceration. The proof of this is within the reach of all of us, for the proper repair of the injury in suitable selected cases will relieve the woman of all suffering. This brings me to the consideration of the cases suitable for operative treatment and the method of operating. There are three kinds of laceration to which I shall call your attention. These are the bilateral, the incomplete, and the combined bilateral and incomplete.

The bilateral laceration of the cervix uteri can only be properly recognized by the examining finger or by inspection after the vagina has been opened with the Simms speculum. The bivalve speculum masks the lesions. If the examiner keeps before his mind the conical or dome shape of the normal cervix, he will usually recognize a laceration by digital examination. The examining finger comes in contact with the broad surface of the cervix, the center of which is occupied by what appears to be the external os, but really is a part of the cervical canal some distance above the external os. The finger then glides posteriorly over the broad cervix, passes around a corner, either rounded or sharp, and enters the posterior vaginal vault. If passed anteriorly it enters similarly the anterior vaginal vault. The presence of the corner or edge is indicative of a bilateral laceration. It is never felt as the finger is passed over the normal conical cervix. In some cases of bilateral laceration it exists in a very marked degree and it can be rolled in by the finger introduced in the posterior vaginal vault. In other cases it becomes rounded by swelling of the cervix, and the condition of two gaping and rolled out lips is not so strongly marked. In these cases, however, the cervix feels flat and broad, and is in no sense conical or dome-like, as in the normal condition.

The condition is still more readily recognized if the woman is placed in the Simms position or the

knee-chest position, and the cervix is exposed by retracting the perineum with a Simms speculum. If, then, the anterior and posterior lips are caught with tenacula and drawn toward each other, the apparent ulceration or erosion, truly the eversion of the cervical mucosa, disappears and the normal shape of the cervix is produced. In any case of doubt this test will make plain the character of the lesion.

You are probably familiar with the nature of what has been called incomplete laceration of the cervix, but I direct your attention to it because its existence is so often overlooked. In incomplete laceration of the structures of the cervix are split unilaterally, or bilaterally to, but not through the mucous membrane of the vaginal aspect of the cervix. The two lips are then held together and gaping is prevented simply by this mucous membrane of the vaginal aspect alone. The split may extend from the external os to the internal os, converting the cervical canal from a cylindrical or slightly spindle shaped structure into a cavity as broad as the transverse diameter of a hypertrophied cervix. The same inflammatory changes and proliferation of tissue takes place as in the bilateral tear. This condition can readily be recognized by passing a sound into the cervix, when it will be found that it comes directly in contact with the mucous membrane of the vaginal aspect of the cervix. This form of laceration is not very common. I mention it because it is so often overlooked. The combined condition, however, of a complete bilateral laceration or split of the lower part of the cervix with an incomplete laceration of the upper part is in my experience not unusual, and the appreciation of its presence is of great importance. In this condition the eversion or rolling out of the lips of the cervix is not very marked, because they are held together above by the intact mucous membrane of the vaginal aspect. There are present the inflammatory changes, a very profuse leucorrhea and other symptoms of laceration more marked than one would expect from the visible lesion. The detection of the incomplete part of the laceration it readily made with the sound. In operating for slight bilateral tears of the cervix one will often discover this condition of incomplete laceration in the upper portion of the canal if the excision of tissue is carried well up toward the internal os, by splitting the cervix beyond the point of apparent bilateral laceration. It will then be found that almost as high as the internal os the anterior and posterior lips of the cervix have been only held together by the mucous membrane of the vaginal aspect of the cervix. The recognition of this condition and its operative repair are most essential to the success of the operative treatment.

Success in treating lacerations of the cervix uteri depends upon the following four factors:

1. Proper selection of cases.
2. Preparation for operation.
3. Attention to certain essential operative details.
4. Selection of the proper operation in the individual case.

The selection of cases is most important. In many cases of laceration of the cervix uteri the operation

of trachelorrhaphy is contraindicated. It not only will not cure the woman, but it may kill her. Failure to recognize the contraindications has resulted in a great deal of harm, and has done much to bring discredit on the operative treatment of laceration. The chief contraindication to operation is the presence of pelvic inflammatory trouble outside of the uterus, the presence of disease of the tubes and ovaries. Emmet recognized this contra-indication before the days of our modern pathology of pelvic diseases, when he advised the preparatory treatment with hot douches and vaginal applications, until all symptoms of "pelvic cellulitis" indicated by lateral tenderness and fullness had disappeared. Marked disease of the Fallopian tubes may in general be considered a contra-indication to the operation of trachelorrhaphy; or at least a contra-indication to trachelorrhaphy alone, uncombined with salpingo-oophorectomy.

The presence of pyosalpinx exposes the woman to a very obvious danger, the danger of an acute attack of pelvic inflammation if the uterus is subjected to the traumatism and manipulation incident to trachelorrhaphy. Most of the deaths after the operation of trachelorrhaphy are due to this cause, and we should not only never have a death after the operation, but the convalescence should be easy and painless. If a woman suffers with local or general peritonitis after trachelorrhaphy, the condition is due to one of two causes; failure to recognize pre-existing inflammatory disease of the Fallopian tubes, or septic infection introduced at the time of operation. The first, I think, is the usual cause.

I have not unfrequently heard of the death of the patient in this way, a tubal abscess rupturing and the patient dying of general peritonitis. I have several times operated for pyosalpinx upon women who had but a short time before been subjected to the operation of trachelorrhaphy. Tubal abscess is too often overlooked, in these cases.

It is not sufficient warrant for the operation of trachelorrhaphy merely to introduce the finger into the vagina and to recognize a laceration of the cervix, or to introduce a speculum and see the gaping os. A most careful bimanual examination is necessary to determine the condition of the tubes and ovaries, and this examination should be made a second time as a final precaution, when the woman is under ether, immediately before proceeding to the operation of trachelorrhaphy.

Another important factor to remember is that when a woman has a lacerated cervix there usually co-exist other lesions, repair of which is also necessary before perfect health can be restored. Failure to recognize these other conditions results in disappointment to physician and patient. Trachelorrhaphy alone will not cure the woman if she suffers also with endometritis, retrodisplacement, and loss of muscular support to the pelvic floor. Curetting of the uterus is usually a valuable addition to the operation of trachelorrhaphy, and perineorrhaphy is in most cases also necessary.

You are, of course, familiar with the operation of trachelorrhaphy for repair of laceration of the cervix, which was invented by Emmet. But there are

several very important points essential to the success of this operation which, I find, are very often neglected. First, the previous preparation, or preparatory treatment of the cervix for operation.

Women are often sent to the Gynecean Hospital suffering with old laceration of the cervix uteri, with the request from the physician that they be operated upon immediately. The tissues of the cervix are hypertrophied, hyperemic and chronically inflamed, often full of Nabothian cysts, sclerotic, presenting a wide surface eversion. Such a cervix is in no condition for operation. Most women with old laceration of the cervix uteri require a certain amount of local treatment before the operation can be successfully performed. Such treatment, depending upon its influence, may require ten days or a month. It consists in the free puncture every four or five days of the whole cervix to evacuate the cysts and to relieve the congestion. It is a process of depletion of the stroma tissue and in opening the gland cysts allows the glandular structure to contract toward normal size and new gland cells to develop. To still further aid this same process the whole vaginal vault, the vaginal cervix and exposed everted mucosa should be painted with Churchill's tincture of iodine, and a glycerine or glycerine and ichthyol tampon introduced in contact with the same surfaces. The tampon should be removed at the end of twelve hours. With the same object large (1½ to 2 gallons) hot water douches are administered twice daily, one being given before retiring. The details of giving such a douche I need not mention. The change which takes place in the cervical tissues, and in the feeling of the woman after from one to four weeks of this treatment is wonderful. The enlarged, the hypertrophied and hyperplastic cervix diminishes in size, the cysts disappear, the inflammatory tissue is greatly absorbed, leaving no cicatricial change, the cervix is softened, the area of proliferated mucosa seems to shrink. This last change, however, is only apparent, and is due to the proliferation of the cylindrical epithelium, which, instead of being a single layer, is now composed of two or more layers and becomes cuboidal or even squamous. With the improvement in the local condition, the woman's suffering diminishes.

The backache, sideache, headache, leucorrhea improve; and we often find that women after such local treatment refuse operation, because they feel perfectly well. Operation is, of course, however, necessary, for the old condition will surely return as soon as the local treatment is stopped. Such local treatment not only makes the operation more certain of curing the woman, but it renders the operation very much easier of performance. There is less bleeding; the tissue is less friable; the amount of tissue to be excised is more accurately determined; it is removed smoothly and regularly; and the sutures can be passed more easily and with more precision. In the case where these changes have taken place following such a treatment, in those of recent tear or where extensive pathological change has never been present, represent the selected cases for the operation of trachelorrhaphy.

If, after a few weeks of rest and such local treat-

ment, there is not a decided improvement in the condition of the cervix, then, in my opinion, it is very doubtful whether the woman will be cured by the operation of trachelorrhaphy. If such a repair is practiced the symptoms continue. In such cases of long standing laceration the secondary changes in the cervical tissues become permanent in character. The cystic degeneration becomes too wide spread, the inflammatory induration or fibrous connective tissue too well established to yield to any treatment. Here the operation to be selected which alone will cure the woman is amputation of the cervix. Therefore, in extreme cases the preparatory treatment to which I have alluded is of advantage in enabling us to determine the best method of operation to pursue. If the condition of the cervix improves, the woman can be cured by trachelorrhaphy; if it does not improve we shall be obliged to resort to amputation. It should not be forgotten that the mere closure of a tear of the cervix, even though union may be perfect, does not always cure the woman. It will not cure her of the cystic degeneration, and the sclerotic condition persists. I have a number of times amputated the cervix for these conditions when a bilateral laceration had been closed, well and successfully as far as the mere surgical result was concerned. The woman after the first operation continued to suffer with all of the symptoms presented before the trachelorrhaphy.

In regard to the details of technique of the operation of trachelorrhaphy I will only allude to a few important points. In making the denudation great care should be taken to remove all cicatricial tissue, carrying the excision well into the angles of tear on each side. The finger should be passed over the surface to determine indurated areas, which should be caught with a tenaculum and excised. No portion of a wall of a Nabothian cyst should be left in the line of denudation. The excision of tissue should be done as nearly as possible in the plane of laceration. A frequent mistake is to remove too much tissue from the vaginal aspect of the cervix.

The sutures should be accurately and evenly placed. In introducing each suture a large amount of the tissue underlying the denudation should be included, so that the needle describes a complete circle when introduced through both lips. If introduced through a small amount of tissue and simply a short distance beneath and parallel with the plane of denudation accurate apposition cannot be secured. The first suture should be introduced well up into the angle of tear, best at the angle of tear, to secure bleeding and prevent fistulae here. A mistake which is very often made, occurrence of which destroys any benefit that might be derived from the operation is, in introducing the needle, it is made to emerge upon the denuded surface. When this occurs the suture does not include in its embrace the whole of the denuded area, and after union has taken place the condition which has been described as incomplete laceration is produced: the cervix is closed to all external appearance, but has a canal, perhaps two or three times as broad as normal, bounded on each side by little more thickness of tissue than the mucous membrane of the vaginal aspect. The result is persistence of the sub-involu-

tion and a cervical endometritis which will yield to no treatment except another operation. The suture should enter upon the vaginal aspect of the cervix, as said, pass around the whole of the denuded area, and emerge in the edge or slightly within the mucous membrane strip which has been left for the cervical canal. The sutures should not be too tight, nor too loose, but of sufficient tension to secure accurate and firm apposition. If there is too much tension they cut out and the same incomplete tear is apt to be produced. If the apposition is not even and accurate or the suture is too loose, again the same condition of incomplete tear results or fistulae are formed.

If good asepsis is practiced union will never fail. In at least seven or eight hundred trachelorrhaphies I have never seen union fail. An infection of the cervix after operation or a failure of union is an unpardonable mistake in this operation. During the last few months, however, I have had three patients referred to me in which no union had taken place. In one I was able to do the operation of trachelorrhaphy again, but in the other two amputation was necessary.

I remove the sutures at the end of two weeks if trachelorrhaphy alone has been done, but if this is combined with perineorrhaphy the sutures are removed at the end of three weeks. The greatest care should be taken not to cut off both ends of the suture leaving a loop of silkworm gut in the cervical tissue. In the two cases I have just referred to where amputation was practiced such a loop was removed. It no doubt had much to do with the chronic inflammatory change, indurated condition of the cervix which compelled me to do the operation of amputation.

Finally, gentlemen, permit me to call your attention to the importance of diagnosing as early as possible between bad laceration of the cervix uteri with sclerosis and eversion of the mucosa, and beginning carcinoma of the cervix. Carcinoma of the cervix in practically all cases occurs in an old laceration. All statistics show this. Carcinoma of the cervix is a disease of the childbearing woman. For this reason I think all, except the slightest, lacerations of the cervix uteri should be closed; so that when the woman reaches the menopause, the age of greatest liability to carcinoma, the cervix may not present a spot of least vital resistance favorable to the development of the disease. But this is prophylactic medicine. Contrasted with these cases are those in which carcinoma has already begun in an old laceration. The cases on the border line between chronic, deep seated, nonmalignant diseases of the cervix, the result of laceration, and the earliest stages of malignant disease. It is of the greatest possible importance that we recognize these cases early. I cannot overrate or too strongly impress you with the importance of this early diagnosis. Upon it depends the life of the woman. It is now true that if carcinoma of the cervix is recognized early, if possible at the time of appearance of the first nodule, or even when it is still confined to cervical tissue, the operation of pan-hysterectomy promised cure in the majority of cases, surely in the very earliest stage. While, if the diagnosis is de-

layed for a few weeks or months, the case becomes hopeless with our present surgical methods.

If the physician has even the slightest suspicion of malignant disease in the case of laceration of the cervix uteri, he is in my opinion a criminal if he idly waits developments. The slightest bleeding in the intra-menstrual period or an excessive bleeding at the menstrual period of a woman in the latter part of sexual life, any excessive bleeding at the menopause or slight or excessive bleeding after this time always suggests, gives rise to a suspicion of carcinoma and examination is imperatively demanded. There are two methods by which the early diagnosis may be made. If with local treatment, as puncture, tincture of iodine, glycerine and douches, the condition improves and the suspicious appearance disappears the disease is not beginning carcinoma. Or we have even a quicker and surer test by microscopical examination of a portion of excised tissue. The suspected tissue or nodule should be caught with a double tenaculum and a wedge shaped piece cut out with curved scissors which shall include the mucosa of the cervical canal, the mucosa of the vaginal aspect of the cervix and a mass of the underlying stroma tissue. Be sure that it is of sufficient size to include these tissues, particularly sure that it includes the suspicious nodule. This procedure is practically painless, there is little or no bleeding, and it can be done without either. The latter method is the one I employ because a microscopic study is easily within my reach, I make it myself, it requires but a day or two at most, is more certain and has so frequently saved the life of a patient for me.

I dwell upon this point in speaking of laceration of the cervix because most women with carcinoma of the cervix die of the disease, and these horrible deaths, as shown by the history they give me, is so often the result of the neglect of a family physician. The diagnosis many times could have and should have been made early.

A REPORT OF TWO CASES OF LYMPHANGIOMA.*

By VERTNER KENERSON, A. M., M. D.

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In January, 1896, Louis Schultz, 12 months old, of German parentage, born in New York City, was admitted to the Wards of the New York Hospital for examination and treatment.

The child's birth was normal, and no history could be obtained from the mother of any unusual prenatal influence. The mother was a well-nourished, German-born woman; hard working, somewhat neurotic, about 30 years old, and this was her first child—after three years of married life.

The patient, on admission and examination, presented a smooth, somewhat venous, dusky tumor, involving the whole left side of the face, with gradually sloping edges. The mass was firm, did not "dent" on pressure, was closely adherent to the underlying structures, and to the overlying skin. It did not pass the median line, did not fluctuate, was not tender, and could be manipulated without disturbing the child.

The mother gave the following history: The child had been born, so far as she could explain, by a normal delivery, without forceps, and labor pains extending over 12

hours. Her recovery was uneventful, and she had nursed the child up to the time of admission. The tumor had given no inconvenience, and had first appeared or had been noticed a few days after birth.

She described the appearance as if the whole of the left side of the face had appeared somewhat thicker than the other side.

At the time it was first noticed—a few days after birth—the overlying skin was not discolored much, and they were not much worried by the appearance. The whole area was slightly involved when first noticed.



Figure 1 Lymphangioma

This whole area had, during the first 12 months, become gradually involved for a greater depth, and the tumor had become firmer in consistency, and was more discolored. The parents wished to have something done to stop the growth. A consultation was held, and operative interference was deemed inadvisable because of the age of the child, and, no urgency seeming evident, a delay was counseled until the child was weaned, and patient was accordingly discharged, and the mother was told to return. The patient was readmitted July, 1896.

During the intervening period the child had been weaned, and remained healthy, was not irritable, and ate ordinary children's food. The lun or had had a constant slow growth for the first 5 months after the previous examination, and then during the last month the growth had been very rapid, the growth being especially noticeable in the pendulous portions of the tumor—namely the parts corresponding to the eyebrow and inferior border of the cheek over the ramus of inferior maxilla. The tumor now extended, as before, from the median line, displacing the nose and mouth toward the right side of the face, and involving the whole left lateral aspect, closing completely the left eye and almost entirely closing the left nostril.

The skin was tense and was colored a dusky bluish tint; the whole tumor was firm, resisting, closely adherent to underlying structures, and to the overlying skin. The growth was confined to the structure outside of the skull. The tongue, left eyeball, mucous membrane of nose and mouth were not involved.

There was fluctuation over the dependent parts, which had been evident since the sudden increase in growth. The child slept well, was cheerful, ate well, and the bodily functions were regular. There was no general cachexia, and there was no elevation of temperature or pulse.

The rapid growth in the last month indicated a change in the process. The lymph spaces were all enlarging rapidly, and fluctuation was due to lymph. It was deemed advisable to try skin-electrolysis. Accompanied by a great deal of discomfort to the patient, this was applied, after previous sterilization of the skin by a weak solution of carbolic acid. Two needles were introduced into the tumor, one at a short distance from the other, and then the current was turned on, which was a weak one, and allowing it to remain for one to three minutes.

Several double punctures were made at each sitting, and a sitting was arranged for on alternate days.

These electric treatments were persisted in for four sittings, and then because the sight of the apparatus created such a disturbance, two more treatments were made under chloroform.

*Read before the Surgical Section of the Buffalo Academy of Medicine, Buffalo, New York.

After each puncture, the small hole left by the needles exuded some serum, and after this was wiped away the punctures were covered with flexible collodion and a wisp of cotton.

The punctures were made vertically into the tumor, the needles being introduced about one inch, and at right angles to the surface of the tumor.

This work was done carefully under surgical cleanliness, and every effort was made not to infect the punctures in any way. The point of application was over the dependent fluctuating portion of the tumor involving the cheek, and possibly in the disturbance which the pain caused the child to make some of the punctures may have entered the mouth, and infection may have been carried in that way.

From whatever cause, the punctures and that portion of the dependent tumor became infected, quite a local central slough ensued, and a considerable constant watery fluid was exuded, and the process of electrolysis was discontinued.

The portion above the eyebrow seemed separated by a ridge from the cheek portion, and it was decided to operate, removing (if possible) a portion of the tumor at one operation and the remainder at a second operation. Accordingly, Dr. Francis Murray operated July 10, 1896. He made an incision at the junction of the tumor with the normal tissues in the median line of the forehead, extended the incision upward and back, dissecting the mass from the muscular and perosteal attachments down to the supra-orbital ridge. He then dissected from the outer surface enough of the skin to cover the denuded surface, replaced the same, suturing and closing the wound, leaving plenty of drainage. The tumor had been cut around, except the thin isthmus which connected it with the lower part of the tumor. The tumor looked venous, and it was expected the operation would be very bloody, but comparatively little blood was lost, but there was a constant and heavy loss of serum or lymph.

The child did not suffer much from shock, but the temperature promptly went up and remained up until the ninth day, when the child died.

There was no pus, but a constant loss of lymph, most of it apparently coming from the lower edge of the wound, where a section of the connection with the lower and largest part of the tumor had become necessary.

The lower wound, when there had been an attempt made to treat the case by electrolysis, continued also to discharge, and what pus there was (and that was little) came from that opening.

The tumor was made up, not of many blood vessels, as its surface would indicate, but of lymph spaces, irregular, with apparently a multiplex structure of fibrous tissue.

The meshes of this fibrous stroma were coarse, and the lymph spaces were apparently lined with a thin lining of smooth cells. The spaces were very irregular in size, and varied from those that would admit the tip of a probe to those that would admit—when a section had been made—the tip of one's little finger.

The drains that were left in situ (which were of iodoform gauze) were literally washed out, and, when the wound was dressed on the 2nd day, new drains were inserted and some of the sutures were renewed.

A careful dissection was made, hoping in this part of the tumor to find the afferent trunk of the lymphatic which caused the disturbance and supply for the tumor, but it was not found.

The dissection was made down to healthy underlying tissue, except at the lower edge, where a cut through the thinnest flattened portion of the tumor was made necessary by the plan of removing only part of the tumor at the first operation.

The case, and the causes and results, first and last, were much discussed at the time, and it was thought by the operator, Dr. Murray, that if he had been able to have removed the entire mass, without causing death from shock, somewhere probably just in front of the ear, where the lymphatics emerge from the skull, there would have been found an afferent trunk supplying the mass, which could have been tied in solid muscular or fibrous surroundings, that the ooze could have been stopped, and healing made possible.

Case 2. Came under my care about 5 months ago.

Child, 5 months old, personal and family history uninteresting, except cause of application for treatment, namely, lymphangioma of neck. Child was born (third child), normal delivery, without evidences of abnormality, but growth appeared about the second week of life. The tumor in this case was located at the junction of the shoulder and neck on the right side, filling in the shoulder notch as high as the level of the lobe of the right ear.

The tumor was not painful. The child was well nourished, fed on the breast; the mother was an Italian, and of a nervous disposition.

The tumor was firmly adherent to the upper angle of the scapula and the muscle of the back and neck extending from the median line of the junction of the shoulder and neck around to the right, well into and filling the supra-clavicular space.



Figure 11. Lymphangioma.

The tumor was a dingy, bluish color, firm, not fluctuating, firmly adherent to surrounding structures, no pulsation, and no local point of tenderness. The mother said the recent growth had been rapid, but the general health of the child remained unimpaired.

After making careful preparations for the rapid completion of the work when once under way, I determined to try and remove the tumor *en masse* and ligature the afferent trunk supplying the lymph in solid surroundings, meanwhile supplying the child's economy, as much, or more, hot salt solution as was eliminated by the operation, the loss of blood being inconsiderable in the previous operation.

The child was carefully prepared in the usual way, by applying a green soap poultice for a short time, then washing carefully and yet faithfully with a coarse cloth, and rubbing with bi-chloride solution 1/2000, finally rinsing with alcohol and ether, and binding in situ a compress covering the tumor and surrounding parts with bi-chloride 1/2000, and leaving in place until the moment of operation. The child was given no depleting physic, and was nursed up to within three hours of the operation.

The operation was performed in a very warm room (hot, I may say), and with hot water bottles packed around the child, and with four assistants and two nurses.

Preliminary to the operation, I prepared 1000 c.c. of normal salt solution, which was sterilized, filtered, and then sterilized three consecutive days. It was sterilized in a receptacle from which it could be used intravenously without transfer, namely, in a glass irrigator, stoppered and supplied with rubber tubing, etc., including silver-

tipped canula, these all carefully cleansed and sterilized at the same time. The tumor was on the right side, and accordingly the left arm was prepared for intravenous injection of salt solution 6/10 of 1%.

Before beginning the operation, I made an incision over the median basilic vein of the left arm, introduced a small ligature carrier under the vein, carrying a double ligature, which was then divided, the carrier withdrawn, and the distal half of the ligature tied tightly, and it was then used as a guy to control the vein while being opened, and the canula inserted. I knotted, but did not tighten the proximal ligature until the vein was opened, which I did longitudinally, with a fine but very sharp-pointed scalpel, and then the canula was introduced, flowing at the moment of introduction with normal salt solution, temperature 115° F., and the proximal ligature was then tightened around the canula, which held it gently in place, and the whole was wrapped around with warm towels, and entrusted to an assistant. The flow was controlled by the assistant (Dr. LeBreton). About 150 c.c. of salt solution was allowed to flow into the veins of the child before any operative procedure was begun.



Figure III. Lymphangioma.

The child was given as little anesthetic as possible, and the operation was begun, with the necessity in mind to avoid as much as possible the shock of a prolonged operation, and yet reach the afferent lymphatic trunk supplying the tumor where it emerged from the body cavity and tie the same securely on the body surface.

An incision 5 inches long was made around the posterior margin of the tumor, and the whole tumor was rapidly dissected away from the underlying muscle and scapula, and, when the line of demarkation was not exactly evident, another piece of muscle was removed, rather than leave any portion of the lymphatic tumor. The afferent trunk was found in the supra-clavicular space and tied. The tumor weighed 12 ounces, and was removed with its attached skin, leaving an uncovered area 5 inches long and 1½ inches wide, tapering to an apex at each end. The entire operation, including the suturing and drawing the skin over the raw surface with tension sutures, occupied less than 15 minutes, and an almost constant flow of salt solution was maintained by the assistant in charge of that work, the child receiving 600 c.c. of salt solution at a temperature varying but little from 115°. The most rapid work consistent with safety and security was carried out.

The child died from shock.

Both of these operations were undertaken after the true nature of the case had been ascertained, and the extreme gravity of the operation understood, and had been explained to the parents.

The affliction in these cases is very great, the children are really monstrosities. The tumors increase as they grow older, and they are not enabled to secure employment except in disagreeable businesses, and the gravity being understood the operations are warranted.

There has been comparatively little—almost nothing—done by way of recording operative suc-

ses or failures with these cases, and little—if anything,—is known of the etiology of these lymphangiomas.

I examined each of these tumors microscopically, and appended drawing of the microscopic appearance.

The section in each case involving the skin and showing the lymph spaces. When these sections are stained with silver salts, the endothelial character of the lining membrane is clearly seen. The tumors are usually congenital, although they may occur after trauma and disease late in life, seldom developing after puberty. They are to be distinguished from Elephantiasis as being limited in area and seldom involving a limb, and never passing the median line, although they may be double and not connected. They are usually directly connected with the deep lymphatics of the trunk, and, in the literature, I found two cases recorded where lymphangioma had been mistaken for inguinal hernia. The most frequent seats of the disease are the inguinal region, (not involving the extremities), the tongue, the lips and neck and supraclavicular spaces, sides of face and skull. They are in character benign. The history is usually given that the children have no deformity at birth, but some slight abnormality is noticed within the first few weeks, and a steady, slow, painless growth may be expected for some months, and perhaps years. Most cases eventually take on a sudden increase in rapidity of growth and through mechanical means become unwieldy, later poorly nourished and frequently break down and suppurate or discharge, after which stage the decline is rapid.

When there is only a superficial involvement and the tumor remains for a considerable period of slow growth, and the parts are not pendent, the method of occlusion by electrolysis is undoubtedly the method most to be recommended. But to make this effective, application must be made at short intervals for several months and perhaps years, and at each application an anesthetic is necessary. In the rapidly-growing, pendent tumors, or those connected with internal lymphatics—as they most of them are—either on the breast or at the upper or lower openings of the thorax and abdomen respectively, the electrolysis will be found entirely inadequate, and the rapid growth will more than make up for the slight retardation made by a single application. The use of caustics, irritating fluids and Pacquelin's cautery have not recently been, and should not be used. In the operative procedure, there remains to be counteracted the element of shock which is very great in these young cases. The afferent branch connecting with the internal lymph supply must be found and securely tied. Children stand Major surgery rather poorly and these tumors begin to grow rapidly and necessitate early interference, and the risk is consequently greater.

I find no record made of the fact in the literature, but in these two cases there was certainly a similar neurotic tendency in the maternal parent. The maternal parents were both not "favored" with contentment and worldly goods, were parents late, —that is, approaching 30, were hard working, and the tumors in the children were undoubtedly con-

genital. They, however, had, so far as could be ascertained, normal deliveries with not over-prolonged labors, and the children appeared normal at birth. The etiology of these tumors has received little or no attention; or, if so, they have been recorded in unusual places.

Dr. Councilman says, in a general way, that it is supposed they are caused by a congenital or acquired occlusion of the efferent trunk of a set of lymphatics which supply a particular part. This seems plausible, but he does not submit any facts in support of his plausible theory of how or why occlusion occurs. He also adds that most of the spaces are simply normal lymph spaces much enlarged by continued pressure and hypertrophy of surrounding supporting fibrous tissue. The tumors look venous, but usually contain but little blood. When the tongue is the seat of the affection, it may be so great as to force the tongue from the mouth. The peculiarity is marked in cretins who are frequent objects of attack. I believe if these tumors are taken early, under proper precautions they may be operated upon with safety. The deformity appears to do no injury, except when it involves, outside the trunk or skull, the subcutaneous connective tissue and skin. There should be future histological and pathological microscopical work to determine what difference exists between these external lymphatics and the internal lymphchannels.

THROMBOSIS OF THE CAVERNOUS SINUS.—DOUBLE PANOPHTHALMITIS OF SEPTIC ORIGIN.

By EDWARD JACKSON, M. D.,

of Denver, Colo.

It is rare, in rapidly fatal disease, to have the ocular symptoms overshadow all others; and give the most positive and valuable evidence of the impending danger to life. The following cases were of this character. They occurred at the Arapahoe County Hospital, during my last term of service; and were at first regarded by the internes as cases of purulent conjunctivitis, a diagnosis that had a good deal to favor it. As the anatomical conditions were ascertained by post-mortem examination, they seem worthy of record.

CASE I. *Thrombosis of Orbital Veins Extending to Cavernous Sinus.* J. C., male, aged 26, a native of Ohio, suffering from pulmonary tuberculosis, was admitted to the medical service of Dr. H. B. Whitney, January 3, 1901. He had suffered from a hemorrhage in 1897, and with cough and expectoration since that time. He had been somewhat worse the last few months—was weaker, and had suffered from asthma. But he was not greatly emaciated, and gave no indication of an early, fatal termination of his case.

During his first five days in the hospital, his temperature did not rise above 99.5. Respiration ranged from 24 to 42, and pulse from 100 to 138. His urine was rather concentrated, specific gravity 1030, but otherwise normal. On the night of January 8th, the lids of the right eye began to swell. There was slight muco-purulent, conjunctival discharge, and severe pain in the region of the right orbit.

January 9th.—The patient was transferred to my charge, and when I saw him in the afternoon, there was great swelling of the right lids, some protrusion of the eye, severe muco-purulent conjunctival discharge, no marked impairment of the ocular movements, cornea normal and

vision apparently unaffected. The left eye had already been protected from supposed risk of infection by discharge from the right by a Buller's shield. It appeared normal in all respects, and remained so throughout the case. The temperature, which had risen the preceding night to 101°, had dropped again to normal; pulse 120; respiration 30. Repeated microscopic examination of the conjunctival discharge failed to reveal either the gonococcus or the Klebs-Loeffler bacillus. The patient made no complaint except of severe aching in the region of the orbit.

January 10.—The swelling of the lids, chemosis, prominence of the eyeball and conjunctival discharge have increased. Temperature rose to 100.5° in the afternoon, with pulse 108, respiration 20.

January 11.—The swelling was still greater. The cornea remained clear, vision apparently good, and there was no impairment of the ocular movements, other than would be accounted for by the orbital swelling. The temperature, 101.4° in the morning, rose to 102.5° in the evening. There was continued complaint of pain and slight delirium. The patient died on the 12th, quite suddenly, shortly after midnight, having responded rationally to questions a few minutes before.

The treatment employed was frequent washing of the eye with a 2 per cent. solution of protargol, and the application of a 20 per cent. solution of protargol, once daily. Internally calomel and a saline were given, with morphia to diminish the pain.

The post-mortem examination was made 14 hours after death by Dr. J. A. Wilder, pathologist to the hospital. It showed old lesions and scattered tubercles in the upper lobes of both lungs; with moderate recent congestion and edema. The heart, spleen and kidneys were normal; there was a nutmeg liver. The cerebral meninges showed miliary tubercles scattered over both hemispheres, but none at the base of the brain. In the right cavernous sinus was an organized clot, about 1/8 of an inch in diameter, extending into it from the orbital vein.

In the early part of its course, this case looked more like one of purulent conjunctivitis than anything else, although the excess of swelling and rather moderate discharge caused me at first to think it might be diphtheritic. The movements of the eye showing no impairment except such as would be expected from the swelling, at first seemed to exclude thrombosis of the cavernous sinus. Later, the swelling of the orbital tissue showed that it was in some way involved; but not until the case had run its course did I conclude that it was a case of sinus thrombosis.

The clot found extended into the cavernous sinus from the orbital vein. But, even allowing for post-mortem contraction, had probably not filled the sinus; and it presented no prolongations extending into other cerebral sinuses. It seems probable that it originated in some vein in the orbit. This would account for the absence of any early paralysis of the extraocular muscles. The vision retained until the time I last saw him, a few hours before death, showed that the thrombosis had not then involved the retinal vessels.

CASE II. *Double Panophthalmitis and Septicemia from Abscess of the Knee.* P. P., female, aged about 45, a light mulatto, a native of South Carolina, was admitted to my service January 25th, 1901. The only history obtainable was of inflammation beginning simultaneously in both eyes nine days previously. Within five days she had become absolutely blind. She was said otherwise not to have been sick; but we subsequently learned that she had been ailing for a couple of weeks. The left knee was somewhat swollen and painful; and there were several large blabs on the right foot and ankle. There was a fetid, purulent discharge from the vagina, but the patient denied any history of venereal disease. Repeated examinations failed to reveal the gonococcus in either the conjunctival or vaginal discharges.

On admission her temperature was 99.5° and pulse 120.

The pulse did not rise above this; respiration continued at 24, and her temperature did not again go above normal, until a few hours before her death, when it rose to 102°.

There was no rigor and no excessive sweating. The urine contained some pus and some granular casts, and had a specific gravity of 1014, but was fairly abundant. The patient's mental condition was apathetic. She continued conscious until just before death, and answered rationally, but quite sluggishly, the questions put to her. She insisted that there was very little the matter with her except her eyes; and blamed the doctor who had first attended her for her loss of sight. She gave no evidence of pain except when the swollen knee or one of the eyes was pressed upon.

The lids were moderately swollen. The conjunctiva was extremely chemotic, folds of it protruding between the lids. Both eyes were absolutely blind with all the evidences of panophthalmitis. The conjunctival discharge was quite moderate. The corneas were but slightly turbid. But there was some pyopyon and extensive suppuration back of the lens. The right eye showed tension + 3. The left eye was soft, the cornea having been perforated near its lower margin, allowing free exit to pus from the interior of the eye.

The inflammation had so clearly arisen from the posterior segment of the eye-ball, indicating a probably embolic, septic origin, that my colleague, Dr. J. N. Hall, was at once asked to see the patient. His careful examination revealed only a few minute, petechial hemorrhages, which he regarded as also pointing strongly to a septicemia. The treatment of the eyes was confined to cleansing with a 2 per cent. solution of protargol. The patient's condition remained practically unchanged until the morning of the 25th, when the signs of commencing septic pneumonia were found by Dr. H. B. Whitney. She died at 2 P. M. that day.

Postmortem examination made by Dr. J. A. Wilder, showed decided hypostatic pulmonary congestion, but no solidification. The heart and great vessels were normal. The uterus and appendages were normal. The only origin discovered for the septicemia was in the left knee joint, which was filled with pus. The right kidney was normal, the left was slightly enlarged, and its capsule stripped with some difficulty.

In this case, although it came into the hospital as one of purulent ophthalmia, the appearance of the eyes at once demonstrated that it was a purulent retinitis or choroiditis, which from its character and simultaneous involving of both eyes, must almost certainly have arisen from grave septicemia. Although the temperature and general symptoms gave little assistance in the diagnosis, the eye symptoms seemed sufficient to make it fairly certain from the first.

The origin of the sepsis, however, was only cleared up at the post-mortem examination. Up to the time of death, although no physical signs of it were discovered, a septic endocarditis seemed the most probable explanation. A possible focus of infection in the genital organs was also thought of. The absence of distinct uremic symptoms and the fairly good general character of the urine led us rather to exclude kidney disease as an important factor in the case; and the post-mortem examination showed no grave organic changes in the kidneys.

A Case of Absence of the Pulse in the Arteries of the Left Arm.—S. I. Schvartz (*Medicinskoje Obsrenie*, June, 1901) observed a case in which no pulsation of the radial and ulnar arteries could be detected. The patient, a girl of 20, was of a nervous temperament and of a neurotic family. She had had at one time paralysis of the left hand accompanied by hyperesthesia. This affection disappeared suddenly after a man grasped her forcibly by the hand to save her from an impending fall. The author ascribes the absence of the pulse to nervous spasm of the walls of the blood vessels as a result of hysteria. [A. R.]

ONE MORNING'S WORK WITH STOMACH CASES: ETC.

By BOARDMAN REED, M. D.,

of Philadelphia

Adjunct Professor of Hygiene Temple Medical College.

There are possibly still physicians in practice who look upon dyspepsia as an entity which is always practically the same thing—that is, a condition of imperfect digestion to be met by the prescription of stimulants, condiments, pepsin and HCl. If there are still such practitioners, the following reports of cases, most of which were seen at my office upon a single morning in April last, will likely surprise them, and should certainly interest all physicians:

CASE 1.—Lady from Boston, Mass., aged 56, who consulted me here first three years ago and was found to have chronic atrophic gastric catarrh. The total acidity of her stomach contents was 13, as against a normal of 50 to 60, and there was no free HCl an hour after the Ewald breakfast. Mucus, large amount. The stomach itself was in a condition of gastropexia with some dilation, the upper boundary of the fundus being two inches above the lowest rib in the left parasternal line, and the greater curvature two inches below the level of the umbilicus. She had been afflicted from birth with a chronic form of constipation. She was placed upon appropriate treatment and returned home a few days later. Her first visit to me was chiefly on account of the ill health of her daughter who was then under my care. On returning home she was so engrossed with family cares and other duties, that she soon abandoned all efforts at treatment. She returned to me recently because in addition to her stomach symptoms, she had developed a serious form of chronic arthritis rheumatoid in type, and suspected that it was in some way connected with her chronic gastrointestinal troubles, as it most probably is. I found her with the stomach externally in the same condition as before, except that the gastric contents one hour after the Ewald breakfast showed a total acidity of only 11, no free HCl whatever, and the percentage of combined HCl .014 as against a normal of .050 to .070. She was otherwise in worse health than before, her nerve tone being greatly lowered and her joints, some of them, so stiffened that they could scarcely be moved. She had been, during some months, under medical care in Boston, but no special examination had been made of her digestive system and there had been no urinalysis. The urine, on being carefully examined here, showed that the percentage of urea was only 1.51, indicating a faulty metabolism, which goes far toward explaining the malnutrition and joint trouble. I have just learned (Sept. 5) that she has been under treatment in Boston for her joint affection during the past summer, and is about the same.

CASE 2.—A physician, aged 35, came under my care in January, 1900, suffering from acute pain several hours after eating, which was relieved by pressure and by taking more food. The physical examination showed him to be sound in all respects, except that upon analysis of the stomach contents an hour after an Ewald breakfast, the HCl proved to be in very large excess. The total acidity during the first few weeks of treatment was from 62 to 98, and the free HCl ranged from .160 up to .208, as against a normal of .050 to .070 in spite of large doses of alkalies and belladonna. He was in active practice, not being able to rest during treatment as he should have done, and, finding other measures ineffectual in his case, I treated him with the high tension faradic current applied directly to the inner walls of his stomach by my modification of the Einhorn intragastric electrode. After a month of this treatment he lost all symptoms and the percentage of free HCl, though much reduced, was still not normal. However, he felt so well and was so busy that he gave up treatment, declaring himself in as good health as he had ever been, so far as he could judge by his feelings. That April morning, after being one year without treatment, he returned to have another test made on account of a recurrence of gastric discomfort and pain. Upon testing his stomach contents we found again an enormous excess of HCl. The total acidity was 92, the free HCl .233, and yet the combined HCl was only .058 as against a normal of .060 to .070,

thus confirming many previous observations that in hyperchlorhydria peptonization is often lessened rather than increased above the normal. In this doctor's case there was, and still is some proliferation of the gastric cells, though there has never been a large excess of mucus in the stomach. His unusual resistance to treatment would render it probable, however, that a proliferative process had been set up, since in all cases where the affection is purely neurotic, there is a prompt response to alkaline and sedative treatment—at least prompt curative results usually follow such a treatment when the patient can observe the proper hygiene. A professional man, obliged to continue in the active pursuit of his calling, might well resist any treatment. This patient responded again promptly to the high tension faradic current applied intragastrically.

CASE 3.—A prominent business man of Philadelphia, aged 44, consulted me in February, 1900, and was found to have a liver slightly enlarged and a stomach dilated to one half inch below the level of the umbilicus. He was in a nervous, overstrained condition, with much impaired sleep, being under an extreme mental tension on account of a multiplicity of important business affairs. The analysis of the stomach contents one hour after the Ewald breakfast showed the total acidity to be 82, the free HCl .211, and the combined HCl .043—another confirmation of how a very large excess of HCl may coexist with a deficiency of peptonization, as shown by the proportion of that acid found combined with the albuminoids of the food. He resisted drug treatment and only responded slowly to the high tension faradic current applied with the intragastric electrode. In his case also it was impossible, he thought, to give up his business and rest. Notwithstanding this, he improved considerably, and at the end of about one month the total acidity was .109 and the free HCl had fallen to .141, not enough stomach contents being obtained to make the extra test for the combined HCl. There was much mucus in his stomach at the beginning, and some proliferation of the gastric glands, as in the previous case. On the 29th of March last he returned to me, having had no treatment meanwhile, since he considered himself well enough to do without. He had been carrying on his extensive business during the entire interval, except that he had had a vacation during a part of the summer. He was again put upon gastric sedatives and alkalines, together with an order to return every other day for intragastric faradization, but after two treatments of this kind, was prevented by business from making other visits to my office, and to-day, upon his return, nearly a month later, I found naturally only a small falling off in the hyperacidity. The total acidity was 88, free HCl .197 and the combined HCl .124. At present he has almost no complaints to make subjectively, feeling well and getting good sleep. Yet I realize that his stomach is in an abnormal condition, and that notwithstanding the present apparent tolerance of the very excessively acid secretion, there is great danger that, unless he perseveres with appropriate treatment, his nervous system will again be seriously impaired and in addition to a chronic acid gastric catarrh, a chronic enteric catarrh ultimately result.

CASE 4.—Merchant, aged 38, consulted me first in February, 1898, on account of extreme nervous depression. This upon inquiry was proved to result from a variety of causes which need not be detailed fully here, but prominent among the conditions found was a condition of hyperacidity from hydrochloric excess with large amount of mucus in the stomach, indicating a beginning acid gastritis. He was also very lithemic. Appropriate treatment, both medicinal and electric, directed to the stomach condition as well as to the entire nervous system, rapidly improved him. The mental depression which had brought him to the verge of melancholia, disappeared, and by the end of three months he declared himself to be feeling perfectly well. For a long time past he has had no regular treatment from me, though once or twice since the time before referred to, he has had some slight recurrences of mental depression, due to lithemia. He called in on the same day before referred to, in order to let me look him over before my departure from the city for a long absence, and I found him in almost his normal condition, though complaining of being a little nervous at times.

CASE 5.—Maiden lady, aged 54, residing in a suburb of New York city, came on with her near relative, Case 1, to see me. She had been in previous years frequently under my care because of a marked derangement in her gastric

secretion (laterly hyperchlorhydria) and other digestive and nervous troubles dependent for the most part, as I finally decided, upon a movable right kidney. After the operation of nephropexy, done at my instance by Dr. E. E. Montgomery, she entirely recovered her health. At her visit on the day above mentioned I tested the stomach contents after the Ewald breakfast with the following results: Total acidity 43, free HCl .076, combined HCl .025. A very little mucus, evidently from the throat. No indications of excessive organic acid. The comparatively low total acidity and small amount of peptonization, as shown by the very low figures for the combined HCl, point to a probable deficiency of pepsin, and I therefore prescribed 15 drops of Parke, Davis & Company's Glycerine of Pepsin in water after each meal. A letter from her, received at the time of writing this reports that she is entirely well except an occasional bilious attack from overeating.

The above reported cases seem to tell their own story and scarcely require comment. They certainly demonstrate that it is not safe, and especially not just to patients, to prescribe for their digestive disturbances, or for the nervous derangement, wholly dependent upon or at least complicated with disease of the digestive organs, without investigating by the modern exact methods the condition of the latter.

JOURNAL DES PRATICIENS.

August 3, 1901. (15me. Année, No. 31.)

1. A Case of Irreducible Femoral Hernia without Symptoms. ED. SCHWARTZ.
2. Psychotherapy in the Treatment of Neurasthenia.

MAURICE de FLEURY.

1.—Schwartz reports the case of a woman of 48, with a chronic bronchitis. While coughing, she felt a slight pain in the right groin, and, on examination, found a small femoral hernia, which remained irreducible. There were no symptoms, the tumor remaining about the size of a small egg. Operation was performed 48 hours after the hernia appeared, and the small intestine was found tightly pinched by the femoral ring. This was reduced, and the operation for radical cure finished. She recovered rapidly. He recalls a similar case in which operation was not performed early, death occurring immediately after the operation. Though it is rare to find a case of femoral hernia which has the small intestine simply pinched laterally, operation should be done immediately. [M. O.]

2.—To treat neurasthenia well, a physician should have had it himself, thinks de Fleury. He must have patience, talk to the patients, listen to their tales of suffering, take an interest in them and their doings, and so encourage them. Most important of all, he must be sure of his diagnosis, and must know whether the patient is a neurasthenic with hypertension, or one with hypotension. In the former case, a diet of milk and vegetables, massage warm baths, hypodermic salt solution injections, exercise, etc., will be indicated. In the latter, rest with good food, tonics, fresh air, and later graduated exercise, is needed. Here, too, saline injections will help. When neurasthenia has existed for some time, the mental condition of the patient may show a quasi-independent personality, with fixed ideas. Here especially does hypnotic suggestion work wonders. Some regular physical exercise and some progressive mental work are both necessary to occupy the returning nervous strength of the neurasthenic. The patient can be isolated at home, unless very ill. Rest for the neurasthenic with hypotension is needed at first, later exercise can be begun. In the neurasthenic with hypertension, exercise should be begun at once. When the patient shows excitability or enervation, begin some intellectual pastime. Overfeeding should never be given a neurasthenic with hypertension, but may be of value in treating one with hypotension, early in the case. A voyage will distract the neurasthenic with fixed ideas, melancholia, etc. But to treat neurasthenia successfully, the physician must have the entire confidence of his patient. [M. O.]

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The Trial of the Assassin.—In his celebrated defence of Hadfield, for shooting at the King, Lord Erskine said: "The scene which we are engaged in exhibits to the whole civilized world a perpetual monument of our national justice. The transaction, indeed, in every part of it as it stands recorded in the evidence, places our country upon the highest pinnacle of human elevation." These words of the greatest of forensic orators have not lost their significance after the lapse of a hundred years and in the midst of a different and distant phase of Anglo-Saxon civilization. Erskine spoke for the supremacy of English law as against the turbulence of popular passion, and his language applies with great force and precision to the sovereignty of American law as it has just revealed itself in the trial of the assassin of the President.

From the medico-legal standpoint, however, it cannot be said that the trial of Czolgosz equals in interest and importance the trial of Hadfield. In fact it can hardly be claimed that the case of the President's assassin had any medico-legal aspect, whatever. If it had any such aspect, this was most successfully kept out of public view in court. The trial of the case, which from the purely legal standpoint was, we should judge, perfect in its form and setting, was on the other hand singularly barren and un instructive for all the purposes of medical jurisprudence. This can hardly be because the case was really lacking in all elements of medico-legal interest, for the eminent counsel for the defence had no sooner come from the trial than they both announced in the public press their belief that their client was insane. We are therefore privileged to wonder why they were so reticent on the subject when the case was still before the jury.

From this point of view we venture to predict that this case will always be looked upon as somewhat of an anomaly. It is certainly without precedent in this country for counsel for a prisoner to entertain a firm belief in that prisoner's insanity, and yet to put no witness on the stand in support of that belief. In fact this trial was marked by rather an apologetic attitude on the part of the learned counsel for the defence, which was hardly in keep-

ing with the traditions of the bar. It was Erskine's boast, in the case of Hadfield, that it was his privilege to defend the accused, who was "covered all over with the armor of the law." He based that defence on the prisoner's insanity, but he did not wait to proclaim his belief in that insanity until after the close of the trial. We speak simply in the interests of medical jurisprudence, and we cannot help but feel that the learned counsel have rather spoiled a fine situation by speaking as they did out of court.

As to the prisoner's mental state, we do not presume to raise a doubt other than that raised by his own lawyers. The experts who examined the accused were not put on the stand, and the inference is that either they were not wanted or that they had nothing to say.

The trial of the case was dignified, solemn and expeditious. The American public is to be congratulated that there was no repetition of the scenes that disgraced the trial of Guiteau. The medical profession, on the whole, is perhaps just as well satisfied that its services were not required in the prisoner's behalf.

Erskine's Defence of Hadfield.—In all the records of medical jurisprudence there is probably not a more important utterance than Erskine's speech for James Hadfield in the court of King's Bench, on a trial at bar. The case had some remarkable resemblances (as pointed out by a writer in the *New York Evening Post*) to that of the assassin Czolgosz, but in many respects it was most unlike it. Hadfield was indicted for shooting at King George III in Drury Lane Theatre, and was brought to trial in April 1800. He had fortunately missed his mark, but according to the English law, his offense was treason and his life was the forfeit. Erskine, then at the height of his fame as the leader of the English bar, was appointed by the court as counsel for the well-nigh defenceless wretch, and based his case entirely on the allegation of delusional insanity. In the opening sentence of his address to the jury he claimed that the duty imposed upon him by the court was a privilege. When we consider the state of public opinion in Great Britain one

hundred years ago with reference to the atrocity of an attempt to assassinate the King, and the general ignorance and perversity, both lay and professional, on the subject of insanity, we may well concede that Erskine's task was such a one as nobody but a legal Hercules could have brought to a successful conclusion.

Hadfield had been a soldier, and in the war in Flanders had received, in the midst of a desperate charge, a series of frightful wounds, one of which had penetrated the brain. His life was saved as by a miracle, but he never recovered his mental health, and deteriorated into a state of delusional insanity. He believed that, like the Savior, he was called upon to sacrifice his life, and under this delusion he fired upon the King.

The difficulty which Erskine had to encounter was to establish the validity of this defence against the antiquated and irrational definitions of insanity as expounded by the English law—definitions which are still too much in evidence in some of our American courts. This task he accomplished in a masterly oration, which even to this day leaves little to be criticised by the most advanced alienist. For its day, and for the circumstances, it was a revelation, and must always remain a landmark of one of the most important advances in the medical jurisprudence of insanity. The court at first had been much against the accused, but it was won over by the logic and eloquence of Lord Erskine, and finally ordered the prisoner's acquittal.

Hadfield's case differed entirely from that of Czolgosz in the radical fact that the prisoner had a good defence. But even so, it would be interesting to speculate as to what would have been the issue if Hadfield had succeeded in killing the King. We fear that in that case even the eloquence of Erskine would not have saved him.

Injuries of the Pancreas.—The pancreas is seldom seriously injured without other and more important viscera being involved. It is encompassed by important structures, many of which are vital. Many years ago its function was supposed to be that of a buffer for the protection of the large vessels lying behind it. One could conceive of a penetrating wound properly thrust below the kidney which might injure the pancreas alone, but we have never read the report of such a case. Uncomplicated rupture does not occur (Treves). That partial laceration or bruising without implication of the neighboring structures may occur after an abdominal contusion, giving rise to but transient discomfort, is demonstrated by pancreatic scars which have been disclosed after death. Robson says the pancreatic tissue is comparatively soft in consistence and easily

bruised, so that, although it is placed in the most favorable position for protection from direct injury, yet a slight injury takes more effect on it than on many firmer organs. We know how often slight hemorrhages occur after blows and falls in those individuals with apoplectic arteries or with pancreatic congestion due to interference with the venous return. The pancreas has been and is a laggard in surgery as well as in medicine. Much of this is due to its central position and to the difficulty of diagnosis. Abdominal injuries, be they wounds or contusions, are not subjected to operation because the pancreas is afflicted, but to anticipate or combat peritonitis and to check hemorrhage. A sterile stiletto puncture would not be followed by serious consequences unless a large artery were severed. The effect of a high velocity bullet with an adamant covering would probably be slight. A soft-nosed bullet with a low velocity would produce a ragged, contused laceration with a greater tendency to hemorrhage or sloughing. Ruptured pancreas is rapidly fatal from hemorrhage. Gangrene or suppuration may ensue. There are a number of traumatic pancreatic cysts on record. Some believe that many of these cysts are really collections of blood and pancreatic fluid in the lesser peritoneal cavity. Acute and chronic pancreatitis may follow contusions. The escape of sterile pancreatic juice into the peritoneal cavity does not necessarily mean peritonitis. When it escapes externally through a fistula it digests the skin, but it is probably absorbed rapidly from the peritoneal cavity or remains to form a cyst.

In all penetrating wounds of the abdomen laparotomy should be performed, not even excepting those produced by such weapons as the Mauser and Lee-Metford rifles, providing efficient facilities be at hand. On the field the expectant treatment of rifle wounds has proved to be safer, but this, we fear, may lead some to defer exploration in civil practice until symptoms of peritonitis appear. If on exploration the pancreas be found injured, hemostasis and cleansing are indicated. Should a portion of the organ protrude from a wound in the parietes it may be washed, reduced and sutured in place or the herniated portion may be excised. When the gland is ruptured or extensively lacerated, the blood vessels may be ligated and the rent sutured. More commonly gauze tamponage will be indicated because it is more quickly applied. A devitalized section of the gland or a crushed tail may be removed between ligatures. Operations on the head are limited to partial excision with the preservation of the common duct. Complete extirpation has been successfully accomplished in dogs but never in the human subject. In Senn's experiments the animals

died from hemorrhage, shock, peritonitis, gangrene of the duodenum, and marasmus. As long ago as 1682 Brunner noticed that dogs thrived after partial removal of the organ. It is asserted by some that diabetes will follow total pancreatectomy. That the other digestive organs may assume the work of the pancreas is proven by closure of the duct by disease or artificial means.

Hemolysis and Immunity.—The last few years witnessed revelations pregnant with results which it is a pleasure to contemplate. One by one the laboratory workers approach the obscure subject through different channels, coming nearer and nearer to a satisfactory solution of the difficult problems. Immunity against bacteria no longer stands alone among the phenomena surrounding cell-life; it finds its correlation in hemolysis and cytolysis. Bacterial toxins are identical with hemotoxins and cytotoxins, for the simple reason that the bacterial cell, like any other, possesses secretions which, while physiological as far as the bacterium itself is concerned, may be destructive to the life of other cells with which it comes in contact and is compelled to wage a war for existence. It is probable that the same law underlying the formation of the protective venoms in reptiles and insects also operates in the case of toxins. The first successful transfusion of blood from a goat into a human being performed by Deny's in 1667 was soon followed by others with less favorable results. It was finally learned that the blood of one species of animal cannot serve for transfusion into the blood current of an animal belonging to another species; it is either itself destroyed in the foreign organism or leads to destruction of the blood of the host, in other words, foreign blood is poisonous. The degree of toxicity is variable. Those near each other in the animal scale possess a blood of lesser toxicity for each other, as for instance, a rabbit and guinea pig. On the other hand the blood of birds and snakes is very poisonous to mammalia, while the blood of some fish, as the common eel, is such a virulent poison that 0.1 c.c. of the serum or whole blood is sufficient to kill by subcutaneous injection a large rabbit in 3 to 5 minutes. Repeated injections of smaller doses will bring about cachexia and finally death.

However, by careful injections of the blood of the eel into other animals Tshistovitch (*Bolnitchnaia Gazeta Botkina*, Vol. X, No. 19) succeeded in producing immunity in the same manner as it is produced in cases of vegetable or bacterial poisons. One of the remarkable phenomena accompanying immunization is the property acquired by the serum of the immunized animal to agglutinate the red blood corpuscles of the defibrinated blood of the eel.

Bordet (*Annales de l'Inst. Pasteur*, 1898) was the first to observe the agglutination of the red blood corpuscles of a rabbit by the serum of a guinea pig which received the blood of the former into the abdominal cavity or subcutaneously. This phenomenon he showed to be peculiar to almost all kinds of blood. If a guinea pig or rabbit receives injections of the blood of a hen, dove, horse, etc., the serum of the former will agglutinate the blood corpuscles of the latter. The agglutination takes place after 3 to 4 injections, the corpuscles coming together and forming islands with clear spaces between; soon the hemoglobin is dissolved out and the corpuscles disintegrate. This phenomenon is identical with that observed in agglutination of bacteria by the serum of animals suffering from diseases produced by them. Like in the case of bacterial infection, the agglutination of the red blood corpuscles can be made specific, *i. e.*, only that blood will be agglutinated which was received by the immunized animal. The specific substance which agglutinates and destroys the red blood corpuscles of the foreign blood consists, according to Bordet of two elements: "alexine" and "substance sensibilisatrice"; the former is a normal constituent of every blood, the latter formed only after the injection of the foreign blood. The "substance sensibilisatrice" so affects the red blood corpuscles that they are readily seized and destroyed by the "alexine". Ehrlich and Morgenroth call the alexine "complement" or "addiment" and the substance sensibilisatrice—"Immunkörper" or, *Zwischenkörper*". According to these authors, the red blood corpuscles of the foreign blood extract the "Immunkörper" with which they enter into a chemical union. London (*Archives des sciences biologiques*, Vol. VIII, Nos. 3 to 4), repeated the work of the predecessors and by special methods instituted a series of elaborate experiments elucidating every phase of this interesting phenomenon. He departs from the usual terminology by substituting the term "desmon" for "Immunkörper". The former (derived from the greek word meaning to bind) he considers more appropriate and in accord with our present knowledge. Space does not permit us to review even briefly the many interesting experiments, and we shall give only some of the summaries of the results. The author found that physiological hemolysin is composed of alexine and desmon. The former is either of alkaline or acid reaction and is destroyed by a temperature of 55 C.; the latter is neutral in reaction and withstands high temperature. The normal blood contains various hemolysins, or at least material for their formation. These differ from each other by their specific action on different blood corpuscles and, accordingly, in

the nature of the alexine and desmon. The hemolysins of related animals, as the cat and dog, are similar in their action and composition. In artificial hemolysis only the desmon is produced which differs from the physiological desmon only in the fact that it gives a stronger hemolysin with a weaker alexine. Otherwise there is no difference between artificial and physiological hemolysin. Ehrlich's lateral chain theory is contraverted by the fact that both isolysin and autospersmolysin may be artificially produced. According to this theory artificial hemolysin or antitoxin is only an intensified physiological product. If such were the case it would be impossible to explain the formation of isolysin and autolysin which are never found in the normal blood. Furthermore, Metchnikoff found that by the proper method of immunization he could produce spermatotoxin in animals devoid of testicles, and consequently spermatozooids, which according to Ehrlich would be indispensable to the formation of spermatotoxin. Buchner's theory on the other hand, fails to explain the physiological hemolysins. Experiments performed by the author have shown that (1) the spleen plays the chief role in the formation of artificial hemolysin; (2) that the formation of hemolysin is connected with the function of the spleen and not with the mere presence of its cellular elements in the abdominal cavity, and (3) the spleen has no effect on the hemolysin already formed. On the ground of these observations the author presupposes the following mechanism of the formation of artificial hemolysins: The blood elements entering the body of the animal subjected to immunization undergo disintegration. The products enter the blood current and are retained in the spleen where they undergo a peculiar transformation and again enter the blood current. Here they come in contact with the various desmons among which is also the specific desmon produced under the stimulation of the blood which is used for injection. The special products then enter into chemical combination with the specific desmon which becomes modified in a certain direction. In acting on the red blood corpuscles, the desmon agglutinates them, while the alexin produces their disintegration. In formulating his theory of immunity, the author expresses as his opinion that the formation of hemolysins (or antitoxins) is intimately connected with the functions of the cells (of the spleen). Once the hemolysins formed, the battle against toxic agents is transferred—a purely physico-chemical ground. The cellulo-humoral theory, therefore, is the only one possessing the elements of a satisfactory explanation.

Medical Society of the State of Pennsylvania.—The fifty-first annual meeting of the Medical Society of the State of Pennsylvania, just held at Philadelphia, was in every respect a most gratifying success. The registration was the largest in the history of the Society, and the meetings were well attended by appreciative listeners. The program was full—even to overflowing, and in this connection the suggestion seems not inopportune that it might be better to have a smaller number of papers to be selected by the Committee on Scientific Business from among those proffered or solicited by the committee from distinguished members or original investigators or authoritative writers, in order that a little more time be given to each communication and reasonable discussion be permitted. In this way another suggestion that has been made might also be adopted, namely the invitation of distinguished physicians from other States to present papers. The social entertainment of the visiting members of the society was likewise well and generously provided for. Some of the receptions were upon a really munificent scale, and the visitors generally have gone away with a sense of satisfaction with the scientific program and a feeling of gratitude for the cordial hospitality that has been shown them. The thanks of the members are due to the officers of the meeting, and particularly the Committee on Arrangements, to whose efforts the success of the meeting must be largely credited. Dr. Davis presided with eminent grace and ability and his admirable address, which it is feared was not heard by as many as could be wished, on account of the noise made by parading bands of music on the street, will surely be read with pleasure and profit when published.

In Dr. Ball, of Lock Haven, the society will have a worthy successor to Dr. Davis, and we hope that the meeting at Allentown in 1902 will be not less successful than that which has just been concluded. The Committee to Suggest Changes in the By-laws presented a long report, which was not read, but is to be published and distributed, and which is intended to bring the organization of the society into harmony with the recent reorganization of the American Medical Association.

It is expected that the Medical Society of the State of Pennsylvania will be entitled to eight members in the House of Delegates of the American Medical Association.

The Continuous and Remittent Fevers Found in Greece.—But four classes of fevers are found in Greece, according to Dr. Spiridon Kanellis of Athens, (*Medicine Moderne*, June 5, 1901, No. 23). The first class consists of those common fevers, remittent, or continued, auto-infectious, of gastrointestinal origin, which last from one to three weeks, seen especially in the warm weather. Typhoid fever forms the second class. The third class comprises all the forms of malarial fever, the gastric, the bilious, the gastro-bilious, and the pseudo-typhoid. In the last group are the many cases in which two or more of the above mentioned types occur together, the mixed or complicated fevers. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

University of Pennsylvania Medical School.—The Medical Department of the University of Pennsylvania opened its 136th annual session on Tuesday, October 1, 1901, at noon. Mr. C. C. Harrison, provost of the University, addressed the students.

Jefferson Medical College.—On Tuesday evening, October 1, 1901, the Jefferson Medical College opened its 77th annual session. Dr. J. Chalmers Da Costa, professor of clinical surgery, delivered the introductory address.

Medico-Chirurgical College.—The opening exercises of the Medico-Chirurgical College were held Tuesday evening, October 1, 1901. The inaugural address was made by Dr. John C. Heisler, professor of anatomy.

Recent Dental Anatomy.—A lecture was given last week before the students of the dental school of the University of Pennsylvania, upon some recent studies in the anatomy of the teeth and jaws, by Dr. Willoughby D. Miller, professor in the dental department of the University of Berlin. It is announced that Dr. Miller will receive the degree of Sc. D. at the next commencement exercises of the University of Pennsylvania.

Bequests.—By the will of the late Helen M. Parker, of West Philadelphia, the Women's Pennsylvania Society for the Prevention of Cruelty to Animals receives the sum of \$10,000 to be used for the erection of fountains for horses and dogs and \$1,000 for the general purposes of the organization. \$5,000 is also left to the Home for Incurables to endow a bed in her name. Should her son, to whom the residuary estate is left, die without issue, \$25,000 more will go to the Home for Incurables, and the rest to the Society for the Prevention of Cruelty to Animals.

Vital Statistics for Philadelphia for the week ending September 28, 1901.

Total mortality 365

	Cases.	Deaths.
Inflammation of the appendix 4,		
brain 6, bronchi 4, heart 1, kid-		
neys 16, larynx 1, liver 1, lungs		
16, pericardium 1, peritoneum 6,		
stomach and bowels 14		70
Marasmus 24, inanition 11, debili-		
ty 7		42
Tuberculosis of the lungs		44
Apoplexy 10, paralysis 5		15
Heart-disease of 19, dropsy of 2,		
fatty degeneration of 1, neuralgia		
of 1		26
Uremia 10, Bright's disease 8, dia-		
betes 1		19
Carcinoma of the breast 1, stomach		
2, uterus 1, bowels 1, liver 1, eso-		
phagus 1, pelvis 1		8
Convulsions 3		3
Diphtheria	59	7
Brain-dropsy of 1, hemorrhage from		
1, softening of 2, tumor of 1		5
Typhoid fever	111	8
Old age		11
Scarlet fever	42	1
Smallpox	29	3
Abscess of the lungs 2, alcohol-		
ism 2, asthma 2, anemia 2,		
atheroma 1, burns and scalds 1,		
casualties 14, cholera infantum		
12, cholera morbus 1, cirrhosis of		
the liver 2, consumption of the		
bowels 1, croup 1, croup mem-		
branous 1, cyanosis 7, diarrhea		
4, disease, kidney 1, drowned 2,		
dropsy 2, epilepsy 1, fever, malar-		
ial 1, gangrene, foot 1, hernia		
3, hemorrhage, umbilical 1, hem-		
morrhage from uterus 1, insanity		
1, intussusception 2, indigestion		
1, jaundice 2, obstruction of the		
bowels 5, edema of the lungs		
3, retention urine 1, sarcoma, leg		

Cases. Deaths.

1, peritoneum 1, jaw 1, shock,

surgical 3, stricture of esophagus

1, suffocation, illuminating gas 1,

suicide 2, teething 1, tetanus 1,

tumor, ovarian 1, unknown 2,

whooping cough 7

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NEW JERSEY.

McKinley's Memorial Fund.—The people of Trenton are much interested in a McKinley memorial. A sum of money is to be raised by small popular subscriptions for the erection of a wing to the Mercer Hospital to be named in memory of the late president. Several hundred dollars have already been contributed.

A New Medical Society.—A new medical society has been organized at Perth Amboy, N. J. This is the first society of the kind in this city. The officers are Dr. J. S. Wilson, president; Dr. H. M. Brace, vice-president; Dr. F. C. Henry, secretary; Dr. W. E. Ramsay, treasurer.

Dr. William S. Baldwin Paralyzed.—On September 25th, Dr. William S. Baldwin, of New Brunswick, one of the managers of the State Hospital at Trenton, and member of the committee investigating the affairs of the institution, while stepping from a carriage at the asylum to attend the investigation, was stricken with paralysis. Dr. Baldwin reeled and fell to the ground in the presence of his associates, who bore him to a room in the institution, where he was attended by the house physicians. His recovery is yet very doubtful. The investigation was not resumed on account of Dr. Baldwin's affliction. Dr. Baldwin is seventy-seven years of age, and is one of the oldest practitioners in New Jersey; he has never held public office except as manager of the asylum. He was one of the physicians of Rutgers College, in New Brunswick while Governor Voorhees was a student there.

NEW YORK.

Food Adulterants.—One of the most striking features of the exhibit of the Department of Agriculture at Buffalo is a collection of silks dyed with food adulterants. One piece of silk is a brilliant red from a substance called "rosaline," used for coloring meats, such as corned beef and sausage. A yard of pink is tinted with dye from preserved cherries and another yard of salmon hue owes its beauty to currant jam. Various kinds of jellies give other colors; there is a fine purple from port wine, a magenta from burgundy, a light red from tomato catsup and a pretty yellow from soda water flavoring.—*Exchange.*

The Medical Society of the State of New York will hold a semi-annual meeting in Hosack Hall, New York Academy of Medicine, 17 West Forty-third street, New York City, October 15th and 16th, 1901.

The Intradural Injection of Tetanus Antitoxin.—The successful use of intradural injections of antitetanic serum, in a boy of fourteen, is announced by Drs. Kinear and Hoyt, of St. Catherine's Hospital, Brooklyn, N. Y.

The American Public Health Association.—At the meeting of the American Public Health Association held in Buffalo, September 16-20, the following officers were elected for the ensuing year: President, Dr. Henry D. Holton, Brattleboro, Vt.; 1st Vice-President, Dr. Walter Reed, U. S. Army; 2d Vice-President, Dr. Jesus Chico, Guanaquato, Mexico, and Treasurer, Dr. Frank W. Wright, New Haven, Conn. The meeting next year will be held at New Orleans.

The Milk in New York.—The Milk Commission of the New York County Medical Society, which was appointed in January, 1900, made its report last week. The Commission found the milk supply of the city very good from a chemical point of view, but the amount of bacteria obtained from it was alarming.

Electrocution.—This method of exterminating criminals was first suggested by Dr. A. P. Southwick, of Buffalo, in 1875. It was only ten years later that Governor Hill of New York permitted the substitution of the electric chair for the gallows. In 1888 an act was passed directing the execution of capital criminals by the electric chair, and in 1890, electrocution was first attempted upon a murderer named Kemmler, at Auburn, N. Y. The chair consists of an adjustable head-rest, in which the head electrode is fixed, binding straps, and another electrode, which,

penetrating the back of the chair, is applied to the lower spine. The electrodes connect with a coil leading from the dynamo, the voltage reaching as high as 2000. The chair is fastened to the floor, its feet being well insulated. Death occurs in from 10 to 20 seconds, and is thus almost instantaneous. It is in this chair that Czolgosz will meet his death during the last days of October.

NEW ENGLAND.

Typhoid Fever in Nahant, Mass.—Almost 20 cases of typhoid fever have occurred among the families who have spent the summer in Nahant. Five of them are under treatment at the Lynn Hospital. The remainder are either being treated in their summer homes in Nahant, or have been removed to the hospitals in Boston. A number of them are at the Massachusetts General Hospital. As near as can be learned, the sickness is due to the milk supply which has been furnished by a milkman said to belong to Lynn. A representative of the State Board of Health visited Nahant, and afterward visited the patients at the Lynn Hospital, but if he reached any definite conclusion as to the cause of the trouble, he did not make it known. The town of Nahant gets its water supply through the metropolitan system. No deaths have been reported so far.

WESTERN STATES.

Nicholas Senn Prize Medal.—The committee on the Senn Medal beg leave to call attention to the following conditions governing the competition for this medal for 1902: 1. A gold medal of suitable design is to be conferred upon the member of the American Medical Association who shall present the best essay upon some surgical subject. 2. This medal will be known as the Nicholas Senn Prize Medal. 3. The award will be made under the following conditions: *a.* The name of the author of each competing essay shall be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the meeting at which the award is made, and the corresponding envelope to be then and there opened and the name of the successful author announced. All successful essays become the property of the Association. *c.* The medal shall be conferred and honorable mention made of the two other essays considered worthy of distinction, at a general meeting of the Association. *d.* The competition is to be confined to those who at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. *e.* The competition for the medal will be closed three months before the next annual meeting of the American Medical Association, and no essays will be received after March 1, 1902. Communications may be addressed to any member of the committee, consisting of the following: Dr. Herbert L. Burrell, 22 Newbury street, Boston, Mass.; Dr. Edward Martin, 415 South Fifteenth street, Philadelphia, Pa.; Dr. Charles H. Mayo, Rochester, Minn.

Oberlin College.—At the conclusion of the dedicatory exercises of the new Severance Chemical Laboratory at Oberlin College, September 26th, Mr. Lewis H. Severance, of New York City, the donor, handed to President Harrows a slip of paper upon which was the announcement of his gift of \$44,000 as endowment for the chair of chemistry in the college.

The Shelby Medal.—Dr. W. D. Shelby, captain and assistant surgeon of the United States army in the Philippines, has given Hanover (Ind.) College a fund as a memorial to his father, who was formerly a student in the college. From the proceeds of this fund a medal will be struck annually for the best work in scientific studies.

Sterilization of Lead Pencils.—The news comes from Chicago that all lead pencils used by the pupils of the Chicago public schools will in the future be sterilized to prevent the dissemination of diseased germs.

The Wyoming State Medical Society held its fourth annual meeting at Evanston, October 8-9, 1901.

Idaho State Medical Society.—The ninth annual meeting of the Idaho State Medical Society was held at Pocatello, October 3-4, 1901.

SOUTHERN STATES.

A Large Dose of Antitoxin.—Dr. Ward of Baltimore recently reported two cases of tetanus in horses, treated with tetanus antitoxin. In one of the horses five bottles of antitoxin were injected. One bottle of antitetanic serum was injected at a time, and this was repeated every three days. Slight improvement was not noted until after the third bottle had been injected. The only other drug given was the fluid extract of belladonna, injected into the muscles of the mouth to prevent trismus. Both horses recovered rapidly.

Smallpox in Maryland.—Just east of Federalsburg, Md., almost upon the line dividing Delaware from Maryland, sixteen cases of variola have been discovered. On this account, the big Epworth League Convention, announced for October 23, has been indefinitely postponed. The circus, which had been scheduled to arrive next week, has also been notified not to come.

Public School Inspection.—Owing to the recent misunderstandings between the school trustees and some of the teachers regarding the sanitary arrangements of the public schools, the Board of Health of the city of Richmond, Va., are at present making a complete inspection of all the buildings, 18 in number.

CANADA.

(From Our Special Correspondent.)

Royalty at McGill.—When the Duke and Duchess of Cornwall and York paid their visit to Montreal, His Royal Highness performed the ceremony of declaring the new medical buildings of McGill University open. Dr. Craik, Dean of the Medical Faculty, read an address in which much interesting information was contained regarding this department of the University. This medical school has been in active operation since 1824, more than three-quarters of a century; for the first five years the school was known as the Montreal Medical Institution. In 1829 it was incorporated with McGill University and became its medical department. When the school opened in 1824, there were twenty-five students in attendance. At the time of its incorporation with the University, the number had only reached thirty. Twenty years later, in 1849, the number of students was forty-four. In 1889, when the faculty was in its sixtieth year, the number had grown to two hundred and twenty-seven; while last year, which was its seventy-second year, the number was four hundred and ninety. Formerly the provinces of Quebec and Ontario supplied nine-tenths of all the medical students at McGill; now, forty per cent. come from places outside of these provinces. Other students come from all the other provinces of the Dominion, from Newfoundland, from the United States (ten per cent. of the whole number), from the West Indies, from the British Islands, and last year two students came from China, and one from Japan. This great increase in the number of students has of course necessitated a corresponding increase in the teaching staff. Seventy-seven years ago the faculty was composed of but four members. Now it contains over seventy.

Christian Science and Dowieism are not going to be allowed by the authorities to meander as they please in this Dominion. A Dowieite in British Columbia has recently been convicted of manslaughter for refusing medical attendance to his two children, who died from diphtheria under the "silent" treatment. While they are "after 'em" in the West, they are not going to be behind hand in the East. The case of a father in Toronto who refused to supply medical attention to his child for the same disease was up before a Police Magistrate here last week; the result was that the father was committed to stand trial at the coming sessions. During the progress of the preliminary inquiry, the Crown Attorney produced Mrs. Eddy's book and proceeded to read extracts. He stated that he had no hesitation in saying that Christian Science as set out in Mrs. Eddy's book was the most damnable blasphemy he had ever read. While these extracts were being read out in court, the Magistrate interjected: is that woman still at large? "Yes," replied the Crown Attorney. "She got this message from God copyrighted." "Oh, that shows she's sane enough in one respect," replied the Police Magistrate. In the opinion of the two officials, this work must be stopped.

The Provincial Board of Health Report of the Province of Ontario which has just been issued is the nineteenth

annual report of that Department. It gives the death rate in the province for the year 1900 as 11.9 per thousand, 25,382 deaths having been reported in a total population of 2,302,705. Only 93 per cent. of this population reported deaths. Scarlet fever claimed 133; diphtheria 486; measles 93; whooping cough 121; typhoid 550; consumption 2,360. The report of the bacteriologist of the work done in the laboratory shows that in all, there were examined 1,669 specimens. These were divided as follows: Sputum, 703; exudate in diphtheria, 526; blood in typhoid fever, 221; water, 194; water for chemical examination, 33; sewage, 7; lee, two; milk, four; meat—tuberculous, four; actinomyces, 2; anthrax, 4; unknown, two.

Another Centenarian.—The death of a centenarian is reported from the county of Wentworth, Ontario. He had reached 103 years and 7 months.

Smallpox has broken out in Ottawa and is regarded as very serious. The compulsory vaccination by-law is being enforced in the schools. A case has developed in the census bureau and Dr. Montizambert has vaccinated all the employees and officials of that department. Owing to severe criticism, Dr. Robillard, who has been health officer for over twenty years, has tendered his resignation.

Anthrax in Canada.—A very severe outbreak of anthrax is reported among sheep in the Canadian Northwest. Over four thousand of these have died on one ranch alone, and deaths have been reported amongst cattle and horses. The disease was brought into that section by shepherders from Australia. Strict and immediate quarantine was enforced and the outbreak is now said to be held in check.

Quebec College of Physicians and Surgeons.—The following officers have been elected in the Quebec College of Physicians and Surgeons for the ensuing year: President, Dr. Lachapelle, Montreal; vice-presidents, Dr. Vallée, Quebec, and Dr. Craik, Montreal; registrar, Dr. Marsolais, Montreal; treasurer, Dr. Jobin, Quebec; secretaries, Dr. McDonald, Montreal and Dr. Paquin, Quebec.

Trinity Medical College, Toronto, opened for the session of 1901-1902 on the afternoon of September 25th. Dr. Charles Sheard delivered the opening lecture. There were forty-eight first year students registered, the largest class registered on the first day in twenty years.

The Amalgamation of the Toronto Societies.—An effort is being made to amalgamate the different local medical societies of Toronto, to form a strong branch of the British Medical Association.

MISCELLANY.

The President's Assassin Sane.—Through an oversight, the statement appeared in the last issue of the *Philadelphia Medical Journal* that Czolgosz, the assassin of President McKinley, had been judged insane by Drs. Allan McLane Hamilton, Carlos T. McDonald and others. These distinguished alienists, after a thorough examination, all agreed that Czolgosz was perfectly sane.

President McKinley's Interest in the Public Health.—Official announcement to the Marine Hospital Service of the death of the late President McKinley is made in the Public Health Report just issued by the Surgeon-General. It says that "to the admiration and love for President McKinley, inspired by his statesmanship, manhood, and personal qualities, should be added a just appreciation of his prompt response to requests for action in public health matters," and recounts many executive orders issued for the purpose of insuring public safety. Among other things it mentions that when the yellow fever appeared in the National Soldiers' home at Hampton, Va., in 1899, he showed extreme solicitude for the veterans and requested a daily report on the progress of the disease and the success of the measures to check it.

Turpentine as a Disinfectant in Enuresis.—The odor of urine which follows continual enuresis can be neutralized by sprinkling a few drops of turpentine upon the sheets of the bed. While this does not wholly eradicate the smell, it produces a marked improvement.

Obituary.—Dr. A. C. Knight, at Sandusky, Ohio, September 22, aged 56—Dr. Jeremiah S. Trexler, at Kutztown, Pa., September 24, aged 69 years—Dr. John A. Peters, at Tiffin, Ohio, September 28, aged 69 years—Dr. John S. MacNutt, at Philadelphia, Pa., September 28—Dr. Aaron Cornish, at New Bedford, Conn., September 26, aged 68 years—Dr. George Singer Shiveley, at Philadelphia, Pa., September 28, aged 72 years—Dr. William Ulrich, at Waukesha, Wis., September 26, aged 83 years—Dr. R. S. Griswold, surgeon in the U. S. Army at Samar, Philippines, September 28.

GREAT BRITAIN, ETC.

The Registration of Midwives.—For some time an effort has been made in England to educate midwives, so that they could conduct a normal case of labor properly, and might know just when to call in a physician. It is now proposed to enact a law to have such qualified midwives registered and licensed, thus preventing any one else from officiating in this capacity. Public opinion seems to be totally against such a law. The people want no laws which will prevent women from obtaining the aid of friends or neighbors during labor, while, for various reasons, physicians are also opposed to the scheme. From the medical journals it seems that a long time will elapse before compulsory registration will be necessary for midwives in England.

A New Laboratory at Parel, India.—The Government of India will soon establish a large laboratory for special research work in bacteriology, under the direction of Dr. Haffkine, at Parel.

Instructions in the Pasteur Institute at Kasauli.—The Indian Government has granted permission to the medical officers throughout India to attend a special course of instruction in the bacteriology and treatment of hydrophobia at the Pasteur Institute at Kasauli.

A New Anatomical Department at Glasgow.—Lord Lister formally opened the New Anatomical Department of the University of Glasgow, on September 12th. These splendid new buildings have been provided through the munificence of the trustees of the late Mr. J. B. Thomson, the well-known shipbuilder. The new buildings include an excellent laboratory and museum, for which Professor Cleland has presented a fine collection of anatomical specimens.

Totnes Cottage Hospital, London.—Dr. William Berry Kellock has given the sum of £500 to be added to the perpetual endowment fund of the Totnes Cottage Hospital as a memorial to his late wife.

Bristol Fever Hospital.—The Corporation of the city of Bristol has finally decided to increase the accommodation at the Ham Green Fever Hospital to the extent of 62 beds at an estimated cost of £24,700.

CONTINENTAL EUROPE.

Physicians in Germany.—In the fifteen years from 1885 to 1900 the number of physicians in Germany has increased from 15,764 to 27,374.

Zurich.—Dr. Friedrich Goll, extraordinary Professor of Pharmacology, has retired at the age of 72 years. His name is familiar in connection with the posterior columns of the spinal cord. He has been succeeded by Dr. Max Cloetta, his assistant.

Fiftieth Anniversary.—Dr. Schultze, Professor of Gynecology and Obstetrics at the University of Jena, has just celebrated the completion of his fiftieth year of practice.

Plague at Naples.—Twelve cases of plague were reported last week from Naples.

The Antispitting League.—Paris has formed an Antispitting League, the object of which is to prevent expectoration in public places. The members wear a badge and publish a "Bulletin." The *British Medical Journal* fears that the purpose of the League will not be accomplished until spitting is made punishable by law. Even then it would prove difficult to have the law enforced. The force of public opinion alone will hardly be able to rid the world of spitting.

A French Physician Sentenced.—In the suburbs of Paris, a physician was recently sentenced to pay a fine of \$40 and \$200 damages, for having told the prospective mother-in-law of a patient of his that the patient was tubercular, thus bringing about a rupture of the projected marriage. Medical testimony at the trial showed that not only had he divulged a professional secret, but his diagnosis had been absolutely wrong.

Dr. Max Saenger in Poor Health.—It is with regret that we hear of the continued ill health of Dr. Max Saenger, Professor of Gynecology at the German University of Prague. Professor Saenger, who was, until two years ago, assistant to Professor Crédé, in Leipsic, is only 48 years of age. His newly erected clinic in the old Prague Hospital, which was built 111 years ago, contains 75 beds.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

September, 14, 1901. (No. 2124.)

1. Observations on Blackwater Fever. F. K. KLEINE.
2. The Influence of Color upon Anopheles.
GEORGE H. F. NUTTALL.
3. A Further Note upon the Biological Test for Blood and its Importance in Zoological Classification.
GEORGE H. F. NUTTALL.
4. Inoculation and the Incubation Stage of Plague.
W. B. BANNERMAN.
5. Albuminuria in Plague. ALICE M. CORTHOEN.
6. A Discussion on Stone in the Tropics. P. J. FREYER, ROBERT HARVEY, PATRICK MANSON, G. M. GILES, MAX F. SIMON, CHARLES MILNE, LEOPOLD G. HILL, R. U. MOFFATT, F. M. SANDWITH, and JAMES CANTLIE.
7. Dust as a Vehicle for the Germ of Cerebro-spinal Fever. W. J. BUCHANAN.
8. Four Cases of Liver Abscess Treated by Tapping by Trocar and Canula and Siphon Drainage (Manson's Method). JAMES CANTLIE.
9. A Discussion on Malaria and its Prevention. WILLIAM MACGREGOR, RONALD ROSS, J. M. YOUNG, C. F. FEARNSIDE, G. A. WILLIAMSON, G. C. LOW, R. W. BOYCE, E. HENDERSON, PATRICK MANSON, J. L. POYNTER, and JAMES CANTLIE.
10. Note on the Entrance of Ankylostoma Embryos into the Human Body by Means of the Skin.
F. M. SANDWITH.
11. Causation of Enteric Fever in India.
ANDREW DUNCAN.
12. Some Ophthalmic Complications of Plague.
F. P. MAYNARD.
13. Maladies of European Children in Hot Climates.
A. CROMBIE.
14. Some Pathological Notes from South Africa.
J. W. WASHBOURN.
15. Discussion on Lymphadenoma. J. MICHELL CLARKE, J. H. BRYANT, G. L. GULLAND, H. J. STILES, and C. J. N. LONGRIDGE.
16. Bacteriological Examination of the Blood.
J. ODERY SYMES.
17. Note on the Arrangement of the Nissl Bodies.
J. J. DOUGLAS.

1.—Kleine reports 15 cases of blackwater fever, in each of which the hemoglobinuria followed, more or less immediately, the administration of quinine. He believes that the statement of Koch, that blackwater fever is due to the administration of quinine, is true. So extensive and unregulated use of quinine as in the tropics, never occurs in more temperate countries, and, therefore, we have no idea how, if at all, the prolonged administration of the drug influences the composition of the blood. In the second place, the blood corpuscles that are destroyed in blackwater fever are not healthy, but have been severely damaged by the preceding or still continuing malaria. Koch has in nowise altered his views and he is still of the opinion that, in the majority of cases, blackwater fever is the result of quinine poisoning in malarial patients. [J. M. S.]

2.—Nuttall's experiments indicate that the *Anopheles maculipennis* is attracted by some colors and repelled by others. The experiments were conducted in a large gauze tent, one end of which was formed by large windows into which the sunlight poured on bright days. Large stone basins were placed on the floor for the *anopheles* to breed in. At the beginning, it was noticed that when a person entered the tent clad in dark gray clothes the mosquitoes settled on the dark cloth, but that they never did this when the person entering was clad in white flannels. A number of boxes lined with cloth of various colors were placed in rows on the floor and it was noticed that the mosquitoes would enter the box lined with dark blue in great numbers and, in less numbers, would enter boxes lined with other colors, in the following order: dark red, brown, scarlet, black, slate gray, olive green, violet, leaf green, blue, pearl gray, pale green, light blue, ochre, white and orange. No mosquitoes were found in the box lined with yellow. As practical applications of these experiments it is to be noted that the

khaki uniform should offer advantages in addition to being invisible to the human enemy. The number of insects congregating in dwellings might very well be lessened by the choice of suitable colors applied to the walls. A trap might be made, lined with dark blue, in which the insects would congregate, so that they could be readily destroyed in large numbers. [J. M. S.]

3.—Since his first paper on the biological test for blood, Nuttall has examined 140 specimens and the results previously obtained have been confirmed. None of the bloods gave the reaction for human blood except monkey blood. The original paper appeared in the *Journal of Hygiene* for July and in the *British Medical Journal* for May 11, 1901. An abstract will be found in the *Philadelphia Medical Journal*, Vol. VII, No. 22, p. 1039. [J. M. S.]

4.—Calmette believes that a person in the incubation period of plague would find the disease considerably aggravated if he submitted to a preventive inoculation of Haffkine vaccine, and that the case would almost certainly end fatally. Haffkine, on the contrary, has all along maintained that inoculation with his vaccine is harmless in the incubation period of plague, and that that method of protection should be pushed with the utmost vigor amongst those immediately in contact with plague cases. In India, hundreds of thousands of persons have been inoculated with Haffkine plague vaccine and evidence has accumulated with sufficient accuracy to refute Calmette's statement. Bannerman publishes a table analyzing this evidence. The plague death-rate in an uninoculated Indian population varies with each epidemic, but may be put at between 75 and 85%. Of those who were actually suffering from plague at the time of inoculation the case mortality was 48.8%, which is about the same as in those who developed the disease more than 10 days subsequent to the operation. The experience of those engaged in administering the vaccine is that no harm results from the injection even in the presence of plague itself. The table referred to furnishes evidence that the prophylactic begins to act beneficially after a lapse of 24 hours only. In all cases in which the plague stricken community has been divided into an inoculated half and a non-inoculated half, it has been found that the difference in the incidence of the disease has begun to manifest itself in 24 hours. It is to be concluded, therefore, that the prophylactic has the power of aborting the disease in this stage. [J. M. S.]

5.—During the Poona plague epidemic of 1900-01, 868 patients were admitted into the General Plague Hospital who were suffering from the disease. Cortthorn aimed to make a daily examination of at least one specimen of the urine of each patient in the hospital until the disease had terminated either in death or in convalescence. It was possible, however, to report only on 597 cases. Of these, 25% of the nonfatal cases did not contain albumin, but only 7% of those that proved fatal did not contain albumin. The author thinks that the quantity of albumin is a certain guide to the gravity of the prognosis. Of the cases in which albuminuria was present, 117 persisted for from one to 7 days, and 51 from one week to two weeks. Both hyaline and granular casts were generally present, and in some cases in which the albuminuria persisted the fatty variety was also present. Plague bacilli were never found in the urine, neither by microscopic examination nor culturally. Traces of blood were found in 11 cases. 0.19% of the cases that went on to convalescence had retention; on the other hand, 12.17% of the fatal cases presented this complication. [J. M. S.]

6.—Freyer opened a discussion on stone in the tropics in the Section of Tropical Diseases of the British Medical Association. In India, stone is of the urate or the oxalate of lime variety in about 95% of all cases. Certain tracts of India are practically exempt from stone and the disease is mainly confined to the Punjab, North-western provinces and Oudh, that is, to the great alluvial plains watered by the Indus and the upper half of the Ganges. Through countless ages these rivers have carried down with them the alluvial soil that covers the plains near their origins. At the foot of the mountains, out of which these rivers flow, there is a vast continuous belt of cretaceous formation. Through ages these rivers have been changing their courses and, as a result, the plains at the foot of the mountains are supplied by water that is impregnated with lime salts in solution. These salts eventually find their way into the system through the drink-

ing water and have a tendency to be deposited in the urinary tract in the form of oxalate of lime. If this does not occur, the lime-impregnated water causing derangements of the digestive system, may lead to the formation of uric acid and urates in excess and, eventually, to deposits of crystals in the urinary passages, resulting in the formation of stone. It is a remarkable fact that the region about Hyderabad, in Sindh, where stone is more common, probably, than in any other place in the world, in addition to being covered with lime-containing alluvial deposits, lies on the most marked cretaceous formation in India. The region just described is also characterized by the scantiness of the rainfall as compared with the rest of India. It is further characterized by great alterations in temperature. These two conditions promote excessive perspiration and, thus, lead to concentration of the urine. The author believes that food plays little, if any, part in the production of stone, but believes that the drinking of lime-containing water and the meteorological conditions are responsible for the great frequency of stone in certain parts of the country. In 1899, there were 4486 operations for stone, namely, 106 suprapubic lithotomies, with a mortality of 21%; 1276 perineal lithotomies, with a mortality of 9.84%, and 3101 litholapaxies, with a mortality of 4.5%. There is nothing peculiar in the native Indian that renders him a better subject for litholapaxy than the European. The author is of the opinion that litholapaxy is the operation for stone in the bladder. Manson said that the suggestion that the distribution of stone was dependent on the presence or absence of lime in the water or on the character of the food was untenable. There are only 2 classes of calculi the etiology of which is positively known: those caused by foreign bodies introduced into the urinary tract, and those caused by the ova of bilharzia. The formation of the stone in both these instances depends on the presence of a nucleus. He believes that in other cases of stone, the etiology of which we are still in ignorance of, the explanation of the geographical distribution will be found from a study of the nucleus of the calculus. The patchy distribution of the disease in India, as well as the analogy of bilharzia calculus, suggests a parasitic cause. Simon said that he had never seen a Malay afflicted with stone and that calculi are rarely met with in the Malay Peninsula. Sandwith said that bilharzia is most prevalent in Upper and Lower Egypt, and that the ova of this parasite form a vast proportion of the nuclei of urinary calculi. Cantlie gave an account of the difficulties attending the operation of crushing stone in a tropical country. [J. M. S.]

7.—After a study of 60 cases of cerebrospinal fever, Buchanan concludes that the disease is transmitted by dust. The organism of the disease in India is the diplococcus of Weichselbaum, so that the disease is identical with that seen in Europe and America. The organism has been shown to offer considerable resistance to desiccation. Out of the 60 cases studied by the author, 57 occurred in patients who worked at occupations in which they were constantly exposed to dust, whereas only 3 occurred in patients who worked at trades that were free from dust. The incidence of the disease was greatest in the dusty months; only 4 cases occurred in the rainy season, and these developed in persons who were at work at grain cleaning, in which the amount of dust is always great. Prisoners who worked at farms of skilled labor which did not expose them to dust escaped from the disease. There were no circumstances pointing to direct contagion, and in no case were those in attendance on the sick attacked. In a hand work-shed in which 8 cases occurred in 1900, the author, this year, took steps to prevent the workmen from inhaling the dust, and not a single case of the disease occurred among the men at work in that shed. [J. M. S.]

8.—Manson's method of treating deep-seated liver abscess is to tap the abscess by a large trocar and canula, introducing a large drainage tube stretched upon a metal rod through the canula and applying siphon drainage to carry off the pus. Of 4 cases operated upon within the last year, 3 recovered and one died. These 4 cases complete a series of 28 operated upon by this method by Cantlie, of which 4 died. The author is more convinced than ever of the efficacy and safety of treating liver abscesses by the trocar and canula, and is still more ready to condemn operations by the knife. He believes that the operation should be done as soon as pus is sus-

pected and that the surgeon should not wait until the abscess has pointed on the abdominal wall or the chest wall. The histories of 4 cases are given. [J. M. S.]

9.—MacGregor opened a discussion on malaria and its prevention in the Section on Tropical Diseases of the British Medical Association. In Lagos, the prophylactic measures include the education of the natives, the administration of quinine, the use of gauze netting and attempts to exterminate the mosquito in its breeding grounds. A man that cannot or a man that will not take quinine ought not to remain in a malarious country. The usual method of the administration of quinine for prophylactic purposes is to give from $2\frac{1}{2}$ to 5 grains daily. Public dispensaries are established for the purpose of furnishing the drug to the natives. In Lagos the great objection to the use of mosquito netting is the serious and highly disagreeable way in which it checks ventilation. Muslin netting rots in the climate, but wire netting can be used for a number of years. The swamps are being filled up by convict labor in order to destroy the breeding ground of the mosquito and kerosene is also being used. The measures being taken are painfully short of what is required, but in 2 or 3 years it is hoped that the effect will begin to be felt. The habits of Europeans in the Indian stations differ in several important particulars from their habits in Indian plantations and in Africa. Particularly in relation to the use of punkahs, mosquito nets, well-built houses and comparatively good food in the Indian stations. On the other hand, these comforts are often or generally wanting in the Indian plantations and in the African coast towns; and it is just where they are wanting that the Europeans suffer most sickness. Ross has noticed that in the African coast towns the European often leads a most doleful existence. Bathed day and night in perspiration, constantly bitten by mosquitoes, without healthful exercise, cheerful society, good food or even such comforts as ice, he is not only always open to malarial infection, but also soon undergoes a marked deterioration of his body due to the incessant heat and the discomforts in which he lives. His one desire is, not to render his life more agreeable, but to escape from it on leave to England as soon as possible. It becomes more and more apparent to Ross that the use of the punkah or, at least, the electric fan, is indispensable to the European in the tropics, not only for keeping off mosquitoes, but also for preserving the general vigor of the body. Scarcely less important are the dairy, the vegetable farm, the ice-machine and the soda-water machine. All these comforts, foolishly called luxuries, are in reality absolute necessities for healthy life in the tropics. From his studies in Hong-Kong, Young concludes (1) that in every place examined, malaria was associated with Anopheles breeding pools in the immediate vicinity. (2) That in no case were Anopheles found in the neighborhood of houses without malarial fever manifesting itself repeatedly, and in every district in which malaria was found the examination of the blood of the children showed the presence of the malarial parasite. (3) That in no case was the distance from the breeding pools to the houses more than 150 yards. (4) That the breeding pools were always easily localized and comparatively easily treated by surface drainage. (5) That the only practical steps found effectual were the clearing of the district of all shrubs, grass, bamboo, etc., the driving off of the adult female mosquitoes and then draining their breeding pools. This combination is absolutely essential; to treat the pools with any larvicide alone means that the adults scatter and select other pools in which to lay their eggs. Concerning the inoculation of malaria by the Anopheles, Fearnside believes that zinc-proof houses and mosquito curtains are out of the question as preventives of the spread of malaria in India. If the mosquitoes are to be killed the rice swamps must be destroyed and, thus, the principal source of food will have to be abolished. There remain, the prophylactic use of quinine and the segregation of infected individuals. Williamson is of the opinion that there is no disease found in Cyprus, and there only, to which the name of Cyprus fever can be given; that the forms of malaria met with in the island are those least fatal; and that febricula, the other fever so frequently met with, is not dangerous to life. He urges that the term Cyprus fever be abolished. In Barbadoes, malaria does not exist, while filariasis is extremely prevalent among all classes of the community. This is explained by the fact that Anopheles mosquitoes, the definitive host

of the malarial parasite, are not found in the island, whereas *Culex fatigans*, one of the suitable intermediate hosts of *Anopheles*, abounds. Low believes that the methods adopted in other places for the extinction of the *Anopheles*, if applied in Barbadoes, would result in greatly reducing the incidence of malarial disease. Henderson thinks that the prospects of ridding the East of malaria are far from encouraging. One method of exterminating *Anopheles* which Manson thinks has not received the attention that it deserves is that of producing natural conditions inimical to that mosquito. That there are such conditions is certain, otherwise *Anopheles* would be as widely spread as *Culex*. [J. M. S.]

10.—It has long been assumed that the chief mode of ankylostoma infection is by the mouth while eating or drinking. Dirty hands, muddy feet and unwashed vegetables are daily factors in the peasant's life and are probably responsible for much of the infection. In spite of conclusive evidence that the infection takes place through the digestive tract, Sandwith believes that the skin must play an important part in admitting embryos of ankylostoma duodenale and distoma hematobium to the human body. Looss noticed that after a drop of fluid containing ankylostoma embryos had fallen on his hand there was a sensation of burning followed by redness of the skin. Later, he had an attack of ankylostomiasis. He then carefully cleaned the skin of a leg which was about to be amputated from a boy and allowed a drop of water containing ankylostoma embryos to dry on it. In an hour the leg was amputated and the skin was examined microscopically, after proper hardening and sectioning. It was found that the embryos had penetrated the hair follicles and that, so far as the drop had spread, scarcely a follicle was free. There is, of course, no proof that the embryos can work their way from the skin into the intestine, but that they can penetrate the skin seems to be proved. [J. M. S.]

11.—Duncan thinks that it is a matter of marvel that more persons are not infected with enteric fever than is at present the case in India. There is a continual supply, year by year, of a large body of men most predisposed to the disease. This body of men, though living nominally in highly sanitary barracks, are daily exposed to the infection of enteric fever contained in the liquids that they imbibe in the bazars, in the dust of the station and through the agency of the flies. The soil of India is impregnated with the bacillus of Eberth from the stools of natives who have suffered from the disease and whose sanitary regulations are, as is well known, so inefficient, and this impregnation is being added to each year, on account of the continued absence of this sanitary system in the native quarters. It is easy on these grounds to account for the causation of enteric fever in India. The author believes that compulsory inoculation for the prevention of enteric fever would serve to diminish the incidence of the disease. [J. M. S.]

12.—During a severe epidemic of plague at Patna, Maynard saw 12 cases in which there were eye complications. In all of the 12 cases the attack was severe and only 6 patients recovered with one sound eye each. In the remaining 18 eyes the cornea was hazy in 4, opaque in 2, and sloughed in 4. There were signs of iritis in 12 cases, and in 3 others the iris was prolapsed. Scleral staphylococci were met with in 2 cases. The lens was hazy in 7 eyes, and quite opaque in 5. The media were hazy in 6 cases. The fundus was normal in 3 cases; it showed a hemorrhage in one case and a limited retinitis in one other. The tension was diminished in 12 cases but was normal in the rest. The vision was fairly good in 5 cases, p. 1. in 8, and nil in 5. The notes of the cases are published.

[J. M. S.]

13.—The sick-rate of European civilian children is lower in India than it is in the United Kingdom. On the other hand, the death-rate, which in the children of soldiers in the United Kingdom is 18.31 per 1000, is 41.09 per 1000 in India. If the cases of malaria could be excluded, the health of the children of European soldiers in India would be 10% better than the health of similar children in England. The sick-rate of the children of soldiers in India is slightly in excess of that of the children of soldiers in the United Kingdom, and the excess is due to the more frequent occurrence of the eruptive fevers and respiratory diseases. The key to the higher death-rate is to be found in the debility produced by an enervating and exhausting

climate which saps the strength and renders the struggle for life so difficult in these sick children. [J. M. S.]

14.—In the Imperial Yeomanry Hospital in Pretoria there were 3 or 4 times as many medical cases as surgical. Of the medical cases the majority were diseases of the digestive apparatus, while very few were diseases of the respiratory apparatus. This would lead to the conclusion that the air in South Africa is good, while the food is bad. Washbourne believes that if the army had been provided with a proper sanitary corps, under the supervision of a good sanitary medical officer to look out for the condition of the standing camps, a large proportion of the cases of typhoid fever, dysentery and diarrhea would have been prevented. The cases of muscular rheumatism that the author saw seemed related to gout rather than to rheumatic fever. He is of the opinion that it is due to the nature of the food, especially to the absence of fresh vegetables. Although the summer temperature in South Africa is high, the author has never seen a case of heat stroke, which leads him to the conclusion that something more than the heat of the sun is necessary for the production of the condition. He inclines to the belief that heat stroke is dependent upon some infection in addition to heat. The author has failed to find the ameba coli in the stools of patients suffering from dysentery. Bacteriological examination has resulted in the isolation of streptococci and a bacillus belonging to the colon group. The death-rate from enteric fever was 9.1%; the author does not think that inoculation modifies the attack, and he doubts whether it has any influence on the incidence of the disease. In South Africa a chill is apt to be the predisposing cause of an attack of diarrhea and dysentery.

[J. M. S.]

15.—The subject for discussion in the Section of Pathology and Bacteriology of the British Medical Association was lymphadenoma. The discussion was opened by Clarke. The term lymphadenoma comprises those diseases that are characterized by overgrowth of lymphoid tissue or that give rise to growths closely resembling the lymph-nodes in structure. Lymphoid tissue may be looked upon as a specialized form of connective tissue capable of great development under irritation, and the growths of lymphadenoma partly arise from an overgrowth of pre-existing and partly in a new formation of lymphadenoid tissue. The lymphatic enlargements may be local or generalized. Apart from simple inflammatory, scrofulous and carcinomatous enlargements, the local forms may further be divided into (1) a local benign growth, which is a simple hypertrophy or is of the nature of a lymphadenitis and which may persist in the same state for years, and (2) a malignant growth, called malignant lymphadenoma or lymphosarcoma, which invades contiguous structures and may give rise to metastatic growths, but not to a generalized overgrowth of lymphoid tissue. The author believes that it is almost conclusively shown that lymphadenoma is an infective disease, occurring in both the acute and the chronic form, of which the microorganismal cause has still to be discovered. The fact that tubercle may produce a disease almost exactly simulating lymphadenoma is a corroboration of this view. Although a certain number of cases described under lymphadenoma or Hodgkin's disease are in reality tuberculosis, there is no warrant for the view maintained by some writers that the disease is merely a general lymphatic tuberculosis. It would conduce to clearness to confine the term lymphosarcoma to tumors limited to one or more groups of lymph glands in contiguity, varying in rate of growth, perforating the gland capsule, infiltrating or invading the surrounding tissues, sometimes causing metastases in distant organs, but without general involvement of the lymphatic tissues and composed of small round cells with a fine reticulum. In the past, the 2 conditions of lymphadenoma and lymphatic leukemia have sometimes been taken one for the other; but in the latter condition, though the glandular enlargements resemble lymphadenoma, there are also greatly enlarged spleen and a leukemic condition of the blood, so that the 2 diseases are distinct. In children there is some difficulty in distinguishing lymphadenoma from anemia infantum pseudoleukemia, but the latter is a separate disease. In certain rare cases of lymphadenoma there may be great enlargement or persistence of the thymus gland. Again, there is a curious condition known as status lymphaticus or lymphatism in which there is partial or general hyperplasia of lymphatic glands

In which the patients are liable to very sudden death from trifling causes. The disease presents numerous points of similarity to lymphadenoma, but as yet there is not sufficient evidence to determine the relationship. Bryant reports a case in which, clinically, there was no doubt about the diagnosis of lymphadenoma. At the autopsy, however, there were such marked fibroid changes in the parts involved and the organs presented such unusual appearances that the question of some other condition arose. When the specimens were examined microscopically the doubt was increased and the possibility of syphilis arose. Without coming to a conclusion regarding the relationship between lymphadenoma, syphilis and fibrosis, the author is of the opinion that the case reported by him must have had some influence, such as alcoholism or syphilis, added to the lymphadenoma in order to explain the pathological changes. Gulland said that the 4 conditions that are likely to be confounded are leukocythemia, lymphosarcoma, generalized tuberculosis of the lymph-nodes and true lymphadenoma, if such a condition exists. Leukocythemia ought to be diagnosed definitely by examination of the blood. Lymphosarcoma is a rare condition and generally starts in the lymphatic apparatus associated with the alimentary tract or the respiratory tract. The immense majority of cases clinically diagnosed as lymphadenoma are really generalized tuberculosis of the lymph-nodes. No case should be pronounced non-tuberculous unless none of the numerous glands examined contain tubercle bacilli, and are found not to produce tuberculosis on inoculation into the lower animals. The author is very doubtful of the existence of true lymphadenoma. Stiles is very sceptical as to the existence of lymphadenoma, although in the past 2 years he had operated on 4 cases of extensive lymphomatous swelling in the neck that were not tuberculous. He is of the opinion that more than one organism is responsible for such conditions of the lymph-nodes and he believes that the streptococcus is one of them. Longridge suggested that if tuberculin was injected into a patient suffering from supposed lymphadenoma the tuberculous nature of the affection could be demonstrated.

[J. M. S.]

16.—Symes describes a method of collecting blood for bacteriological examination. He has found that fluid media are more satisfactory for bacteriological examination of the blood than solid media. This is possibly because the fluid media serve as a diluent of the bactericidal power of the blood, while on solid media this power remains unchanged. Occasionally, although no colonies are to be found on the surface of the medium, colonies will be found in the clots that form in the bottom of the tube. Out of 12 cases of septic infection, organisms were found in the blood in 4. One was a case of puerperal sepsis, in which the staphylococcus pyogenes albus was found; the second was a case of puerperal sepsis in which the same organism was found; the third was a case of pyemia following a wound of the foot in which a streptococcus and the staphylococcus pyogenes albus were found, and the fourth was a case of septicemia following a wound in which the micrococcus tetragenus was found. Out of 7 cases of acute infective endocarditis microorganisms were found in the blood of 3. The offending organism in one case was a streptococcus and in the other 2 cases was the staphylococcus pyogenes albus. Out of 3 cases of pneumonia the pneumococcus was found in the blood of one and the staphylococcus pyogenes aureus, together with a streptococcus, in another, the third blood was sterile. The total number of cases examined was 31, of which 9 presented microorganisms. For the purposes of diagnosis, then, the bacteriological examination of the blood is seldom of real practical value. If, on the other hand, organisms are found in the blood, the treatment indicated would be the proper antiserum; although the failure to detect an organism should not be considered an indication for withholding the antiserum. All observers agree that the discovery of organisms in the blood renders the prognosis of the case exceedingly grave. [J. M. S.]

17.—Douglas has found that in the cells of the anterior cornu of the spinal cord the chromophilous granules are aggregated into definite masses which are uniformly distributed throughout the cell protoplasm. In the cells of the column of Clarke, on the other hand, the Nissl bodies, as these aggregations of the chromophilous granules are called, have a more or less peripheral distribution.

[J. M. S.]

LANCET.

September 14, 1901.

1. Presidential Address on the Range of Physical Theories. ALTHUR W. RUECKER.
2. On the Changes Effected by Anti-Typhoid Inoculation in the Bactericidal Power of the Blood, etc. A. E. WRIGHT.
3. Tubal Gestation Sac Entirely Anterior to the Uterus; Operation; Recovery. ALBAN H. G. DORAN.
4. The Post Office and the Prevention of Tuberculosis. CHARLES H. GARLAND.
5. Some Points in the Pathology of Pernicious Anemia. WILLIAM BAIN.

2.—Wright presents an article "on the changes effected by anti-typhoid inoculation in the bactericidal power of the blood; with remarks on the probable significance of these changes." Three previous communications have been published in the *Lancet*; one on December 1, 1900, the second on March 2, 1901, and third on June 1, 1901. In these previous articles, he outlines the methods (A) for determining the desired dilution of a bacterial culture; (B) methods for mixing volumes of serum with corresponding volumes of successive dilutions of bacterial cultures in a series of capillary tubes; (C) the technic for testing the bactericidal effect upon these dilutions produced by serum, and finally he gives methods for enumerating the living bacteria contained in the culture. In the present communication, the author has carried on a series of investigations upon individuals and these were in each case made upon surgeons-on-probation in attendance on the Army Medical School, Netley. The anti-typhoid inoculations which consisted of sterilized culture, were in all instances begun with very small doses. Only from one-third to one-half of the dose required in the case of a soldier was used. Almost invariably the primary inoculations were not followed by the local and constitutional disturbances so commonly seen after anti-typhoid inoculation. The determinations of the bactericidal power of the blood were made before and subsequent to anti-typhoid inoculation. The results of these observations are set forth in three tables. In the first table, the results of the experiments relate to fourteen surgeons-on-probation who had never suffered from enteric fever. These individuals were inoculated with fresh typhoid vaccine. The second table includes the data of the experiments made on two surgeons-on-probation who recently convalesced from enteric fever. These persons were also inoculated with fresh anti-typhoid vaccine. The third table represents the results of observations made on four surgeons-on-probation who had not suffered from typhoid fever, and who were inoculated with typhoid vaccine prepared respectively 18 and 24 months previous to the time of experimentation. Definite evidence of bactericidal effect upon the bacillus typhosus by the blood of the individuals was obtained in 13 out of 14 normal persons, in one out of two convalescents of typhoid, and in two out of four normal persons inoculated with the old vaccine. The positive phase of increased bactericidal power of the blood manifested itself within an extraordinarily short period. A considerable number of days were required for a full development of the bactericidal power. A summary of these observations is deduced, which we give in substance:—"With regard to the sequence of events after an anti-typhoid inoculation it has been shown: 1. That where the quantum of anti-typhoid vaccine employed produces the familiar well-marked constitutional symptoms, a decrease in the bactericidal power of the blood and a correspondingly increased susceptibility to typhoid infection may supervene in the period immediately subsequent to inoculation. Upon this negative phase of increased susceptibility there may, however, be expected to succeed, probably within a period of three weeks or less, a phase of increased bactericidal power and a greater resistance to typhoid. 2. That when the quantum of anti-typhoid vaccine employed produces very severe constitutional

symptoms, a negative phase of increased susceptibility will be produced, which—and the same would appear to hold true also in the case of a negative phase supervening upon an actual attack of typhoid fever—may never be followed up by a positive phase of increased resistance. 3. That when the quantum of anti-typhoid vaccine employed is reduced to the point at which marked constitutional disturbance is avoided, a positive phase of increased resistance may be expected to supervene without the intervention of any negative phase, and in many cases within 24 hours." Some practical conclusions are also drawn. In these he emphasizes the value of anti-typhoid inoculation, and the importance of using very small doses in the presence of an epidemic, so as to avoid marked constitutional disturbance. In the absence of an epidemic of enteric fever, larger doses may be employed. [F. J. K.]

3.—Doran remarks that in tubal gestation the sac of the earlier months of pregnancy nearly always fills Douglas's pouch and more or less of the lateral fornix on the side where it develops. Thus, when the other symptoms of extrauterine pregnancy are present, a swelling to the left of the cervix usually signifies that the left tube is the seat of gestation. Experience has shown, however, that a tubal sac may be displaced so as to lie on the opposite side of the pelvis. Still, whether the tubal sac lies on its own side or crosses the pelvis, it almost invariably occupies Douglas's pouch, that is to say, it lies behind the uterus. Doran now describes a case in which the gestation-sac rested entirely anterior to the uterus. The patient was operated upon successfully. An interesting feature of the case was an adhesion of the vermiform appendix to the gestation-sac.

[W. A. N. D.]

4.—Garland writes on the post-office and the prevention of tuberculosis. This author directs attention to the fact that the methods adopted for the disinfection of post-offices have been so well carried out that contagious diseases, except tuberculosis, are rare among the huge staff of employees. He points out that the official figures for the whole staff show that the mortality from tuberculosis is relatively and absolutely high. The author has appended a table illustrating the loss from phthisis during the years 1896, 1897, 1898, and 1899. These statistics show the death rate of the whole postal staff to be higher than that of the general population during the years mentioned above. He believes that it is the duty of the State to direct the way in the adoption of preventive measures, for at the present time there are practically no measures used to prevent tuberculosis in the post-office. Reference is made to the precautionary measures which have been adopted in the French postal and telegraph departments. [F. J. K.]

5.—Bains reviews some points in the pathology of pernicious anemia. Reference is made to the view held by Hunter, who believes that the toxin of a special micro-organism in the intestinal canal is absorbed, and is responsible for excessive hemolysis in the portal area. The liberated blood pigment is excreted in the urine and in the bile, while the free iron is stored in the spleen, liver, and other organs. Stockman maintains that pernicious anemia is not a disease *per se*, but a condition which supervenes on an ordinary severe anemia accompanied by vascular degenerative changes, followed by capillary hemorrhages. Mott is inclined to the view that pernicious anemia is essentially a disease in which there is excessive activity of the blood destroying function of the liver and spleen. The following report of a case is given: A man, 36 years of age, was admitted to the Leed's Infirmary on September 24, 1901. He had been for four years a sufferer of pernicious anemia. The disease began insidiously; gradual weakness set in, he lost his appetite, and the skin assumed a yellowish tinge. A year after the onset of the illness, the patient noticed blood and mucus in the feces, and also complained of nausea, and occasional vomiting after taking food. As the disease progressed, the weakness became more pronounced, and palpitation and dyspnea set in. An examination showed the following: The patient's skin presented a dirty yellow tinge. He was extremely weak, his tongue was pale and uncoated, the bowels constipated, and his

appetite poor. His teeth were in a bad condition. In the right hypochondriac region, there was slight fullness, and the spleen was enlarged. At the base of the heart and at the apex a systolic murmur was audible. The retina was the seat of hemorrhages. The following blood counts were made: September 26th, the red cells numbered 970,000 per cubic millimetre; the hemoglobin percentage was not determined. There was no leukocytosis. On September 29th the red cells numbered 880,000 per cubic millimetre. On October 20th, red cells 2,100,000 and on November 22nd the colored corpuscles numbered 3,240,000; the hemoglobin 72%. The patient gradually improved from the time of admission on a treatment consisting of Hommel's hematogen, arsenic, and oxygen inhalation. The following case of chlorosis is also reported: On January 17, 1901, a domestic servant, 22 years of age, was admitted to the Leed's Infirmary, suffering from gastric ulcer and chlorosis. The symptoms were pain and vomiting after taking food, shortness of breath, palpitation, and edema of the extremities. A loud systolic murmur was heard at the apex, which was transmitted towards the axilla. The author has inserted in his article a table which illustrates an analysis of 24 hour collections of urine in cases of pernicious anemia and chlorosis, respectively. This table points out a comparison of the quantity of urine and the specific gravity, the amount of urea, the acidity, the amount of uric and phosphoric acids, preformed sulphates and conjugated sulphates. A number of determinations were also made in regard to urobilin, indican, hematoporphyrin, and skatoxyl sulphuric acids. This table shows that the uric acid excretion in pernicious anemia is below the normal average, while in chlorosis it is normal. The conjugated sulphates are relatively increased in pernicious anemia and there was also an increase in the formation of indican, skatoxyl sulphuric acid, and urobilin. The author is of the opinion that Hunter's theory is the correct one, although he states that his arguments are not absolutely conclusive. Bains maintains that the liver should be accorded precedence over the spleen as a hemolytic organ. In regard to the cause of this hemolysis, it must be said that this remains an unsolved problem. It appears quite certain that the excessive hemolysis occurs within the portal system, for there is no hemoglobinuria, and consequently no free hemoglobin in the general circulation. [F. J. K.]

MEDICAL RECORD.

September 28, 1901.

1. A Matter of Interest in Blood Structure Study. WOODBRIDGE HALL, BIRCHMORE.
2. Report of a Case of Intracranial Tumor; Operation; Recovery. WM. M. LESZYNSKI.
3. Operative Procedure for Tumor of the Brain. JAMES H. GLASS.
4. The Prophylaxis of Tuberculosis. JOSEPH KUCHER.
5. The Home Management of Epilepsy. R. H. PORTER.
6. The Origin of Retroversion of Uterus and Its Pathological Dignity. SAMUEL W. BANDLER.
7. Treatment of Typhoid Fever. BASIL M. TAYLOR.

1.—W. H. Birchmore presents a paper on a matter of interest in blood structure study. Four drawings are included in the article. The spreads were made from blood, still fluid, which had been effused into the great lymph spaces between the deep muscles of the neck of a turkey, consequent upon the cutting of the carotid artery by way of the mouth. The unusual condition of the nuclei of the red corpuscles attracted attention. The nuclei in the blood cells of domestic fowls are evacuated from many cells and are present within the cells of many more. In these specimens the nuclei were not extended for the most part. The author has made a critical study of the morphology of the corpuscles observed. An interesting feature of the examined blood was a fact that it did not coagulate and that the changes described seemed to be changes of development. [T. L. C.]

2 and 3.—William M. Leszynski and James H. Glass report a case of intracranial tumor with operation and recovery. The symptoms were a right neurorhinitis and a left receding papillitis. There were no aphasic symptoms. There was paresis affecting all extensor muscles and the shoulder girdle of the left upper extremity. The right was normal.

There was no static ataxia. In walking the patient dragged the left leg and was unable to stand on the left leg alone. The flexors were partially paralyzed, and there was also some paresis of the extensors. There was no muscular rigidity. The left knee-jerk and the Achilles reflex were exaggerated, but there was no ankle clonus. Urine negative. The diagnosis of an intracranial tumor of slow growth involving the arm and leg centers in the cortex of the right hemisphere was made. During the operation profuse hemorrhage was encountered and it was necessary to overcast all soft tissues and plug with bits of bone the nutrient canals of the cranium. The vessels of the exposed dura were engorged with blood, and were ligated before this membrane was incised, which done, revealed almost centrally located in its relation to the opening, the convex surface of the growth pushing out above the surface of the brain. The tumor was enucleated up to the longitudinal sinus, to which it was attached through the falx cerebri, and from this membrane it was carefully dissected off. In shape the tumor was spherical and about 20 mm. in diameter. To control the oozing the wound was packed with strips of gauze tape, the ends of which were brought out through drill holes in the angles of the wound, after the replacement of the osteoplastic flap, which was secured with silver wire. The patient made a good recovery.

[T. L. C.]

4.—Joseph Kucher discusses the prophylaxis of tuberculosis. There is no better and surer way to prevent consumption than to keep away from the danger of infection. It can be done by avoiding the causes which make the human body susceptible to it. Living, working and sleeping in a confined and contaminated air are the foremost of these. Out of all the United States, only fourteen have laws relating to inspection of factories and workshops. Among the contributing causes are certain occupations such as those of silex cutters, needle-sharpeners, file cutters and lithographers, etc. Prolonged worry, excess and dissipation are important factors. [T. L. C.]

5.—R. S. Porter discusses the home management of epilepsy. The patient, as a rule, is not competent to take care of himself. An attendant who can be trusted should oversee the administration of medicine and follow out the physician's instructions. To apply these principles to the daily life of an epileptic, often requires great patience, forbearance and self-denial, and yet much can be done when these are shown. There are few or no rigid restrictions in regard to the diet. Prudence and temperance in all things should be carefully followed. Stimulants are to be avoided, and the emotions, such as excitement, worry, etc., must be controlled. [T. L. C.]

6.—Bandler describes the condition of *retroversioflexio uteri*, and mentions as associated symptoms dysmenorrhea, sterility, metritis, endometritis, oöphoritis, and bladder, rectal and nervous symptoms. He gives as the probable origin of the condition relaxation of the ligaments and loss of elasticity of the levator ani muscle. In order to explain the congenital cases he enters largely into a study of embryology. He decides that congenital retrodeviations are very frequent, and that *retroversioflexio* constitutes a practically normal condition. Congenital *retroversioflexio*, he claims, is not frequently followed by hysterectomies. This disease is not an obstacle to the cure of pelvic affection, and if accompanied by severe local symptoms, these may be corrected in a vast majority of cases without surgical treatment. [W. A. N. D.]

7.—B. M. Taylor contributes a paper on the treatment of typhoid fever. He divides his patients into two classes: First, those who have been healthy prior to the acute disease; second, those who have had some chronic disease for years. The digestion must be watched with especial care, and if there is myasthenia with fermentation, give a small amount of food, easily digested and slow to ferment. The white of an egg given raw with pepsin and hydrochloric acid suits these patients. Do not give milk to patients with gastric catarrh or myasthenia; milk given every three or four hours will kill more patients than the fever. Treat the stomach and feed it as if it was the only trouble the patient had. The motto is: "To remember the stomach first, the colon next." He bathes the patient in tepid water for about 20 minutes, and emphasizes the necessity of avoiding disturbing the patient during his sleep and the value of prolonged and absolute rest. [T. L. C.]

MEDICAL NEWS.

September 28, 1901. (Vol. LXXIX, No. 13).

1. A Contribution to the Surgical Relief of Cancer of the Rectum; Revision of the Statistics to Date, with Special Reference to Sacral Extirpation. FRANK LE MOYNE HUPP.
2. The Problems of Physiology and Pathology. MARTIN H. FISCHER.
3. Intratracheal Injections in Bronchial and Pulmonary Affections. WILLIS S. ANDERSON.
4. Presbyopia; Accommodation; Astigmatism. NORBURN B. JENKINS.

1.—Hupp gives an interesting résumé of the history of the surgery of the rectum for cancer, especially dwelling on the more recent method of sacral extirpation. He remarks that it was not long ago that the entire subject was dismissed from the text-books with the advice to treat the symptoms and relieve pain as long as possible, and a final resource to colotomy. Kraske's method of sacral resection has been adopted largely and has been very considerably modified by various surgeons, including Bardenheuer, Heinecke, Kocher, Levy, Hegar, Hochenegg, and Lange. Hupp reports a number of operations in his own experience and revises the statistics up to date. There are now 761 sacral operations for cancer of the rectum reported from Germany, Austria, and Switzerland, with a few in the British Isles, giving an operative mortality of about 18%. [W. A. N. D.]

2.—In *The Problems of Physiology and Pathology*, M. H. Fischer explains the heart beat as follows: The puzzle of the heart beat has been brought a step nearer solution. It has been definitely proved that the rhythmic activity of the heart is dependent upon the presence of certain salts in the blood. The heart cannot beat except in the presence of sodium ions in the circulation, but sodium ions alone act as a poison and soon bring the heart to a standstill. The presence of certain other, for example, calcium ions, however, neutralizes the poisonous effects of the sodium ions. Indeed in a mixture of these two salts the heart muscle will beat rhythmically for hours. Any of the voluntary muscles can be made to contract rhythmically just as the heart muscle by the simple abstraction of a little calcium from the mixture of these salts. It is a slight excess of calcium in our blood that keeps the voluntary muscles from contracting rhythmically. These facts are interesting in another direction; they show that in this case chemical and not morphological differences underlie variations in function. In the physiology of taste, the theory of ionization has also correlated many heterogeneous facts. Acids taste sour because they contain hydrogen ions; the characteristic taste of hydroxides is due to their hydroxyl ions. With inorganic compounds the intensity of the taste is directly proportional to the number of ions that the solution contains. With organic salts, however, this law does not hold. The halogens have a salty taste due to the halogen ions. Sodium, potassium, magnesium, lithium and other metallic ions each have an individual taste. Thus the taste of a given salt is dependent upon the nature of the ions that constitute its molecule. [T. M. T.]

3.—W. S. Anderson, in *Intratracheal Injection in Bronchial and Pulmonary Affections*, concludes as follows: (1) It is of no advantage in acute bronchitis, at least during the congestive stage; (2) It is of distinct advantage in subacute and chronic bronchitis; (3) It is of positive benefit in bronchiectasis; (4) It is valuable in pulmonary tuberculosis, relieving many of the symptoms, especially those due to secondary infection; (5) It quickly relieves the distressing symptoms of asthma. The amount of relief and the permanency depend largely upon the predisposing and exciting causes; (6) It in no way interferes with other lines of treatment; (7) The writer has never seen harm follow its use, although in a very few instances it excited severe coughing for a short time. [T. M. T.]

4.—N. B. Jenkins states that in youth the focusing muscle can so mold the soft crystalline lens that fine print is distinct as near as three or four inches to the eye. As age advances the lens hardens and decreases the active focusing power until fine print, such as foot-notes, can no longer be read at the proper reading distance. This condition is presbyopia. The active focusing power gradually decreases until about the seventieth year, when the focusing muscle loses nearly all power over the hardened lens, and at this age the perfect eye needs for reading a magnal-

ner equal in strength to what the active focusing power was just before presbyopia came on. Until the fiftieth year most people with farsighted, near-sighted and astigmatic eyes can read fine print with glasses which totally correct these imperfections. Many at fifty-five years of age and some at sixty can do this. Many with normal distant vision at fifty to sixty years of age have never used reading glasses, and yet are a trifle farsighted or astigmatic. Presbyopia does not come at the fortieth year. Those who need glasses this early have farsightedness, nearsightedness or astigmatism. Belladonna is not used in testing the eyes of the aged, so the focusing muscle may mask imperfections after the fortieth year almost as much as earlier. Latent imperfections may exist until the sixty-fifth year. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

September 28, 1901.

1. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
2. The Gonococcus and Its Toxin. J. RILUS EASTMAN.
3. A Study of the Temperature, Pulse and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain. J. T. ESKRIDGE.
4. Two Cases of Intestinal Obstruction Diagnosed by the X-Rays. J. RUDISJICINSKY.
5. The Abstraction of Calcium Salts from the Mother by the Fetus a Cause of Osteomalacia in the Former. JENNIE G. DRENNAN.

3.—J. T. Eskridge concludes his article on A Study of the Temperature, Pulse and Respiration in the Diagnosis of Certain Diseases of the Brain as follows: (1) By a careful study of the temperature, pulse and respiration much valuable information that will aid us in the diagnosis and prognosis in certain diseases of the brain can be obtained; (2) Much care must be exercised and considerable time and patience are required on the part of the physician in obtaining reliable records; (3) Nurses are totally incompetent for such detailed work, unless they have been specially drilled for it; (4) A change in the character of the respiration, rather than in its frequency, is sometimes one of the first positive symptoms of organic intracranial disease, especially of tuberculous meningitis; (5) A respiration that is more frequent while the patient is asleep or unconscious than it is during the waking or conscious moments is very strong evidence of organic disease so situated as to interfere with the respiratory centers; (6) Apoplexy due to hemorrhage is attended with greater disturbance of the temperature of the body soon after the occurrence of the stroke than is the case, when the apoplexy is due to thrombus or embolus. The temperature disturbances in apoplexy due to hemorrhage, especially if attended with hemiplegia, are a slight fall of the axillary heat within an hour or less after the occurrence of the hemorrhage, the fall being a little greater on the paralyzed side; after reaction has occurred (eight or twelve hours on the average) a slight rise of temperature, a little greater on the paralyzed than on the opposite side; an elevation of temperature from half to 2° or 3° above normal for the next few days, the temperature remaining a little higher on the paralyzed than on the unaffected side for a week or more (in cases of complete hemiplegia); later the temperature slightly lower on the paralyzed side if trophic disturbances occur; (7) In apoplexy from thrombus or embolus there is scarcely an appreciable disturbance of temperature before the end of the second day, except in the severer cases. In these cases it is slight. In the majority of cases of apoplexy from thrombi or emboli there is no marked variation of temperature from the normal at any time, so that disturbance of the temperature on the first day points very strongly to hemorrhage as the cause; (8) Considerable disturbance of temperature, beginning from the second to the fourth day, is significant of thrombus or embolus, and indicates extensive softening and an unfavorable prognosis; (9) If the temperature on the paralyzed side remains higher than on the opposite side several weeks after the occurrence of the apoplexy from any cause, it indicates that softening or inflammation of the brain is going on, and lends great gravity to the prognosis; (10) It is premature to arrive at any definite conclusions from a study of the temperature, pulse and respiration in traumatism of the brain. This class of cases on account of their great importance, deserves a

more detailed study of all the symptoms. It is probable that if cases of traumatism of the brain were classified and grouped according to the severity of the injuries and the character of the symptoms, a careful comparison of the temperature, pulse and respiration would lead to important conclusions. The author also makes the following statements in regard to the traumatic class of cases: (a) All cases of injuries to the head in which the temperature does not reach normal or slightly above a few hours after the receipt of the traumata will probably prove rapidly fatal. The higher the temperature, the greater the probability, that contusion of the brain and membranes is a more important factor in the case than intracranial hemorrhage. The greater the variation of the temperature from normal, either above or below, the worse the prognosis; (b) A rapid, weak, and intermittent or irregular pulse denotes great danger. A pulse that is at first slow, but soon after becomes quite rapid, indicates that the brain power is being overwhelmed by the intracranial lesion and justifies a bad prognosis; (c) An exceedingly slow (8 or 10 to the minute) and intermittent respiration indicates a lesion at the base, in the posterior fossa. The slower and the more pronounced the intermission of the respiration the greater is the danger of sudden death. A respiration at first nearly normal in frequency, but soon after becoming quite rapid, indicates a rapidly fatal case. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

September 26, 1901.

1. Problems in Medical Education. HERBERT L. BURRELL.
 2. Observations on Heart Disease. ROBERT T. EDES.
 3. The Pupil in General Disease. EDWIN E. JACK.
 4. Report of Cases from the Second Surgical Service of the Children's Hospital, Boston. H. L. BURRELL, R. W. LOVETT and J. E. GOLDTHWAIT.
 5. Spermine Crystals in Pus. EDWARD T. WILLIAMS.
- 2.—The exact diagnosis of the condition of the heart muscle is not easy but its importance has not been undervalued. Even if absolute precision is unattainable, an estimate of the relations between the amount of work to be done and the power of the heart to do it, may be made to an extent sufficient for purposes of prognosis and therapeutics. The variations in the load which the heart has to work under arise to some extent from the mass of blood but much more from the demands upon the voluntary muscular system for its supply of oxygenated blood and upon the resistance offered to its distribution. The observation of the pulse, of the venous circulation, of localized congestion and edema is the real guide as to the efficiency of the heart's action. The sphygmograph is probably inferior in some respects, beside that of convenience, to the trained finger. Edes is of the opinion that the fingers should determine the size and degree of elasticity of the artery, the extent to which it is filled by each beat of the heart, how long the blood is retained without running back through the aortic valves, how rapidly it escapes from the arteries and how much pressure is required to extinguish the pulse. It may not be possible from any combination of symptoms to diagnose actual degeneration of the cardiac muscle with absolute certainty, but under many circumstances this diagnosis may be made with sufficient probability for practical purposes. The suggestion made by Jacobl, that the difference between the cases of fatty degeneration with a slow pulse, of which there are some, and those with quick ones, of which there are more, consists in the involvement of the cardiac ganglia in the same process that affects the muscle and very frequently the coronaries in both, is a very plausible one and has some clinical evidence in its favor. It does not rest, however, on an assured anatomical basis as yet.

[J. M. S.]

3.—In testing for the light reflex the eyes should be tested one at a time and should look at a distance of 20 feet or more into darkness or at some object. The source of light should be in front and slightly to one side. Direct daylight may be used. There is no absolute normal standard for the size of the pupil. In diagnosing the situation or nature of an intracranial lesion the pupillary symptoms are of little significance if they exist alone, except that the lesion must affect the nucleus itself or be peripheral. If, however, with this isolated symptom there are

those of the involvement of other branches or nerves, the importance may become considerable. [J. M. S.]

4.—Burrell reports the case of a girl baby, aged three days, who was operated upon for imperforate rectum. The patient recovered. Lovett reports the case of acute arthritis of the hip joint, with dislocation of the femur in a girl, aged 11 months. The dislocation was reduced by the open method. Goldthwait reports a case of dislocation of the hip occurring during an acute inflammatory process, which was probably rheumatic, in a girl, aged 8 years. The dislocation was reduced and a normal joint existed at the end of the treatment. [J. M. S.]

5.—Williams examined the pus from a cervical abscess of several months duration. The pus was thick, curdy and slightly mixed with blood. He added 8 parts of salt solution to the 1000 of pus and set it aside for 2 days. At the end of that time the supernatant liquid was decanted and a considerable proportion of a saturated solution of neutral ammonium phosphate was added to it. This was set aside for another day when the precipitate was examined microscopically and found to contain spermine crystals.

[J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

September 28, 1901.

1. An Improved Method of Treating High-Seated Cancer of the Rectum. ROBERT F. WEIR.
2. The Present Status of the Carcinoma Question.
N. SENN.
3. Cirrhosis with Pigmentation. THOMAS B. FUTCHER.
4. Circulatory Disturbances Accompanying Hepatic Cirrhosis and Inoculation of the Portal Branches with the Systemic Veins. CHARLES G. STOCKTON.
5. Roentgen Rays in the Treatment of Diseases of the Skin, etc. WILLIAM ALLEN PUSEY.
6. Congenital Cystic Kidney. WILLIAM JEPSON.
7. Gonorrhea in Boys. ABRAHAM L. WOLBARST.
8. Prevention of Tuberculosis of Babies Born of Tuberculous Parents. CLIFTON SCOTT.
9. The Etiology of Paretic Dementia.
FRANK P. NORBURY.

1.—Weir considers the Kraske operation unsatisfactory for the removal of high seated cancers of the rectum. The wound is deep, it is difficult to draw down the upper portion of the bowel, and troublesome to suture the anal portion to the proximal end. The author proposes a modification of the Maunsell method. The abdomen is opened, the bowel separated nearly to the tip of the coccyx and in front to the edge of the prostate. Two iodoform tapes are tied around the bowel about three inches from the anus and the intestine severed between them. The lower end of the rectum is then inverted and drawn out through the anus by a pair of forceps. The growth is resected and the lower end of the upper segment drawn down through the dilated anus and the edges of the two segments united. After the peritoneum is sewn together and to the bowel, so that the pelvis and general cavity are separated, drainage from the peri-intestinal space is provided for by a tube just in front of the coccyx. Three patients have been operated upon by this method; two recovered and one died from a persistent diarrhea. [F. T. S.]

2.—Senn says, searching criticisms have shown almost conclusively that the so-called cancer bodies are not living organisms but the products of degeneration of cell protoplasm of cell inclusions of a parasitic nature. He defines carcinoma as an atypical proliferation of epithelial cells from a matrix of embryonic cells of congenital or post-natal origin. The histology and histogenesis of carcinoma speak against its parasitic origin. The increase of carcinoma is more apparent than real. The positive results of implantation and inoculation experiments have failed to establish beyond all doubt the parasitic theory of carcinoma. Two great objections are the variety of microbes and bodies which have been made, have been in operative treatment. The histology and histogenesis of carcinoma does not correspond with the structure of true carcinoma. The author has inoculated himself with carcinoma some five months ago. A month later the graft had disappeared, leaving no evidence of a scar. The only real advances which have been made, have been in the operative treatment. Medicines, injections, local applications, and the serum treatment have but a limited application. The early and radical operative treatment offers the only prospect

of cure, the permanency of which cannot be determined in less than ten years. [F. T. S.]

3.—Futcher communicated an article to the Section on Practice of Medicine of the American Medical Association, at its fifty-second annual meeting, on "cirrhosis with pigmentation." The author states that 49 cases of atrophic cirrhosis of the liver (Laennec's) have been treated in the wards of the Johns Hopkins Hospital, and in this service not a single instance of permanent pigmentation had been observed. Eight cases of hypertrophic cirrhosis of the liver were also studied and one of these presented bronzing of the skin. The author reviews the literature of cases of cirrhosis of the liver with bronzing of the skin. In regard to the symptoms of this condition, he refers to the clinical analysis made by Anschütz who studied 24 cases collected from the literature up to 1899. The symptoms are those of rapidly fatal diabetes mellitus accompanied with cirrhosis of the liver, commonly of the hypertrophic variety. The pigmented cirrhotic liver is found at autopsy. This pathological manifestation was found in 23 out of 24 of Anschütz's cases, in all but one instance the liver was enlarged. It contained an ochre colored, iron-containing pigment. This pigment was present in the liver cells and in the connective tissue. In fifteen of the cases, there was also a marked increase in the amount of the connective tissue of the pancreas, and eighteen of the cases revealed pigmentation of the pancreatic epithelium and connective tissue. Futcher states that the pigment of the liver is now generally believed to be the exciting cause of the liver changes. Reference is made to the work of Opie, who has designated this pigmentation of the liver and pancreas as a distinct pathological entity, and he believes that the term hemochromatosis should be used to designate this condition. In regard to hemochromatosis, the author quotes the conclusions which Opie has drawn. They are as follows: "(1) There exists a distinct morbid entity, hemochromatosis, characterized by the widespread deposition of an iron-containing pigment in certain cells, and an associated formation of iron-free pigments in a variety of localities in which pigment is found in moderate amount under physiologic conditions. (2) With the pigment accumulation there is a degeneration and death of the containing cells and the consequent interstitial inflammation, notably of the liver and pancreas, which become the seat of inflammatory changes, accompanied by hypertrophy of the organ. (3) When the chronic interstitial pancreatitis has reached a certain grade of intensity, diabetes ensues and is the terminal event in the disease." The article is concluded with the report of a case which occurred in a male 50 years of age. The skin of this patient, particularly that of the hands, wrist, and the legs, was deeply bronzed. The liver was markedly enlarged, and the urine did not contain albumin or sugar, but gave a reaction for indican and iron. [F. J. K.]

4.—Stockton discussed "circulatory disturbances accompany hepatic cirrhosis" before the Section on Practice of Medicine at the annual meeting of the American Medical Association. In his article, he describes the relation of the portal to the general circulation, and the circulatory disturbances that occur with atrophic cirrhosis. He gives a report of a number of cases. He concludes that when the portal blood enters the general circulation without having passed through the liver, a toxemia is produced. This portal blood escapes into the general circulation when the blood pressure in the portal vein is raised. The toxemia which occurs from the escaped portal blood in the general circulation is more marked when the blood pressure in the portal vein is suddenly raised. When the increase in the blood tension in the portal vein is gradual, the toxemia is less marked. Purgation tends to relieve the increased blood tension in the portal vein and therefore lessens the toxemia. [F. J. K.]

5.—Pusey discusses the "Roentgen Rays in the treatment of diseases of the skin." He outlines the value of the X-rays for the removal of superfluous hair. The author has had nine cases of this kind under his observation. The treatment by the X-rays produced partial or complete alopecia in seven out of nine instances. The fact that the X-rays have an effect on the subcutaneous and sweat glands, suggests the possible value in the treatment of disorders of these glands, acne and hyperidrosis. The favorable influence of the X-rays in the treatment of tinea tonsurans, favus, and sycosis is also mentioned. He states

that the X-rays have been highly recommended in the treatment of eczema, lupus vulgaris, and carcinoma.

[F. J. K.]

6.—Jepson reports "a case of unilateral cystic kidney" in a child 11 months and 14 days old. The points of interest in this case are the following: The condition involved only one kidney and in its development it did not lead to serious disturbances until pressure was exerted upon the gastro-intestinal tract. The probable diagnosis of this condition was made by a very careful examination. An operation was performed under chloroform anesthesia, which lasted but 14 minutes. The cystic kidney was removed and a rapid recovery followed. The author emphasizes that this case illustrates the capability of children to endure operations provided that the precaution of giving a minimum amount of anesthetic is exercised and reducing the blood loss to a minimum. [F. J. K.]

7.—Wolbarst states that a number of cases of gonorrhea in boys have come under his notice within the past two years. Twenty-two cases have been observed in patients ranging in ages from 18 months to 12 years. The diagnosis of all these cases was confirmed by a bacteriological examination. [F. J. K.]

8.—Scott writes on "the prevention of tuberculosis in babes born of tuberculous parents." He reports one case of chronic tuberculosis which occurred in a young married woman, 19 years of age. She was delivered of a baby girl weighing five pounds. The child was fed on modified cow's milk, and all communication between the mother and the child was prevented. At the time the author presented this report, the child, now three years old, appeared to be in perfect health. He reports a second case of acute tuberculosis which occurred in a young woman, married at twenty years of age. She enjoyed good health during pregnancy and during her confinement. On the twenty-seventh day after her confinement, she presented signs of acute pulmonary tuberculosis. The child up to this time had been nursed by the mother. Death occurred 16 weeks after confinement. The infant also developed tuberculosis and died a week after the mother's death. [F. J. K.]

9.—Norbury discussed "the etiology of parietic dementia" and deduces the following conclusions: (1) Syphilis is the factor in chief which causes parietic dementia. (2) Infectious fevers with their toxic influences are contributing etiological factors. (3) Heredity is a potent factor.

[F. J. K.]

AMERICAN MEDICINE.

September 28, 1901.

1. The Technique of Cesarean Section.

MATTHEW D. MANN.

2. Pelvic Indications for the Performance of Cesarean Section.

J. WHITRIDGE WILLIAMS.

3. The Place of Symphysiotomy as Contrasted with Cesarean Section.

CHARLES JEWETT.

4. Circumstances Which Render the Elective Section Justifiable in the Interest of the Child Alone.

EDWARD REYNOLDS.

5. The Hygienic and Mechanical Treatment of Heart Disease.

BOARDMAN REED.

6. The Lane Lectures on the Social Aspects of Dermatology.

MALCOLM MORRIS.

7. The Case of President James A. Garfield; An Abstract of the Clinical History.

ROBERT REYBURN.

1.—Mann remarks that the operations of cello-hysterectomy and cello-hysterotomy are not properly rivals. Each has its proper place. In the elective Cesarean operation with the woman in good health and all the conditions favorable in the hands of skilful operators the mortality has been reduced below 5 per cent. In all cases in which the cause of the obstruction can be removed without injuring the uterus or both ovaries, or when the patient is suffering from a curable disease as eclampsia, the uterus must be left, except in the presence of sepsis or uncontrollable hemorrhage. The other advantages of the Singer operation are, that for the ordinary surgeon it is easier of performance; it enables the woman to become pregnant again; it does not interfere with menstruation or in destroying the sexuality of the woman; nor is it followed by the nervous symptoms of the menopause. Mann protests against the choice of hysterectomy simply for the purpose of preventing future pregnancy. The conditions

indicating hysterectomy are the presence of infection within the uterus, and any serious injury to the uterus by attempts at delivery. Disease of both ovaries necessitating their complete removal, would do away with the advantages of leaving the uterus. Cancer of the cervix is also an indication for the Porro operation. When the patient is greatly reduced, this operation is also indicated. Rupture of the uterus, if the abdomen be opened, should be followed by complete removal. Mann gives the technique of both operations as performed by him. [W. A. N. D.]

2.—In speaking of the pelvic indications for the performance of Cesarean section, Williams first considers the frequency with which contracted pelvis occurs and the methods of treatment which have been employed. He found 278 contracted pelves in 2123 consecutive cases of labor; that is, a frequency of 13.1%. He remarks that many of these cases occur in colored women. The race of the patient is not only of importance in determining the absolute frequency of contracted pelves, but his observations have shown that the variety of deformity varies markedly in the two races. The simple flat pelvis is the variety most frequently met in white women, after which the generally contracted, irregularly contracted and rachitic pelves follow in the order given; while in black women the generally contracted pelvis is the most frequent variety, after which comes the rachitic, then the flat and lastly the irregularly contracted form. 199 of the 278 women had spontaneous labors (71.58 per cent.), which is about the usual average. The colored women have comparatively easy labors. As regards treatment, labor was not induced in a single case. He believes that this operation when performed sufficiently early to give satisfactory results from an obstetric standpoint, is attended by an ultimate fetal mortality of nearly 50 per cent. The women are allowed to go to term and enter the second stage of labor. If, then, at the end of an hour, the head does not become engaged, such operative procedures are undertaken as may appear indicated. The corrected maternal mortality was 0.72 per cent. 36 children were born dead or died shortly after delivery, a gross mortality of 12.96 per cent. 18 of these children, however, died from causes not connected with the pelvic contraction. Of the remaining 18 seven children were dead when the case came into his hands, leaving 11 children, or four per cent., who died as the result of his treatment.

[W. A. N. D.]

3.—In considering the place of symphysiotomy as contrasted with Cesarean section, Jewett concludes as follows: Symphysiotomy is still a useful operation within a limited range in pelvic contraction. It is suited to conditions in which only very little additional space is required for delivery. It is a valuable resource, therefore, in cases in which forceps unexpectedly proves inadequate. Axis-traction forceps with the aid of posture should always be tried before resorting to symphysiotomy. Its results would be much improved by restricting it to pelves with the conjugate of not less than 7.5 cm. (3 inches) in simple flattening or 9 cm. in general contraction. Under equally favorable conditions its total mortality should be no greater than that of Cesarean section. When the pelvic space permits it should replace the Cesarean operation in the presence of exhaustion. It may be elected primarily as an alternative of Cesarean section when the operator can be assured that the degree of obstruction is well within its safe limit. Within its proper field symphysiotomy is better than the Cesarean section for an operator of little experience in abdominal surgery. [W. A. N. D.]

4.—Reynolds, in speaking of the elective Cesarean section, states that his experiences have led to the following conclusions: (1) The Cesarean section performed late in labor, or in the presence of infection of the uterus, or other complicating constitutional conditions, has been shown by the experience of almost every operator who has tried it, to have so high a mortality as to be totally unjustifiable when performed in the interest of the child alone. (2) When a Cesarean section is performed on a healthy woman early in labor, and under otherwise favorable conditions, for merely mechanical indications, it has in skilled hands no mortality other than the fractional percentage incidental to all considerations *per se*. (3) The inconveniences and high morbidity-rate of symphysiotomy render it distinctly inferior to the section as an operation of

choice, but it is an operation which as compared to craniotomy or prolonged and forcible high-forceps work without it, involves almost no increased risk of life. It is, therefore, the operation of choice in the limited number of neglected cases in which the pelvic contraction is within the range where the extraction of a living child without symphysiotomy is difficult or impossible, but after symphysiotomy is safe and easy. (4) The induction of premature labor for contracted pelvis results in so high a fetal mortality as to be unwarranted when placed in opposition with the performance of the Cesarean section at the beginning of labor and in favorable cases. [W. A. N. D.]

5.—Booramman Reed discusses the hygienic and mechanical treatment of heart disease. In two ways the heart may be injured by the toxic products of imperfect ingestion, as well as by suboxidation and other faults of metabolism: (1) Its muscle may be impaired by the circulating poisons, and at the same time be poorly nourished in common with all the other muscles, by the blood previously impoverished from the same cause; and (2) its work may be increased by the contraction of the arterioles resulting from the action of the alloxuric bodies and other products of imperfect metabolism. Reed emphasizes the value of preventing the threatened cardiac hypertrophy and the renal changes by the selection of a proper diet, not too nitrogenous, and an amount of careful, moderate exercise in the open air and the oxidation of food. He believes that (1) Cardiac disease is often due to auto-intoxication, especially to poisoning by the alloxuric bases; (2) cure, or amelioration in such cases requires at first, in addition to an appropriate diet, not too nitrogenous, the utmost practicable rest of the crippled organ. This cardiac rest may be further promoted by very gentle exercises which dilate the capillaries without taxing the heart; (3) the Nauheim method of treatment spares the heart by dilating the too contracted arterioles in two ways—(a) by stimulating the peripheral circulation through carbonated saline baths; and (b) by massage and forms of exercise (Widerstandsgymnastik) so mild as not to quicken the pulse.

[T. L. C.]

Superalimentation in Pulmonary Tuberculosis.—Candido of Paraná, has written an interesting article upon the evils of superalimentation in phthisis, in *Brazil-Medico*, (June 1, 1901, No. 21), which he read before the National Academy of Medicine of Brazil. In it he reiterates the inconveniences of superalimentation, though Debove, Broca, and other prominent men counsel it. Alimentation may be sufficient when the food ingested just balances the output of energy, and the individual remains in good health; insufficient when emaciation follows; and excessive when more is ingested than is needed to make up for the energy spent. Candido considers superalimentation impracticable, inefficacious, and harmful. It is impracticable because more or less anorexia already exists; inefficacious because the pulmonary lesions do not improve, though the patient does gain in weight; and harmful because it causes dyspepsia, with even more marked loss of appetite. Letulle and Rendu have both shown this. Candido therefore, agreeing with Pujade, discounts excessive feeding in pulmonary tuberculosis. Enough food should be given, but not superalimentation. [M. O.]

Tuberculous Pericarditis with Large Effusion.—At a recent meeting of the Medical Society of the Paris Hospitals, (*Bulletin et Memoires de la Societe des Hopitaux de Paris*, 1901, No. 11), Dr. H. Rendu reported a case of tuberculous pericarditis in a man of 34. On admission to the hospital he was very dyspneic, his pulse was small, rapid, and irregular, a typical *pulsus paradoxus*. The precordia bulged, there were edema of the anterior chest wall, precordial dullness, and tympany over the left lung posteriorly. Rendu punctured the pericardium, withdrawing 800 g. of sero-fibrinous, slightly hemorrhagic fluid. Four weeks later the effusion again caused the same symptoms. 1250 c.c. were withdrawn, and 1 g. of camphorated naphthol was injected. Six weeks later he was well. And he has kept very well since, considering his pulmonary condition. The size of the effusion, and the great quantity of mononuclear leukocytes in it showed that the condition was probably tuberculous. The sphygmograms give plainly the changes in the pulse. The result is exceptional. [M. O.]

Society Reports.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fiftieth Annual Meeting Held at Philadelphia, September 24-25, 26th, 1901.

(Continued).

SECOND DAY—MORNING SESSION.

The meeting was called to order at 9.30 A. M., and the minutes of the previous meeting adopted as read. Dr. F. H. Wiggan, of New York City, Secretary of the New York State Medical Association, and Dr. E. Eliot Harris, of New York City, Chairman of the Committee on Legislation of the New York Medical Association, were then introduced as visiting delegates. Both delivered short addresses to the Society, and gave a brief account of various methods employed by the New York Society. The scientific schedule of the day was then begun.

Address in Medicine by Dr. John B. Donaldson, of Canonsburg, Pa. The speaker expressed his belief that with further progress, typhoid fever and tuberculosis would become as preventable as smallpox. He referred to the achievements in medicine during the last century, notably the discovery of the bacillus of diphtheria and the introduction of antitoxin. The progress of surgery during the last century which may be well termed the surgical era, was referred to, with especial reference to anesthesia and the work of Lister. He highly recommended the preventive measures against disease that had been adopted, and especially the treatment and modern crusade against tuberculosis. Cholera and yellow fever have been halted at our shores and the anti-expectoration laws are continuing to guard the populace against the transmission of infectious diseases. The valuable lives that are saved by the employment of the microscope and tuberculin test, and open air life, cannot be computed in dollars and cents. But we need not send the patients away for open air treatment in cases of tuberculosis, for our own mountain and hill tops are splendidly adapted for this purpose. The existence of slums in cities is to be deplored, especially as there is no excuse for their existence. The application of money for the eradication of this sanitary evil is in many instances far more desirable than the erection of libraries. As an illustration of this he quotes the present sanitary condition of the city of Havana, where yellow fever has been stamped out by diligent and scientific men. Why should not such matters be as strenuously observed for instance in the city of Pittsburg as in Havana. The water supply in many localities is becoming a serious question, filtration only straining the coarser particles. The raising of the standard of medical education fortunately leaves no room for fakirs and impostors. Dr. Donaldson predicts a speedy dissolution of all such detrimental institutions and their speedy replacement by those teaching sensible medicine. In conclusion he calls attention to the necessity of the careful scrutiny of the bodily excretions.

Gastroptosis and Its Treatment by Dr. J. Dutton Steele, of Philadelphia. A table of fifty consecutive cases of gastroptosis was shown in all of the patients, the diagnosis having been made by gastric inflation. After quoting the varieties of gastroptosis, the etiology was referred to. The most frequent causative factor is corset lacing, causing pressure from above upon the stomach. In men the wearing of stiff belts may give rise to this affection. Occupation may also play a role, especially in the case of engine drivers who sustain a shaking of a full stomach. It is important to differentiate between simple dilatation of the stomach and gastroptosis. The inflation test is the most valuable method of obtaining the size and position of the viscus, the fallacies of other methods than inflation being shown. Inflation may be produced by the intragastric liberation of carbon dioxide following the administration of sodium bicarbonate and tartaric acid. The test must be performed quickly with the patient in the recumbent position and diagnosis assisted by auscultatory percussion. Other methods have also been employed, such as the introduction into the stomach of a

distensible balloon at the end of a tube. The simpler method employed the better the results. The physical signs elicited by the bulb method are high pitched tympany on percussion, a distension visible against the anterior abdominal wall, and when the bulb is compressed, a metallic ring is heard, which, however, loses its metallic character when it is present beyond the confines of the viscus. In these cases the examination of the gastric contents is absolutely of no value, some cases showing normal conditions, some subacidity and others hyperacidity. The treatment consists of abdominal binders, preferably rectangular pads six by four inches, and otherwise similar to those used in floating kidneys. The speaker showed a diagram, illustrating the various displacements of the different parts of the stomach. Permanent restoration of the position of the stomach without operation may result favorably, but it is rare.

Movable Kidneys; Their Effects Upon the Gastric and Intestinal Functions, by Dr. Boardman Reed, of Philadelphia. The author believes that downward displacement of abdominal viscera ought to be considered together, as they are usually associated. It is very frequent in women, and he quotes Stockton, who estimates that 50% were affected by enteroptosis. He believes that many women are treated by pessaries, tampons, and even operation, when the trouble is really above. The various degrees of nephroptosis were described. Corsets, heavy skirts, etc., had much to do with the etiology, and the old theory that pregnancy was responsible for this affection is being disproved. Disturbances of digestion occur, there being pain one to three hours after eating. He calls attention to the stimulation of the gastric glands which frequently occurs in these conditions, as well as the vomiting of liquid so acid as to put the teeth on edge, fermentation, however, being absent. If the kidney process progresses, there will be insomnia, mental depression and even neurasthenia. Dilatation of the stomach may ensue. The diagnosis is to be made by palpation alone, the symptoms themselves not being sufficiently diagnostic. The peculiar shape of the kidney must be recognized and the organ made to slip through the fingers. Regarding prognosis Dr. Reed believed that a cure may now be obtained in a certain number of cases if the patients are in a position to carry out the instructions and subject themselves to medical supervision for a long time. The treatment consists in confinement to bed, a certain modification of the rest cure and the application of suitable pads with an elastic belt. The neurasthenia can be overcome by massage, electricity and good food, and also tends to replace the natural cushion of fat, the absence of which often causes nephroptosis. In extreme cases the pad and belt may also have to be kept on during the night. Drugs are little needed, tonics may be employed temporarily to fortify the constitution and the stubborn hyperchlorhydria may have to be combated, requiring intragastric faradism. The chief aim is to strengthen the patient and his or her abdominal muscles.

Dr. R. H. Gibbons, of Scranton, Pa., in discussing the subject, believed that it was a mistake to assume that the application of a pad keeps the kidney in place. He quoted Edebohl, who claimed that appendicitis is often caused by a loose right kidney interfering with the circulation and causing congestion. He concurred with this authority regarding the surgical treatment and removing the appendix through the same incision. Dr. C. P. Noble, of Philadelphia, considers the rest cure and the fattening theory of value in cases where there is a moderate amount of displacement. Where the symptoms are absent, patients may be left alone. In suitable cases operation is decidedly indicated. The discussion was continued by Dr. J. A. Downes, of Philadelphia, and closed by Dr. Reed, who emphasized that movable kidney should not be considered *per se*, and, as many surgeons will concur with him, is not always cured by surgical intervention.

Dieter's Crises in Movable Kidney, by Dr. John G. Clark, of Philadelphia. The author substituted the title, "enteroptosis in general." Dieter's crises, as is well known, are due to a tortuosity of the ureter caused by a backing up of the urine and the ensuing pain, which is somewhat similar to that observed in a case of calculi. The etiology depends upon lack of exercise of the abdominal muscles and a separation of the recti. He stated that in women who had rapidly born children, the muscles were well separated and the pulsation of the aorta could be easily felt;

this latter phenomenon has itself frequently formed a subjective symptom, and has led the patients to believe that it was of such importance as to require them to consult medical aid. The operative treatment consists in carrying the incision well up above the umbilicus excising the relaxed tissue and bringing the recti well together. Medical treatment will to a certain extent give relief, but surgical treatment is requisite in obstinate cases. Dr. Clark showed models illustrating the pathological anatomy of the condition, and the objects which aim to restore the continuity and the tonicity of the structures. Surgical intervention should be followed by rest, support and carefully conducted massage. The paper was discussed by Dr. R. H. Gibbons.

Report of Several Cases of Infective or Malignant Endocarditis, by Dr. A. O. J. Kelly, of Philadelphia. Dr. Kelly believed that an acute endocarditis is a single process, with gradations depending upon the virulence of bacteria and the resistance of the individual. There are cases beginning benign and which subsequently become malignant. Bacteria have been found not only in the cardiac valves, but also in secondary involvements, such as emboli. The condition is really a pyemia or bacteremia, and should be so considered. It is not always necessary for the bacteria to lodge on the valves; the toxins should also be taken into consideration. The diagnosis depends upon the leukocytosis, which should be looked for not only from a numerical standpoint, but also from a differential one; second, a bacteriological examination of the blood, the importance of which is demonstrated by the fact that the author has on several occasions been able to demonstrate the organisms during life and subsequently upon post-mortem examination. Third, the symptoms referable to the heart, as well as the so-called arrhythmic disturbances.

A Few Notes on the Salts of Sulpho-Carbolic Acid, by Dr. Edgar Moore Green, of Easton, Pa. This paper constituted a plea for the more frequent employment of the salts of sulpho-carbolic acid and a statement of the author's results. He believes that it is a convenient method of administering carbolic acid and describes the physiological action of these combinations. He has obtained good results with combinations, of acetanilid and the sulpho-carbols of sodium and of zinc.

Primary Abdominal Tuberculosis, by Dr. Flick, of Philadelphia. The speaker stated that by the title of his paper there was meant the primary lodgment of a colony of tubercle bacilli in some intra-abdominal tissue. Surgery and pathology have discredited the long accepted theory that primary tubercular infection always has its seat in the lung. The statistics of Williams, of Johns Hopkins Hospital, based upon observations, after a number of celiotomies, and those of Israel, of Berlin, who believes that one-third of the diseases of the kidneys where there is pus in the urine were due to primary tubercular infection of those organs, all seem to support the theory of primary abdominal infection. Regarding the manner in which the tubercle bacilli gained access to the abdominal cavity he stated, that by reason of the fact that the tubercle bacillus required a certain temperature for its propagation, it can hardly be believed how a colony can thrive on an abraded surface of the intestines, especially when we consider the intestinal movements and their appended secretions. The diagnosis of primary abdominal tuberculosis is difficult, and we must look to the surgeons for diagnostic factors. The tuberculin test in these cases is too meagre to warrant conclusions. The treatment is as yet unsettled and up to now is still restricted to the surgical domain. It is of interest to note that the opening of the abdomen itself without the removal of tissue has been beneficial, but it is only speculative how this does good. The introduction of iodoform into the abdominal cavity during operation is highly recommended. The discussion on this paper was opened by Dr. Joseph Price of Philadelphia who considered Dr. Flick's paper from a surgical point of view. The surgeon is in a position to observe the infection from a macroscopical standpoint. The treatment has really been stumbled upon as many abdominal sections were really not made with a premeditated diagnosis, and especially in the cystic forms did the cures result from mere accident. For a number of years Dr. Price has not hesitated to open the abdomen for abdominal tuberculosis. Most of the operations have been done late, the surgeons frequently being afraid of adhesions, and Dr. Price furthermore stated that a

surgeon who fears adhesions ought not to open an abdomen. He considers the introduction of Iodoform of value. Later on when the abdomen had again to be opened these eight inches were found perfectly healthy. The drug is not as toxic as has been supposed. Abdominal tuberculosis is a condition that justifies thorough and complete intraperitoneal intervention. He knows of no condition where one can take the liberty of manipulation as in abdominal tuberculosis. Dr. Price's maxims are, operate early, free the viscera, liberally dust with Iodoform, and drain. The discussion was resumed by Dr. Mordecai Price, of Philadelphia, who is thoroughly convinced that infection in these cases occurs through the blood and lymphatics from food that is infected with tubercle bacilli. If the symptoms are present he considers it his duty to open the abdomen. He advises early operation. Dr. James Tyson, of Philadelphia, believes the diagnosis difficult and the tuberculin test a thorough one, especially in tuberculosis of the peritoneum. Dr. S. Solis Cohen stated there was not one agent in the materia medica which could combat tuberculosis as well as Iodoform. The drug can be administered internally without much gastric derangement. Notwithstanding the theories of Koch and Theobald Smith, he stated that we nevertheless were in possession of sufficient evidence to put us on our guard as to the reciprocal transmissibility of human and bovine tuberculosis. Dr. Flick, in closing the discussion, called attention to the fact that it must not be forgotten, the mode of entrance may be the alimentary canal, and from other sources than food. Respiration may carry the germs to the bronchi, thence to the lymphatic glands, then to the thoracic duct and finally to the heart and circulation, a comparatively short route from the lungs to the abdomen. He also believes that Iodoform is a most valuable drug in these conditions.

AFTERNOON SESSION.

The first paper in the afternoon session was the address in hygiene by Dr. E. B. Borland, of Pittsburg, Pa., who alluded to the discoveries of the last century which probably have paved the way for preventive medicine. Typhoid fever and tuberculosis seem to demonstrate the want of the potential factors, pure air, pure food, pure water and sunshine. He spoke of the individual communion cup in churches and apparent defects in military hygiene as exemplified by the many deaths during the Spanish War of previously healthy and robust soldiers. He believes that the epidemic of smallpox now prevalent is due to the negligence of the authorities in not providing special hospitals, as well as to the ignorant anti-vaccinationists. Special hospitals should be provided for smallpox, scarlet fever and diphtheria in all places of over one thousand inhabitants, and in localities of over twenty thousand inhabitants each hospital should have three wings, each of which to be devoted to one of these diseases. Such institutions should be placed in the centre of a plot of land comprising one acre in order to dispel the fear of the public. He advocates cooking schools, as improperly cooked food has much to do with disease. The author stated that if the Women's Christian Temperance Union would devote more time to cooking instructions, probably more would be done against intemperance. Young girls ought to be taught cooking just as well as boys are taught bookkeeping. The sexes should be separately instructed in physiology by a plan of lectures which would elucidate such matters that would prevent them from becoming victims in the future of quackery and enable them to realize it. Much inebriety is due to the spirits contained in proprietary medicines, and causes much moral degradation. In the interest of public decency, if for no other reason, this should be stopped. The next subject taken up by the author was that of barber shops. Missouri requires the rule of the Board of Health relative to barber shops to be posted in conspicuous places in each shop. It furthermore requires that a clean towel be used for each customer, that the paraphernalia be sterilized in a suitable oven, and that the barber must wash his hands after he has attended each patron. Another subject of hygienic importance is the humidity of houses in winter. Experiments have shown that at a time when the humidity within the house was 30% it was 71% outside. This is too much of a strain upon the respiratory passages, and can be obviated by the installa-

tion of an air moistening apparatus. This has been done with excellent results in a certain telephone building, and considerably reduced the number of bronchial affections among the numerous operators. Contaminated water may not only be held responsible for 50% of cases of enteric fever, but causes much suffering in many tubercular subjects. Regarding house plumbing, the speaker stated that disaonest contractors and plumbers in the absence of suitable restraining laws, frequently take advantage of householders. Legislation on this subject should be so modified that contractors can be held legally responsible. In taking up the subject of hygiene as related to tuberculosis, the author quoted Koch, that sputum is the chief conveyer of the infection. The author laid considerable stress on the anti-spitting crusade and gave a geographical description of the localities where it is enforced, New York leading in the anti-expectorating crusade. Dr. Borland called attention to the necessity of protecting our shores, by keeping out cases with ulcerative tuberculous lesions. It is to be presumed that the house fly conveys tuberculosis just as it did typhoid fever in the military camps. It will require a long continued observation to determine the feasibility of Koch's theory regarding the reciprocal transmissibility of human and bovine tuberculosis. The public should be instructed to go hand in hand with the municipal authorities in its crusade against this disease. The author referred in the most emphatic way to the doubtless conveyance of tuberculosis into the home by the long skirts of women which sweep up the infection from the streets, and exhorts the women to give this matter due consideration.

The Histories of Three Accidents in Tapping the Chest, by Dr. J. C. Lange, of Pittsburg, Pa. The first case resulted in instant death after the introduction of the aspirating needle into the seventh intercostal space posteriorly on the left side. The patient had had an aortic murmur, a dilated heart, arteriosclerosis, and albumen and casts in the urine. His anasarca had resulted in a large bilateral hydrothorax, and it was for the pulmonary edema that aspiration was performed in order to increase the patient's respiratory power. The patient was not excited or afraid of the tapping, but the instant that the needle penetrated him, he died of heart paralysis. Post-mortem examination showed a diastolic overfulness of dark blood, no ante-mortem clots and a hydropericardium. The second case reported was that of a male aged 23 with a history of croupous pneumonia three years previous. His respiratory capacity was not fully restored, and he continued to expectorate. He had a pleural distension on the right side, and aspiration gave vent to a substance which was so mucilaginous that it passed with difficulty through a large aspirating needle. The discharge was sterile. The cough which usually follows aspiration and is due to pleural irritation, caused the author to stop in his interference from five to ten minutes. Examination showed that areas which were previously flat were now resonant. Aspiration was continued and now the patient, with a terrified cry, became purple in the face and would have run away had he not been restrained. Blood gushed from the trachea. Morphine was given, and hemoptysis gradually decreased for four days. The patient, in whom no other chest lesion was present, was sent to the mountains, and improved, but returned again with a pleural effusion, fifty ounces of effusion being removed this time without accident. A second time he returned with another pleural effusion, which now contained pus cells. Aspiration was this time performed by means of an incision into the seventh intercostal space and one inch in length, which subsequently was increased to two inches, resulting in a gradual aspiration into the dressings, which were applied over the wound. Two and a half years thereafter no symptoms were present, except a diminution in fullness in the sub-clavicular region. The third case was that of a woman 58 years of age with biliary cirrhosis and an acute pleurisy on the left side. Four weeks after convalescence three pints were aspirated, and hemoptysis occurred, which gradually decreased, the patient dying sixteen months thereafter.

(To be continued.)

TWENTY-NINTH ANNUAL SESSION OF THE AMERICAN HEALTH ASSOCIATION.

(Continued from Page 521.)

RESOLVED, that this Association is of the opinion that sufficient facts have not been offered by Professor Koch or other investigators to prove that human and bovine tuberculosis are different diseases. It is further of the opinion that the variability under different environment common to micro-organisms may, on further investigation, be found sufficient to account for the differences that have been noted and that the germs of these diseases may not be proved to be closely allied or identical. Irrespective of the question of the communicability of bovine tuberculosis to man, the inspection of animals and premises is absolutely necessary, in order that:

1. The meat and milk of animals suffering from this and other constitutional diseases be not used as human food.
2. The sanitary condition of dairies, stables, etc., as regards cleanliness, water-supply and ventilation may be maintained.
3. That the health of dairymen and other handlers be closely supervised to prevent the spread of diphtheria, scarlet fever, human tuberculosis, etc., through the milk supply.

RESOLVED, that this Association while desiring to express its positive opinion as to the importance of dealing with animals and their products as indicated in the preceding resolutions, does, at the same time, insist upon the necessity of dealing with the still greater dangers, now universally recognized, of the transmission of tuberculosis from one person to another by continued personal association through inhalation of infected living rooms, the contamination of clothing, handkerchiefs and similar objects with sputum and other secretions, and would therefore urgently recommend that municipalities adopt regulations, as follows:

1. Against expectoration on pavements and in other public places.
2. For the compulsory notification by physicians of cases of tuberculosis, in order that literature may be supplied to householders and municipal aid given, where necessary, to lessen the dangers to the families of infected persons.
3. For the establishment of municipal sanatoria for the benefit of persons and families of limited means.
4. For the regular inspection of tenements, factories, workshops, schools and other public institutions, to promote cleanliness, ventilation and other sanitary conditions.

"The Prevention of Yellow Fever," by Dr. Walter Reed, Surgeon, U. S. Army.

Dr. Reed's excellent paper on this important subject was illustrated with drawings and a diagram of the female yellow fever mosquito (*Stegomyia fasciata*). There have been not less than 500,000 cases of yellow fever in the United States during the period from 1793-1900. The commercial loss sustained through the epidemic of yellow fever at New Orleans, in addition to 41,348 deaths, amounted to \$10,752,500.00.

The Doctor claimed that the mosquito *Stegomyia fasciata* serves as the intermediate host for the parasite of yellow fever. It has been demonstrated that an attack of yellow fever cannot be induced by the most intimate and prolonged contact with the clothing and bedding of yellow fever patients, even though these articles had been previously thoroughly soiled with the excreta of such patients. This mosquito has been found in all of the principal cities of Cuba. It has also been found in other cities in the West Indies, Europe and in the South and South-western part of the United States. This mosquito has a large distribution in the warmer countries of the globe and especially at low altitudes.

As to the breeding places, this mosquito has been found in rain water barrels, in sagging gutters containing rain water, in tin cans that have been used for removing the excreta and which still contained a small amount of fecal

matter, in cesspools, also in tin cans placed about table legs to prevent the inroad of red ants. This mosquito will breed in any collection of still water, rain or hydrant, and the presence of fecal matter does not seem objectionable. The female lays her eggs on the surface of the water in pairs, and it takes 12 days for the young to develop. The mosquito will bite at a temperature of 60° and above. There have been cases of yellow fever reported bitten by insects at intervals varying from 12 to 57 days after contamination. Here the dangerous interval was 45 days.

The problem of preventing the spread of the disease, when imported, seems to resolve itself into the simple question of excluding mosquitos from access to the sick individual, and of destroying those insects that have already become infected. We can leave out of consideration any danger from wearing apparel or baggage, which may be dismissed as harmless. The fear that has been entertained that infected insects may be imported in boxes or trunks is believed to be absolutely groundless by the author, for the reasons that mosquitos require water for their existence and in its absence they die within five or six days. As a fumigant pyrethrum powder is preferred, although sulphur and formaldehyde are used. The pyrethrum is burned in proportion of one pound to 1000 cubic feet of air space. At the expiration of 3 hours the room is opened and the mosquitos swept out and burned.

The conception of yellow fever as a "filth" disease must be abandoned and our attention turned to yellow fever as a mosquito-borne disease. If in the city of Havana a comparison is made of the mortality of the epidemic year of 1900 with the present year of 1901, during which sanitation based on the demonstration that yellow fever is propagated by the mosquito has been enforced, there will be observed a great reduction in favor of the latter, namely, 411%. The sanitary regulations put in force February 15, 1901, by Dr. Gorgas resulted in freeing Havana from yellow fever within three months. The Doctor further said: "We believe that no quarantine restrictions should be placed upon either passengers or cargo from non-infected ports. In the case of a vessel loading in midstream at an infected port by means of lighters, we believe that she can only receive infection in one way, i. e., by passengers who have been exposed to yellow fever on shore and who, coming on board, may thereafter be seized with the disease. The possibility of infected mosquitos reaching the vessel, either by flight or by means of lighters, may be dismissed." It is not considered necessary to disinfect the cargoes of ships, unless there is ground to believe that the vessel might possibly have carried the yellow fever mosquito in transit, which is unlikely. The chief duty of quarantine officers in future will lie in the detection of mild or very mild cases of yellow fever."

The contribution of Dr. LEEGO, President of the Supreme Board of Health of Mexico was: "10th Report on Yellow Fever Cases Observed on the Two Coasts of the Mexican Republic from the 17th of September, 1900, to the 31st of August, 1901." The Doctor said that the sanitary authorities of Mexico have imposed on themselves the obligation of never attempting to hide the diseases that prevail in its ports in frontier towns. Within the above named period cases of yellow fever were observed in Vera Cruz. But it is expected that through the new sanitary works already begun in that city, together with an abundant supply of pure drinking water and a system of sewage, the same good results will accrue as obtained in the city of Havana. The port of Tampico is likewise receiving sanitary attention. Recommendations have also been made that in these places, where yellow fever reigns in an endemic or sporadic manner, the residents protect themselves against the bites of the mosquito (*Culex fasciatus*), as well as to prevent those, that have bitten yellow fever patients, from escaping out of the wards in which those patients are attended and infect the immunes outside of the hospital.

(To be continued.)

Original Articles.

A LECTURE ON STRANGULATED HERNIA.*

By CARL PFISTER, M. D.,
of New York.

Professor of Surgery in the New York School of Clinical Medicine.

Ordinarily, the student and junior practitioner are taught that when strangulated hernia is suspected, the first and only step, the imperative one, indeed, is to call in a surgeon. Thus most valuable time, especially in country practice, is lost by the delay. It is my purpose to show the error of such proceedings, first, on behalf of humanity, and second, for the sake of science. I insist that the general practitioner is fully qualified to treat a great number of strangulated hernias—even that he is able, in an emergency, to operate for relief of the strangulation.

For the clear understanding of our work, let us primarily consider what strangulated hernia is. The pathological feature of such a hernia is the incarceration or torsion of the intestine, obstructing the movement of its fluid or solid contents and obstructing the blood circulation in the intestinal wall. This leads to gangrene of the prolapsed gut below the point of incarceration. Strangulation is produced by the disproportion between the prolapse and the opening. Strangulations are clinically divided into:

1. Chronic strangulations, due to gradual accumulation of fecal matter in the prolapsed intestine;
2. Acute strangulations, with but slight, intermittent symptoms of increasing severity; and
3. Strangulations in which the onset is acute and shows manifestations which rapidly grow intense.

Little is known of the original mechanical cause of strangulation. Several established factors enter into its evolution: The hernial opening, its sac may become inflamed, or perhaps only engorged, there may be a sudden increase of the prolapse or of its contents, and finally, torsion, or knuckling of the gut, may occur. This last-mentioned condition does not seem to have received the attention it merits. Before entering into the details of diagnosis and treatment of the various acute forms of strangulation, let us discuss that kind of gradual incarceration which most frequently occurs in old people with large irreducible scrotal hernias of long standing.

This condition consists in obstruction to the passage of feces through the incarcerated intestine. The anatomical construction of the colon and the sigmoid flexure make them the most frequent sole contents of the hernial sac in such incarceration. The exciting cause of the incarceration may be food which is difficult of digestion, such as soggy bread, large quantities of potatoes and insufficiently chewed food. Slow peristalsis for a long time in an intestine within a hernial sac aids materially in arrest of its contents, readily predisposing it to obstruction. The rupture is gradually filled by the remains of undigested food. If discovered early, it may be possible to empty the contents of the hernial sac; but the hernia is rarely heeded until it gives either decided discomfort or marked pain. The

development of the condition which leads to strangulation is usually so gradual that professional aid is not sought until emergency has arrived. Then the descendent part of the gut has become widely distended and its ascending part entirely compressed.

The symptoms produced by this kind of incarceration are usually not of such a severe and alarming character as those of acute strangulation. But after some time antiperistaltic motions set in together with stercoraceous vomiting. This may last a comparatively long time without producing that collapse which presages, in the acute form of strangulation, a fatal termination. In beginning the treatment of these cases a light cathartic, such as castor oil, or a small dose of calomel, may be given. A high injection of cold water and the application of an ice-bag will stimulate peristaltic movements and diminish the size of the rupture. Frequently the application of heat produces more relaxation of the involved tissues than cold. It is, however, wise not to spend too much time on these preliminaries, but to resort promptly to taxis for the reduction of the strangulation. For this purpose the patient is placed on a table, preferably to a bed, because of the greater firmness of the former, and because it is more convenient for the physician's work. A pillow is placed under the patient's head and the foot end of the table raised, so that the patient lies with the pelvis elevated, which aids materially in overcoming and releasing the strangulation. We first attempt to reduce those loops of intestine which entered the sac last. Then we strive to gently express the contents of the gut which has grown adherent to the hernial sac. This attained, we endeavor to return the emptied gut to the abnormal cavity. It is always best to grasp the rupture with both hands that the force applied be equally distributed over the entire tumor.

Taxis is the principal treatment we depend upon in these cases. The prognosis of herniotomy is a very grave one in this condition, because we have to operate under most unfavorable circumstances in view of the very old age, poor heart action, and low vitality of the patient. These same circumstances mostly attend cases of coprostasis. General anesthesia is contra-indicated on having to deal with a purely mechanical obstruction, and not with a spasmodic, muscular, or other tissue contraction; therefore, narcosis would be of only very limited value. Special attention is given to this kind of strangulation, because it is just the form which occurs frequently in general practice and especially in country practice. There seems no room for disagreement that the whole management of such an occurrence contains nothing that the skilful practitioner could not do without specially trained assistance. The diagnosis is almost always clear and simple, and the treatment requires not much more than a little common sense.

Now, to consider the various forms of acute strangulations, beginning with those in which the first symptoms seen are not severe, but which become so after several periods of intermission. The pathological and anatomical changes which take place in a strangulated hernia are beyond the scope of the present discussion. The first noticeable and most

*Delivered before the New York School of Clinical Medicine.

important symptoms of a strangulation are irreducibility and immobility of a hernia, irrespective of whether a truss has been worn or not. Up to then the hernia was easily reduced by the patient. Stercoral retention is another important diagnostic factor, as is vomiting, in the more acute stages. Where these symptoms are combined in a person afflicted with hernia, the diagnosis can be almost infallibly made. This condition is the chief reason which urges the patient to summon professional aid, after many ineffective efforts for hours and even for days to reduce his rupture. The diagnosis of the patient's desperate state is thus often made, and correctly so, before the practitioner's arrival. Several personal experiences of somewhat more than ordinary diagnostic and clinical interest will illustrate the type of slow incarceration of hernia.

CASE I.—35 years old, reported a right femoral hernia of one year's duration. It had been reducible, and was always controlled by a truss without causing him the slightest trouble; now for a day his rupture could not be reduced. Examination revealed a swelling of half the size of a hen's egg in the right groin. The swelling was hard and immovable, somewhat tender to the touch, and yielding no impulse from coughing. The bowels had moved eight hours before. No other symptoms. Normal pulse. Adenitis was diagnosed, wherein one of my most prominent surgical colleagues agreed. I prescribed ichthyol ointment and sent the man home. The next day he returned, but his condition was not changed at all, and he felt comparatively well. The following morning I was summoned to the patient's house and found him with all the symptoms of strangulation. He vomited, his bowels had not moved, the skin was moist, his forehead covered with cold perspiration. The swelling itself showed no change excepting increased tenderness. I immediately operated under local anesthesia. (4% solution of eucaine). Taxis was not attempted because of the severe pain, and I had no assistant for general anesthesia. I made a skin incision two and a half inches long across the highest point of the tumor, and, coming immediately down to the hernial sac, found that the neck of the sac was greatly constricted by a number of greatly enlarged infected glands, incarcerating its contents after removal of these glands the hernia was easily reduced. The skin-wound was closed by interrupted sutures. The patient stood the operation, lasting fifteen minutes, well, and made a rapid recovery. In this case you will see the strangulation was produced by a purely mechanical process, as occurs only occasionally, through the formation of a neoplasm; a very rare form of strangulation, in which the originating causes are neither in the opening nor in the sac. This operation was done, by the way, without assistance, in poor tenement house surroundings, and its success was due, essentially, to prompt operative intervention.

CASE II.—F. M., 21 years old, came with a very slight right inguinal hernia which he had first noticed about four weeks before. He had worn a very light truss for one week, and complained of pain which greatly increased with the pressure of the truss. The rupture did not enter the scrotum and was very soft and easily reducible. At his request, because of the intolerable pain, I transferred the patient to St. Mark's Hospital for operation. Having, after the skin incision, divided the fascia of the external oblique, a very small hernial sac was found, in which, when opened, I discovered, to my great surprise, the much-enlarged appendix, knuckled, and perfectly adherent to the wall of the sac; and within this appendix, upon dissection, I found three bird shot. Here was at once the explanation of the severe and unaccountable pain. The young man had played slingshot, frequently carrying shot in his mouth, and had swallowed some of them. The sac was ligated and dissected out, and the wound closed by Bassini's method. Two and one half weeks later the patient was discharged from the hospital in perfect health. Though a complete strangulation had not taken place in this instance, the inflammatory process in the sac would soon have led to it, and, with the appendix involved, we

should have had to do with a very severe case, as that troublesome organ will become necrotic in a very short time. In this case the dangerous outcome would have been inevitable, since torsion would have been arrested circulation.

CASE III.—G. N., 17 years of age was referred to me one week before Christmas, suffering from an irreducible umbilical hernia, which was probably congenital, but had never caused him trouble or pain until a couple of weeks before this time, when he had experienced frequent distress accompanied by vomiting. We agreed to defer the operation until after the holidays. On December 22d he returned, complaining of increased pain and vomiting; his bowels had moved. I sent him to the hospital immediately and operated on the following morning. The hernia consisted of adherent omentum, but through the very small opening a little segment of intestinal wall had slipped and become caught. This was easily pushed back, and the wound closed by three layers of sutures; peritoneum, fascia and skin. The patient left the hospital after two weeks.

Umbilical hernias in men so young are extremely rare, and especially so if of slender build, as was this patient. The treatment of the different forms of strangulation being in general the same, let us first consider the most important clinical and diagnostic characteristics of acute strangulation. The pathological changes which take place in the involved tissues are divided into three stages: first, the venous hyperemia; second, inflammation, and third, gangrene. In the first stage, blood stasis in the veins of the prolapsed gut is caused by pressure. The arteries not yet being obstructed, transudation through the serous edematous intestinal wall into the hernia sac occurs and forms the so-called hernia fluid. The second stage involves those tissues situated above the strangulation, whose arteries are still uncompressed, and are consequently hyperemic, in contrast to those parts below the strangulation, where the blood supply is entirely obstructed. The third stage is necrosis of the prolapsed gut consequent upon entire interruption of the blood supply. The most important macroscopic changes in the appearance of the involved intestine are from light to dark, brownish red and grayish discoloration, the formation of small, hemorrhagic spots, thickening of the wall, the formation of strangulated grooves and hernia fluid, adhesions, and the spreading of the inflammatory process to the external surroundings. While the clinical symptoms of strangulated hernias are usually very striking, it may chance that some of these symptoms are not present; so that, in view of the fact that a hernia may become strangulated at the moment of its first appearance, it is not always a simple matter to make a correct diagnosis. For instance, many strangulated hernias are very tender, the slightest touch causing exquisite pain; and yet, the absence of pain does not by any means exclude strangulation. Vomiting alone does not prove strangulation; the inflammation of an empty hernial sac, or of omentum will produce this result; the same is true of the retention of stools.

We can make a definite diagnosis only by consideration of all symptoms and careful examination of the inguinal and femoral regions and of the abdomen. The last named, being soft in the beginning, becomes tense and tympanitic when circumscribed peritonitis, primarily localized in the hernia sac, has spread over the peritoneum. Should the femoral or inguinal region present a tumor, hard and tense and increasing in size, together with the

above mentioned symptoms, the diagnosis of strangulated hernia may be made with almost absolute certainty. Another clinical symptom, which until quite recently received too little attention, is the presence of albumen in the urine. If the urine was free of albumen before strangulation occurred, it will be present after the intestine has been incarcerated for a short time, increasing according to the duration and severity of the constriction. Thus the quantity of albumen in strangulations which can be reduced by taxis is much less than in cases which require operation.

The question in all cases of strangulation, acute or not acute, which confronts us is: What treatment offers the best prognosis for the patient? Doubtless taxis, primarily. But the mortality following herniotomy has been greatly reduced since the introduction of antiseptis and asepsis and also by early operation. Though some surgeons now recommend operation in each individual case, I should always try taxis first, except in cases where the conditions contra-indicate this treatment. We have no exact statistics for reference in this matter. Should the taxis be successful the patient is almost well as soon as the rupture is reduced, and can fulfill his daily duties without being confined to his bed. We also avoid exposing him to the danger of prolonged narcosis which must never be underestimated. Beyond cavi, narcosis in cases of operation for strangulated hernia is very dangerous.

The circumstances under which taxis is contra-indicated are the following: great tenderness and pain in the region of the opening, redness of the skin, collapse, and increase of all the other symptoms; also, if the tumor, having for some time been very tense, suddenly becomes soft and collapsed. The last symptom would lead one to suspect perforation of the prolapsed gut. In former times many internal remedies were resorted to in connection with taxis; such as opium, morphine, and other narcotics; also tobacco clyster, cathartics, hot poultices, cold application and douches. These therapeutic measures are usually but a waste of time, with perhaps the exception of a high injection of lukewarm water. The intestine thus filled will sometimes by its own weight draw back the prolapsed loop. The greatest assistance in taxis is derived from general narcosis, providing, of course, that the patient is still in fair condition; that is, if he is not yet almost pulseless, or so collapsed that a few drops of chloroform would kill him. Therefore, a patient should never be anesthetized unless the surgeon is fully prepared for operation and has complete consent thereto. The technic of taxis is as follows: After the patient has been placed upon the table, as before suggested, the operator, standing at his right side, places the thumb and index finger of the left hand at the opening, and with the right hand seizing the lower part of the rupture, attempts first to pull out a little more of the intestine, and then begins pressing with the right hand, at first gently, then little by little with increasing force, so endeavoring to empty the bowel of its contents, and finally to reduce the prolapsed portion. If a general decrease of the tumor is felt, and a murmuring, gurgling sound is heard, taxis has been successful. The force applied by the manual reduction of a strangulated

hernia must be a moderate one, for it must be borne in mind that we are dealing with very tender and more or less inflamed tissues. The fact that the patient under narcosis does not feel pain should not mislead the physician to rough handling of these very sensitive tissues. A slightly inflamed intestinal wall may become gangrenous in consequence of severe pressure; or a partially gangrenous loop, which, perhaps, under careful handling might have recovered, may be perforated. Last, but not least, care must be taken, that by reduction *en bloc* internal incarceration be not produced.

How long may taxis safely be continued? It is extremely difficult to give a definite answer to the question of time, as much depends upon the general condition of the patient and of the involved tissues; of the duration of the strangulation, and whether many attempts have been made to reduce the rupture, either by the patient or other persons, before the arrival of the physician. However, considering the fact that early operation affords so much better prognosis than a late one, and thanks to the inestimably valuable work of our great master, Lister, which enables us to operate so much more safely than our ancestors, it is not advisable to delay the operation too long or to leave a strangulated hernia in that condition over night. Should the strangulation, while the patient is under narcosis, not yield to the first attempt at reduction, the operation should be performed without further delay; with the added reason that, under favorable conditions, a radical operation may be performed, thus saving the patient from a recurrence of the previous experience. That the operation must be attended by all antiseptic and aseptic precautions, I need not say, as there is no other way of operating to-day, let it be a question of laparotomy or the amputation of the first phalanx of a finger. These precautions may be fulfilled wherever we can obtain boiling water; and in every farm-house are fire-place and boiler utilizable for this purpose.

Now, a few words in regard to anesthesia. If the patient is narcotized for taxis, we proceed under these conditions. For this, ether is preferable to chloroform, first, because ether is less dangerous to the heart, and second, because an inexperienced assistant cannot do so much harm with ether as with chloroform. I always prefer local anesthesia for patients with low heart action and small and rapid pulse; for old people, especially old women with small strangulated femoral hernias. A little experience shows that a 4% solution of eucaïne or Schleich's solution is quite sufficient for local anesthesia. Those cases which are operated without the aid of general anesthesia show the best results.

We have two methods of operation for the relief of strangulation. First, external herniotomy—that is, operation without opening the hernial sac; and second, internal herniotomy, when the sac is opened. The first operation may be employed in case of a recent hernia, never before strangulated and for which a truss has not been used. In such, no pathological changes have yet taken place in the sac. This method is contra-indicated in all cases of inflammation; and also when a large portion of omentum is prolapsed, or after adhesions have formed between the hernial sac and surrounding tissues. Thus, the

sac need not be opened in cases where the strangulation has not occurred in the sac itself, and when it is possible to ascertain the condition of the contents of the sac. The great advantage of this method is that after the strangulation has been released we have practically to deal with but a skin wound, and the danger is thus greatly diminished, since the peritoneal cavity has not been opened. This is of signal value if one is not able to operate amidst proper surroundings. And yet, striking as in this advantage, one should positively not fail to open the sac, if after opening the fascia propria the contents do not yield to the gentlest pressure.

The technic of external herniotomy is as follows: After the field of the operation has been made aseptic by brushing it with hot water and soap, followed by washing with bi-chloride solution 1-2000, and alcohol, the skin incision is made in the direction of the rupture, extending the hernial opening from 1 to 1½ inches. This opening with a part of the neck of the sac must be exposed to the eye of the operator. After division of the underlying connective tissue, we come to fascia propria. This is a bag enclosing the hernial sac and consisting of fibrous, connective and muscular tissue in the inguinal hernia. The upper part near the opening must be lifted between two thumb-forceps and opened to bring the sac free to the eye. In favorable cases the place of the constriction can now be felt by the finger. It is not an absolute necessity that the opening be the constricting part; but we very frequently find bands of connective tissue or of fibrous character which surround the sac like a thread or a sling. All these constricting strings are best divided on a grooved director, and if the opening is the incarcerating part, it is split in the same way, in case we fail to dilate it with the finger. The rupture should then be reducible by a very slight pressure. If this is not possible the sac must be opened. The wound may be closed by suture for which purpose silk-worm gut is the best material. After a week's duration the wound usually has healed by primary union and the patient may leave the bed.

The technique of internal herniotomy differs from that of external herniotomy in inguinal hernia in so far that the skin incision is made parallel with Poupart's ligament beginning from the internal ring along the inguinal canal and extending the external opening for about 3 cm. In a femoral hernia the incision is identical for both operations. I give preference to vertical opening directly across the highest point of the protrusion. The incision for operation of strangulated inguinal hernia permits, in selected cases, radical operation in connection with that for strangulation. The few veins found in dividing the skin and the underlying cellular tissue can be clamped and ligated before cutting. Then the aponeurosis of the external oblique is reached and is easily recognized by its bluish color. The next step is to introduce a grooved director through the external ring under the aponeurosis and to split it up with the probe as a guide, so saving the underlying muscular fibres from injury. The fascia propria, that is, the surrounding tissue of the hernia sac, is now exposed. A little thereof is taken in a thumb-forceps and nicked with a pair of scissors. Then a grooved director is introduced into the small

opening, and the entire membrane is divided in the same direction as the skin incision. This exposes the hernial sac, which is a smooth serous membrane, somewhat uneven on its surface, and somewhat vascular. The next step of the operation is opening the sac. This is done by lifting a fold with thumb-forceps and making a flat incision with a scalpel at its base. The hernial fluid will now escape from the sac. Again, a grooved director is introduced into the opening, and the sac carefully opened. It is not advisable to extend the incision down to the hernial opening, but to leave about one-half an inch of the sac intact. Fresh adhesions between hernial sac and intestinal wall can, as a rule, be freed by the grooved director or by the finger introduced into the sac. Old adhesions are not, as a rule, very extensive. If they cannot be dissected free with Cooper scissor, it is better to leave a part of the hernial sac attached to the hernial wall, and not to risk injuring it. The prolapsed intestine is now examined for any evidence of beginning necrosis. In case any is present, especially at the constricting ring, great care must be taken in handling the loops, especially as regards any traction thereof. In case of the absence of any further abnormalities within the hernial sac which continue the strangulation, we try to find the constricting ring. For this purpose, the left hand, by means of thumb-forceps, draws the hernial sac toward the operator, who introduces the right index finger into the neck of the sac, where it will feel a fold, ring shaped, and mostly sharp edged. This constriction is the place of incarceration. Two methods of dilatation of the constriction have been employed. In the first method the right index finger is introduced into the constriction, the left hand leads a blunt-pointed tenotome into the ring along the rear side of the index and rotates its sharp side to the constricting tissue, while the index finger pressing against it, makes the incision. If one incision be not sufficient, a second one is made at about one quarter of an inch from the first.

The other method, which is now usually practiced, consists in splitting the constricting tissues from without, inwards. We divide the rest of the sac down to the constriction, and lifting it by a sharp hook or forceps, cut into it with a small scalpel. This method seems to me preferable because of the facility it offers in controlling hemorrhage. After another careful inspection of the prolapsed gut for any symptoms of necrosis, and after emptying the contents of the intestine back into the abdominal cavity, the reduction of the hernia may be completed. In case of failure, another undivided constriction or an intestinal twist must be sought and remedied. After ligating the hernial sac the wound is closed. For greater safety a strip of iodoform gauze is left in the lower angle for drainage; this strip may be removed one or two days later. The patient will soon pass gases and his bowels will begin to move. None but fluid diet should be given for about a week. In doubtful cases, whether a suspicious-looking intestine may develop necrosis or may recover, it is wise to leave the loop outside the abdominal cavity for twenty-four hours, until its fate can be decided. To prevent its slipping back, a strip of iodoform gauze may be drawn through an

opening in the mesentery and the entire wound covered with sterilized gauze. It is surprising how a desperate-looking gut, with almost black discolorations, will recover the following day and regain its elasticity after blood circulation is restored. Even the most experienced surgeons cannot always decide at once whether an intestinal loop will become necrotic or not.

What are the advantages, first to the patient, and second to the operator, if he waits a day before finishing the operation? The patient is released by a short operation from his strangulated rupture, and the immediate danger to life is removed; he has the opportunity to recover from the severe shock from which all these patients suffer more or less, and should it unfortunately happen that gangrene sets in, and intestinal resection anastomosis become necessary, he is in better general condition for this operation than he was the day before.

And as to the practitioner? After he has fulfilled his chief duty by attempting to save his patient's life by immediate surgical interference, he has the chance to obtain the assistance of an experienced surgeon if another and difficult operation must be performed. Now arises the important question, what shall the practitioner do if he finds a gangrenous and perforated intestinal loop? If the gangrene is very limited and the perforation not exceeding the size of a five-cent piece, the opening may be closed by interrupted silk sutures, inverting the edges of the wound to the lumen of the intestine, preventing necrotic tissue from entering the free abdominal cavity, and allowing it to pass through the intestine. Leave the loop outside the abdominal cavity and dust it with iodoform powder. After careful disinfection of the entire wound an aseptic dressing must be applied. The next day, if the gangrene does not show further development, the loop may be reduced and the operation finished. In those desperate cases in which gangrene is extensive and perforation has occurred in several places; when the whole hernial sac is phlegmonous and filled with fecal matter, nothing but drainage and disinfection with carbolic acid can be of any avail. When the intestine must be attached to the thigh by several stitches, the lumen of the ascending part should be maintained and drained by a wide calibre rubber drain; or if no drainage tubes be at hand, iodoform gauze must be placed in the gut to conduct its contents out. Patients in this condition are usually so collapsed and so nearly pulseless that any extensive interference for the time is naturally forbidden.

In closing this paper, a case may be cited to show how much harm may be done in strangulated hernia, by submitting the patient to a prolonged operation and prolonged narcosis.

About two years ago, a man, 28 years of age, came to a hospital in this city with a strangulated right inguinal hernia. Strangulation had occurred in the forenoon and the operation was performed at about 4 P. M. of the same day by the house surgeon of the hospital with the assistance of the attending surgeon. The intestine did not show symptoms of beginning gangrene, and could be easily reduced after the sac was opened, and the radical operation was performed. The duration of operation was one and

three-quarter hours, and though the patient was in excellent condition when he entered the hospital, he died three hours later from shock. This case is mentioned to emphasize the fact that the element of possible shock must never pass unheeded. As a rule, however, with due care, and following ordinary surgical principles, strangulated hernia is within that list of surgical ailments which may be viewed optimistically.

This view-point is based upon study and experience, which leads me to submit:

1. That strangulated hernia is entirely within the scope of those conditions which the general practitioner can treat.
2. That not more than a fair modern surgical education is required.
3. That no rarely-used instruments are needed.
4. Strangulated hernia is so exceedingly frequent that every physician should inform himself on the technique of its treatment.

5. That the simple procedures I have endeavored to make plain yield successful results in the vast majority of cases.

Throughout this little sketch I have striven to avoid encumbering my effort with reference to literature on strangulated hernia. The extensive works and innumerable journal articles on the subject have attained colossal dimensions. He who desires to do special work in this department must naturally study this immense literature; and I can promise him that he will be amply rewarded therefor.

Lest, however the impression be conveyed that I would operate on all cases of hernia, I must lay stress upon the fact that there are conditions, such as advanced age, where a well-adapted truss will suffice to attain the desired ends. The adaptation of a truss, however, is not so trifling a matter as some instrument-makers would have it appear. Indeed, in many cases the injudicious selection and application of a truss can, and often does, precipitate the danger which makes capital surgical intervention imperative.

In conclusion, I beg to say that if this effort serves as a guide to but one of my junior colleagues, leading him to save the life of his next case of strangulated hernia, my purpose will be fully attained.

On the lesions of the Central Nervous System Consecutive to the Elongation of the Peripheral and Cranial Nerves. G. Marinesco, (*Gaz. Heb. de Med. et de Chirurg.*, March 28, 1901. 48 me. Année, No. 25.) At a meeting of the Société de Biologie, held March 23, 1901. Marinesco reported the results of stretching the hypoglossal and sciatic nerves in a dog. The author found that in the neighborhood of the point of application of the stretching force, the myelin was fragmented and converted into large bulbs or presented granular degeneration. The axis cylinder was more or less altered and the nuclei of the sheath of Schwann multiplied. If the compression exercised in the neighborhood of the elongation is very marked the areas of degeneration are found deep in the nerve as well as in the superficial portion. The changes in the nerve cells are in relation to the degree and duration of the stretching force. When the traction is slight the cells present a slight swelling accompanied by a very moderate dissolution of the chromatic substance. If the stretching force has given rise to traumatic degeneration, the corresponding changes in the nerve center are more marked and the chromatic substance may be entirely dissolved. [J. M. S.]

THE SANATORIUM TREATMENT OF TUBERCULOSIS.

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In 1859 Brehmer, of Goersbersdorf, laid the foundation for the hygienic or instrumental treatment of pulmonary tuberculosis, not, however, without meeting with some opposition from the government of the Silesian province before the first sanatorium was constructed. The treatment as first conceived by him was most simple. He believed outdoor life, exercise and a liberal diet were the essentials for the cure, but he also held the belief that the climate in the vicinity of Goersbersdorf was a specific one, being supposedly immune from the disease, Dettweiler, who had been a patient, and later assistant physician to Brehmer at Goersbersdorf, opened another sanatorium at Falkenstein in 1876.

Dettweiler held somewhat different views and modified to some extent the treatment which had been originated by his teacher, recommending rest instead of exercise in the treatment of pulmonary tuberculosis. It is needless to say that these two pioneers had to face the harsh criticisms of the whole professional world for nearly twenty years before the medical men took up the subject and discussed it in a fair manner, as the prevailing opinion at that time rather pointed to the belief of incurability. Towards the end of the struggle these two phthisio-theapentists had created a small school, which soon added to its number of adherents, until now we find the field of phthisio-therapeutics as an established department of medicine in every civilized portion of the globe.

The essentials of the sanatorium treatment as understood and practiced at the present time by the phthisio-therapeutics the world over, may be summed up in the following terms: **Rest, Outdoor Life, Overfeeding, Medical Supervision.** For the sake of convenience we shall consider each subdivision of the hygienic or sanatorium treatment separately in the order named:

Rest.—This should be an absolute term, understood as such by all serious-minded, well-intentioned medical men who are looking forward to the permanent recovery of their phthisical patients. In incipient cases **rest, absolute rest**, must be enjoined. A score of personal observations might be cited of patients giving promise of complete recovery, who have simply murdered themselves with the mild (!) exercise prescribed for them.

I have very little hesitation in making the statement that the time is not far distant when the term "rest" will mean the recumbent position as applied to the treatment of incipient pulmonary phthisis. I have kept patients in bed, in the open air, during the incipient stage of the disease, for three, four and five weeks, at the outset of their treatment and always with most beneficial results.

I recall one instance of a male patient gaining one pound in weight every day during a three weeks' stay in bed, and ultimately making a most perfect recovery in three and a half months.

The *rest-cure* as practiced at the present time is in a semi-reclining position in a steamer chair, or an adjustable invalid's chair, out of doors. The patient is made as comfortable as possible with the aid of

cushions, rugs, etc., and in winter a hot soapstone is placed at the feet. Each sitting of two to three hours is interrupted by the ingestion of food, and a short walk of forty to fifty steps on the veranda.

The term "rest" should imply even more. A wound on any part of the body is set to rest by protective bandages. The wound in the lung should also be protected as much as is possible. Hilarious outbursts, loud and excessive talking, singing, forced expiration and inspiration, or any attempt at chest expansion, until there is evidence of arrested disease, are bound to be injurious. In a like manner emotional reading, sexual reflexions, or indulgences, however mild, are to be avoided.

Smoking and the unwarranted use of intoxicants, as well as games of an exciting nature, should not be allowed. Anything that will increase the respiration or pulse rate is going to interfere with speedy recovery by irritating the wound which is attempting to heal by resolution.

Outdoor Life.—In the summer time not less than ten hours, in the winter season not less than six hours, should be spent in the open air. In the Laurentian Mountains our patients put in an average outdoor stay of twelve hours in the summer and eight in the winter, inclusive of inclement weather.

Patients sleep with their bedroom windows open both summer and winter. During the extreme cold weather a hot soapstone is usually placed at the foot of the bed, thus keeping the feet and body warm with comfortable bed clothing, while the head is kept quite cool, the patient constantly breathing fresh air, practically continuing his outdoor life while sleeping.

Gradually accustoming your patients to this open air method of living makes them extremely resistant to cold, and increases the power of food assimilation and metabolism.

The following summary of meteorological observations will give you some idea of what outdoor life means in the Laurentian Mountains, where is situated the now well-known resort and sanatorium of Ste. Agathe des Monts:

—1900.—

Min. temp.		Max. temp.		Mean. temp.		Days of Sunshine.		Rainfall.	
January	July	Jan.	July	June	October	June	October		
—17°	82°	7.88°	62.08°	20	18	3.6 in.	1.13 in.		

The fact that open air life in favored resorts is not hindered by inclement weather, and the further well-known fact that the outdoor life is practically carried on throughout the night as well as the day makes the possibility of a similar treatment being carried out at a very moderate altitude anywhere, if one can only be assured of a plentiful supply of pure air. The very good results obtained in the Laurentian Mountains, where the elevation is quite moderate, varying from 1,200 to 1,700 feet above the sea, should encourage every physician to seek suitable resorts as near the home of the patient as possible.

We know from experience that the permanent cures are those obtained in home climates.

Overfeeding.—This does not necessarily mean "gavage" or "forced feeding," the average patient does not require these extreme measures, as the change to a suitable climate with health-giving and restful surroundings usually develops in the individual a voracious appetite. The northern altitudes particularly enhance food assimilation, and the winter season in northern climates is remarkably stimulating in this direction.

Food must be given at frequent intervals, as digestion is much more rapid under this regime of life. Before rising the patient should be given some light liquid food or some fruit, hot milk, gruel, coffee and cream, etc., the choice being left to the physician, or guided by the desires of the patient. The patient is then allowed to rise and dress and take his regular breakfast at an hour or so after the breakfast of awakening. The regular breakfast should be varied, but oatmeal or some other cereal food should be taken daily. Honey, hot rolls, cornmeal cakes, fish, either smoked or fresh, lamb cutlet or a small steak, eggs in any form, sometimes bacon, toast, coffee, milk, etc., should be varied and used at breakfast time.

Between breakfast and the midday meal (which should be the heaviest meal of the day) a small luncheon should be taken, consisting of biscuits and cocoa. Tropon chocolate or tropon biscuits, cold milk with somatose, one or two raw eggs, broth or beef tea with buttered bread, etc. This intervening lunch should be varied each day as much as possible, yet when patients can be made to ingest one, two or three raw eggs without producing nausea, it is preferable to keep on giving the eggs daily.

The midday meal should be taken at one o'clock and should invariably begin with a rich consommé not too highly seasoned, in which one may add a small teaspoonful of Tropon or Somatose. This should be followed by a light entrée of fish, or some cold meats, or daintily made dishes, followed by roast meat, such as lamb, fowl, beef (underdone), etc., with large quantities of vegetables, such as cabbage, potatoes, lettuce, spinach, asparagus, green peas, beans, etc. Desserts are not considered necessary, yet such a meal requires relieving dishes, so that ices, milk puddings, light cake and preserved as well as fresh fruit may be partaken of. Fruit should at all seasons be made use of in the diet of a consumptive, unless the condition of the bowels should be a contraindication. Between the midday meal and supper a light lunch such as the one outlined for the forenoon should be partaken of. The supper should not be a hearty meal. Some hot or cold preserved fruit. Before retiring at nine o'clock some hot milk or an egg-nog usually procures a restful night. The supervision of the cooking should not be neglected by the physician; in fact, the successful phthisio-therapist is the man who, though roughly, understands the culinary art, and devotes a great part of his time to supervising the preparation of the food his patients are called upon to ingest. Quite often a patient will come to the conclusion that overfeeding, or stuffing as he calls it, is going to ruin his digestive organs. You must

in such instances make use of your persuasive powers, and convince your patient that even if he should have no desire for food, his digestive organs will assimilate all he can ingest, even if he forces himself unto nausea. Impress upon him the fact that the digestive organs are more apt to become inactive if given but little to do, while the stomach itself possesses the indisputable privilege of relieving itself speedily when overloaded, which seldom happens.

If it becomes necessary to resort to forced feeding, the greatest firmness is required on the part of the physician, in order to confirm his earnestness in helping the patient in the battle for life. After the stomach tube has been used a few times the patient usually realizes that he can ingest his food quite well without it, and he usually becomes the hero. Persuasion and firmness, however, usually render it unnecessary to resort to extreme measures.

A palatable combination of proteids and carbohydrates, with a small quantity of alcohol, given between meals, will, in the majority of cases, favor the assimilation and storage of hydro-carbons contained in the usual diet.

Medical Supervision.—This is the keynote to success in the treatment of tuberculosis. It is this supervision which has carved the name of victory in the field of phthisio-therapy. It must, however, be constant. The physician must be the friend as well as the adviser of the consumptive. He must study the peculiarities of each patient, and individualize his treatment, if the régime may be called such. In appalling numbers the victims of this lack of supervision are to be found in open health resorts. To-day you may be called to attend an individual who has an exacerbation after having been for a long walk, a bicycle ride, a canoe or boat outing, either paddling or rowing; to-morrow you may be summoned to the bedside of a young mother with an extension of her lung lesion through having had to sacrifice herself at the altar of devotion attending her child during an acute illness; the next day a young lady seeks your advice: she has had a slight rise of temperature following a prolonged drive, having returned home in an exhausted condition, and in the course of a few weeks a new focus develops under your observation. How many instances one could recite of the fatality of this lack of medical supervision, which is nowhere else so absolutely necessary as in the treatment of pulmonary tuberculosis.

Medical Treatment.—Outside of a few symptomatic indications drugs are seldom of any real value in the treatment of pulmonary phthisis.

In fact, the patient who is made to follow the hygienio-dietetic treatment exclusively is the one who improves most speedily. Where indicated strychnine in doses of 1-30th of a grain has proved very useful. Creasote still remains the most reliable internal antiseptic in tuberculosis. It should, however, be used in the form of creasote water, nearly to saturation, and both the creasote and water must be strictly pure, as otherwise disastrous results are bound to follow its administration. The doses exhibited in creasote water may safely reach 30 drops three times a day, but should not be long continued. Recent hæmoptysis, as you know, is

a contraindication to the use of creasote or any of its derivatives.

The fever of tuberculosis should invariably be treated by rest in bed. The use of antipyretics should not be encouraged. If antipyretics are used at all, the chosen one should be given from one-half to one hour preceding the time of the expected rise of temperature.

Cinnamic acid and cacodylate of soda, of which we have heard much lately, are apt to be recommended.

One might enumerate by the dozen the different remedies which have been advocated for the treatment of phthisis. Let me tell you that very few of these have ever proved beneficial, while we have proof positive of the dangers of supermedication in the treatment of this disease.

The *cough* is usually controlled by the use of codein, heroin or diorin. The *night sweats* usually disappear with increased nutrition. They can be controlled if necessary by the use of atropine (1-80 gr.) or camphoric acid (20-30 grs.).

The hemoptysis when profuse is always a dangerous complication. Absolute rest in bed in semi-reclining position must be enjoined. For twenty-four hours after a hemorrhage the movements of body, limbs or head must not be allowed; even whispering must be avoided by the patient. Ice packs to the chest, with a hypo of morphine sulph., 1-4 grain, and atropine, 1-75 grain, in combination, will as a rule hasten the formation of the sealing clot.

According to the severity of the hemorrhages, rest in bed must be enjoined for sometime, varying from two to fifteen days after the last trace of blood has disappeared from the sputum.

Conclusion.—We usually judge of the efficiency of to the inevitable conclusion that the hygienic treatment produces.

Looking into the records of the older institutions, such as Goerbersdorf and Falkenstein in Germany, giving a percentage of permanently arrested disease in over 60 per cent. of cases treated, and also taking into consideration the very excellent results obtained at the Adirondack Cottage Sanatorium, with a percentage of over 70 per cent. of cures, we must come to the inevitable conclusion that the hygienic treatment has definitely established its superiority. I have quoted the two oldest institutions in Europe (over thirty years) and the oldest institution in America (over twenty years) as the results obtained during a long period are far more convincing. I do not wish to enumerate the different institutions in America which are now doing similarly good work and obtaining results quite as good, as such would encroach upon your time.

Being favored by many ideal health resorts in different parts of the North American Continent, one cannot but ask why more sanatoria are not in active operation. The reason is to be found in the fact that the erection and maintenance of such institutions is largely a social problem, and the public has not yet been aroused to the needs of the population which is being decimated by this disease.

A most important factor in sanatorium treatment is the education given to the patient which will allow him to lead a more hygienic life at home, as

well as graduating him as a teacher in the prevention of disease.

It is a well known fact that when pulmonary tuberculosis becomes arrested, the disease cannot be considered as positively cured unless good health has been enjoyed for at least eight years after the arrest of the disease. Thus the necessity of a practical hygienic education becomes imperative, and this can only be obtained by a sufficiently long stay in a supervised institution.

The time is not far distant, I hope, when every city in this Dominion will have its sanatorium at as short a distance as possible, with its rural probating as well as isolating home in the immediate vicinity of its suburbs.

ORTHOPEDIC TREATMENT OF DEFORMITIES AND DISABILITIES RESULTING FROM DISEASES OF THE NERVOUS SYSTEM—SPECIAL REFERENCE TO TENDON TRANSPOSITION.*

BY B. E. MCKENZIE, B.A., M.D.

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On reviewing the cases that have presented themselves for orthopedic treatment in the last thirteen years, I find that nearly 20 per cent. of all patients seeking advice do so because locomotion and symmetry are interfered with by deformity or disability arising from some affection of the nervous system. The proportion is about equal to that of cases arising from bone or joint disease, but smaller than that due to congenital deformities or defects.

Of the various nervous affections, acute anterior poliomyelitis is much the most common in producing the conditions for which alleviation is sought. The affection is marked by atrophy of the muscles involved, by altered electrical reactions, diminution or loss of the reflexes, and by a peculiar distribution of the paralysis according to function, rather than anatomy. This last feature is an interesting one, and has an important bearing, as will be seen, upon the treatment of these cases.

Joint Equilibrium.

The normal condition of a joint implies that the muscles exercising control shall be able to maintain a balance. If at the knee the quadriceps femoris be reduced in power or completely paralyzed, its antagonistic group, the hamstrings, will so disturb the balance as to make flexion easy and habitual, while complete extension will be difficult or impossible. Under these circumstances the condition of flexion soon becomes permanent and contracture of the hamstrings results, so that we have a fixed deformity. (It is important to note that the word "contracture" here used is meant to imply a permanently shortened condition of the muscle.) It is seldom, relatively, that any muscle or group of muscles thus affected is completely paralyzed. There is generally some degree of power left, and quite frequently the muscle is only slightly disabled. These effects, also, as will be seen, have an important bearing upon the treatment.

* Read at the meeting of the Canadian Medical Association, at Winnipeg, August 28th to 31st, 1901.

If the peronei muscles be partially or completely paralyzed, those muscles passing to the inner border of the foot draw it inward and deformity is gradually produced; or if the anterior leg muscles be partially or completely disabled through paralysis, then the back group, acting through the tendo Achillis, gradually bring about a condition in which the heel is kept drawn up and the anterior portion of the foot is pointed downward, a condition known as talipes equinus. If the quadriceps extensor of the thigh be disabled, the hamstrings tend to produce permanent flexion at the knee; if the glutei have less than normal power, the flexors of the thigh will tend toward its permanent flexion upon the pelvis, and in a similar manner through disablement of other groups of muscles various other deformities may be caused.

Mechanical Treatment.

Until comparatively recent years, the only aid given to these patients was afforded through the use of appliances, generally consisting of steel braces strapped about the legs and attached to the boots. Both in books and in practice even at the present time this method of dealing with weakened limbs is far too common.

The constant use of braces and straps tends to prevent a development which might otherwise be induced. While the use of braces cannot be given up in all cases, yet it may be said that their employment has been quite too general. They may be frequently employed with advantage, especially at night when the patient is in bed. It is then that the part is allowed to assume the position of deformity, the knee to be continuously flexed and the hamstrings are permitted to become contracted, or the anterior part of the foot is allowed to drop downward and the tendo Achillis to become permanently shortened. The wearing of a simple nightbrace that will hold the leg or foot in position during the hours of recumbency, is much less objectionable than it would be when the patient is moving about. It does not prevent development of muscle, it is not seen by the public, and its inconvenience is reduced to a minimum.

Some Peculiarities of Infantile Paralysis.

There are some peculiarities of acute anterior poliomyelitis which will bear special study because they afford indications for its rational treatment.

The paralysis is not general, but local. Mary Putnam-Jacobi, in Pepper's "System of Medicine," shows that in thirty-seven cases the paralysis was distributed as follows: Left lower extremity in thirty-four cases; right lower extremity forty times; right upper extremity and left lower extremity twenty-three times; all four extremities seven times; both upper extremities three times; both lower extremities twenty-three times; left upper and lower extremity twice; right upper and lower extremity once; right upper and left lower extremity three times, muscles of trunk and abdomen once.

It will be noticed that the lower extremities are much more frequently involved than the upper. Here is a feature of the disease specially worthy of consideration in view of treatment. The difference of function between the upper and the lower extremity is marked. In order that the hand and arm

may be of service, it is necessary that the fingers should be capable of considerable dexterity. They need the deftness which can finger a musical instrument, tie a knot, grasp a handle, hold and use a needle, etc. The upper extremity, which cannot approach in delicateness of function to this ideal, falls proportionately below its requirements. The lower extremity, on the other hand, serves comparatively well its purpose if only it can be a secure and substantial post to bear the body weight. The further it can go beyond this in adding to the activity of the individual the better. The comparative coarseness of function of the lower extremity, however, makes it much more amenable to treatment in the manner which is to be indicated in this paper than is the upper extremity.

It is further noticeable that the paralysis, even in a single extremity, is not general, but is limited to muscles functionally related. In the upper extremity the supinator longus generally escapes in spite of the fact that all the extensor muscles of the forearm are paralyzed, and though these are supplied by the same nerve; in the lower the sartorius generally escapes, though the quadriceps femoris be greatly disabled. On the other hand, the supinator longus is generally affected along with the deltoid, biceps, and brachialis anticus, with which it is functionally associated. The tibialis anticus is generally paralyzed in connection with the quadriceps extensor. These muscles are supplied by different nerves, but are associated in extension movements of the leg in walking.

In the lower extremity the peronei muscles situated at the outer border of the leg and foot, and employed to move the foot outward, are most frequently affected. Next in frequency is the posterior tibial and then the anterior thigh muscles, and least frequently the posterior thigh muscles. Rarely an entire extremity or a large group of muscles may be permanently paralyzed, but the paralysis is sometimes restricted to a single muscle.

The definitely localized paralysis and atrophy point to the importance of massage and electricity being applied early to stimulate the nutrition of the affected muscles. If contracture has been allowed to occur, section of the tendons of the contracted muscles and immediate replacement of the deformed member are indicated. Such replacement must be followed by the use of mechanical means to prevent recurrence, and under such circumstances results which are most gratifying are frequently obtained.

A further study of the mechanical conditions present affords a basis for a novel and bold, but quite a rational and effective, method of treatment. The conditions of the foot when the calf muscles are paralyzed and the peronei escape, will serve to explain the method of treatment here referred to.

Muscle Transposition.

The muscles causing movement at the joint should maintain an even balance among themselves, but in the case where the calf muscles are paralyzed and the peronei active the heel will drop down, the outer border of the foot raised up, and the foot drawn outward.

No surgical intervention can add to the sum total

of the power manifested by the muscles producing movement at the ankle, but a readjustment may be made as to establish a more even balance. The effect of the peronei when unopposed is positively harmful and if nothing better can be done their tendons should be cut so as to permit correction of the deformity. This procedure would further lessen the sum of power possessed by the muscles at the ankle; hence a transposition of the peronei is made. The tendo Achillis having been freely exposed, and the peronei tendons having been cut subcutaneously in front of and below the external malleolus, these latter are reached at a point where they are nearest to the incision made over the tendo Achillis and are drawn from their sheath. The proximal segments of the peronei tendons are now inserted into the tendo Achillis as close as possible to the os calcis. It is generally advisable to shorten the tendo Achillis before the peronei tendons are sutured as here advised. If each of the peronei tendons have its proximal segment split, it can be introduced in a fork-like manner along with the split portions of the tendo Achillis, so as to make a very strong union. In suturing these parts together the posterior extremity of the os calcis should be pushed as high up as possible and the peronei tendons should be drawn down so as to make the distance between the origin of the peronei and the new insertion as short as possible. The union which takes place under such circumstances is nearly always without failure or defect. Circumstances permitted the cutting down upon such grafted tendons a few months ago when the splicing was found to be most complete, a strong union having been formed at the point where the tendons had been sutured together.

When the healing is complete, it will be noticed that the power of the active unparalyzed peronei, which before were harmful in their action, is transposed so as to permit them to pull upward at the insertion of the tendo Achillis. Thus, without lessening the sum total of power manifested at the joint, its action has been so rearranged as to establish a better balance of the foot, and to change its position so as to bring it more directly and effectively under the body weight, thereby improving its function.

History of Cases.

In a similar way numerous other transpositions may be made with signal advantage to the usefulness of the affected extremity. I shall report briefly a few cases to illustrate some of the many varieties of transposition which may be made.

Case 1.—December, 1892. H. R., a boy, aged 11; infantile paralysis; history incomplete; lame from childhood, but not from the time when he first learned to walk. Both legs affected; right leg, in all its parts, is smaller and weaker than the left, but the paresis is more marked in the internal and extensor muscles of the foot. The gastrocnemius, soleus, and posterior tibial muscles are powerless. The flexor longus digitorum, the flexor longus hallucis, the tibialis anticus, and peronei are active. The latter muscles are displaced one inch forward from their natural position behind the external malleolus.

Operation.—An incision was made extending three inches directly over the tendo Achillis, which was

found to be a firm fibrous cord about the size of a lead pencil. The tendon was split, the incision being continued down to the os calcis. The tendons of the peronei were cut subcutaneously, and the proximal segments having been drawn from their sheaths, were stitched into the tendo Achillis as close as possible to the insertion into the os calcis. The tendon of the flexor longus digitorum was reached by dissection from the first incision, cut and sutured with the peronei. Healing was satisfactory, and three months afterward walking was much improved. He has increased power of raising the heel, though not sufficient to enable him to sustain his weight by raising the heel from the floor and balancing upon the anterior part of the foot. A properly constructed boot was made supporting the inner border of the foot. He wears no brace, and walks much better than formerly.

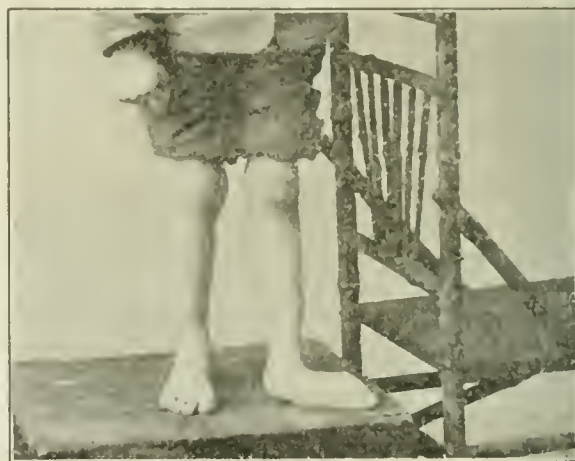


FIGURE 1

Case 2.—R. M., aged 14; had a severe attack of anterior poliomyelitis in infancy, greatly disabling both extremities. The right foot was drawn into strongly marked valgus, as shown in Fig. 1. The quadriceps extensor of the left side was so completely disabled as to make it necessary to place his hand on his knee in walking. Otherwise the knee would become flexed and the body weight coming upon the limb cause him to fall. Various other groups of muscles were so affected as to make it impossible for him to walk more than a couple of blocks at a time, the disability increasing as his age and weight increased.

Feb. 21st, 1901, the scaphoid of the right foot was removed, the cartilages of the head of the astragalus and of the cuneiform bones were completely cut away so as to leave a fresh bleeding surface of bone. The gap was closed up by adducting the anterior portion of the foot, and the freshly-cut surfaces were brought into intimate contact, purposing to obtain a synostosis.

The tibialis posticus being completely paralyzed, and the extensor hallucis being left unaffected, and acting with such vigor that it dislocated the great toe dorsalward when an effort was made to dorsiflex the foot, the tendon of the former muscle was cut by an open incision two inches above the tip of the internal malleolus, and the distal segment of the

tendon, being pulled from its sheath, was carried up in front of the malleolus and sutured into the split tendon of the extensor hallucis. The result in improving the position of the foot may be seen in Figs. 1 and 2. The result in improved function is just as satisfactory as the improvement in appearance. The strong extensor which before was able to dislocate the toe upward can do so no longer because its force is expended partly in adducting the foot and raising its inner border.

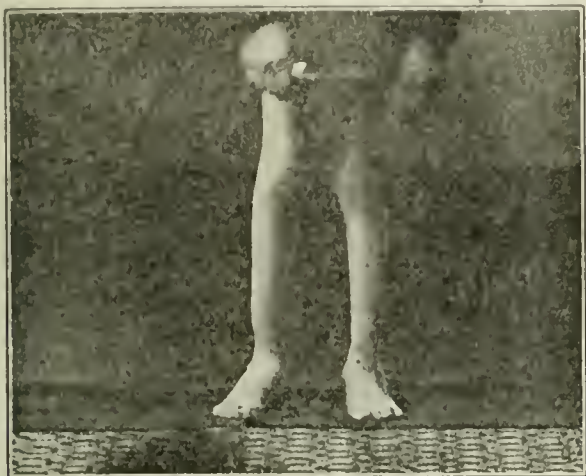


FIGURE 2

May 2nd. In the same patient, who was obliged to place his hand on his knee in walking because of the disability of the quadriceps extensor to maintain extension, the sartorius was cut from its insertion and sutured in just above the patella. An incision five inches long was made midway between the patella and the tendon of the sartorius. The sartorius being found an active muscle, but inefficient, because of its insertion, to accomplish the work that is most needful for such a patient, it was cut near the insertion. The end of its proximal segment was drawn through a slit made in the fibrous structure just above the patella. The leg was kept fully extended for several weeks until healing had occurred. This patient was allowed to return home in five weeks after the last operation, able to walk further and with greater ease than formerly, he does not find it necessary to place the hand on the knee, and he can propel his bicycle with much greater force than he could before the operation. Time, development, and education of these muscles in their new role will greatly improve their efficiency.

Case 3.—September, 1899. C. M., aged 18. Left talipes valgus paralyticus. The extensor proprius pollicis and the peronei were found active, while both tibiales were greatly disabled. In this case the tendon of the extensor pollicis was cut, and the proximal portion transposed to that of the tibialis anticus and the proximal segments of the peronei were carried in front of the tendo Achillis and grafted into the tibialis posticus. The result was a very marked improvement.

Case 4.—H. C., aged 18, has right pes equinovarus and loss of power of extension of the left knee from anterior poliomyelitis. This young woman

walked with crutches constantly, except to move about in the house, which she could do by placing her hand upon the knee to prevent its giving way under her. The disability was increasing as the age and weight increased, and she had gradually become more dependent upon her crutches.

January, 1899, the sartorius was transposed as in Case 2 with a most gratifying result.

Enough cases have been related to illustrate this method of dealing with disabled and deformed extremities in such cases as are due to lack of balance in the muscle which control the foot and knee. It is a most satisfactory method of dealing with such affections of the lower extremity, but less helpful in the similar conditions which are found much less commonly in the upper.

Case 5.—One case may be related to show what is the practice at the wrist. January 2, 1900. M. A., aged 33, had hemiplegia when 19 years of age; has flexion at the wrist with contracture of the anterior muscles and tendons, and extreme pronation. The proximal segment of the flexor carpi ulnaris was carried around the ulnar border and grafted into the extensor carpi ulnaris, and the flexor carpi radialis was in a similar manner carried around the radial border and grafted into the extensor carpi radialis longior. Several bands of fascia and of carpal ligaments were divided subcutaneously and the hand dressed in a position of supination and extension. Healing was satisfactory, and there is some improvement in the use of the hand, arising largely from the fact that the wrist is no longer kept flexed, but remains in about a medial position. There is also greater readiness in letting go of an object on which the fingers have fastened. It is possible that greater gain might have resulted in this case if the tendons had been carried more directly to their point of action by putting the tendons through between the bones. There is also another step in the operation which might have been taken with benefit, namely, the pronator radii teres might have been cut from its ordinary insertion at the outer border of the radius and so transplanted as to pass between the radius and ulna to the same insertion at the tubercle of that bone. Much less opportunity has presented itself for operating upon the upper extremities, but so far as our observation goes the results are less satisfactory, not because the transposition could not be so well made, but because the requirements of the hand are so very different from those of the foot. Even in the hand and arm, however, much good may be effected by judicious tendon operations.

Before deciding what tendons to transpose and where to insert them, each case should be studied carefully with a view to determining exactly the effect produced by the action of each muscle both at its original and its new insertion. Either the distal segment of the tendon of a paralyzed muscle may be grafted into the uncut tendon of one that is active, as in case illustrated; or the proximal segment of an active muscle may be transferred to the tendon of one that is paralyzed, as in Case 3. There are some who advocate doing the former as frequently as possible and avoiding the latter, deeming it inadvisable to run the risk implied in cutting the

tendon of an active muscle. It should be noted, however, that such active muscle is not an efficient one. On the other hand, it would often be better to cut the tendon, even if it were only possible to destroy its action thereby, as in the case of the peronei when unopposed drawing the foot into a position of extreme valgus, or when the tibiales unopposed draw the foot into extreme varus and supination. After operating in both ways upon many cases since December, 1892, I do not regard the distinction as important.

If good judgment be exercised in the transposition made and care be taken in the operation, the success of the grafting is certain and always attended with improvement in function. The operation was first performed in 1882 by Nicoladoni and described in the *Archives of Clinical Surgery* of the same year. But little attention was paid to it, however, till Parish of New York employed the same principle in 1892, and described it in the *New York Medical Journal* of the same year. In recent years it has come rapidly into favor with orthopedic surgeons as a most valued means for improving the condition of many who suffer from paralytic disabilities.

Other methods of treatment employed are much more widely known and call for only a brief notice.

Mechanical means must often be employed because the disability is so great that the limb could not otherwise bear the body weight; but it should be carefully borne in mind that the use of braces retards the development of the extremity, and is therefore contraindicated if the limb can be kept in position and can perform its function fairly without aid. If the knee or ankle be so completely paralyzed as to be fairly described as the flail joint, then the subject of excision for the purpose of securing ankylosis should be considered. A leg without motion at either one or the other of its joints is much more serviceable than one that is extremely weak. Amputation because of paralysis should seldom or never be practiced, even in the most completely disabled lower extremity. The limb can better be employed as a core for a good mechanical appliance than can its place be taken by an artificial limb.

One important condition, and one often overlooked, is that of deformity arising from paralysis. Where this exists it is, in most instances, the surgeon's first duty to correct the deformity. In many cases the contractures resulting from the paralysis are insuperable obstacles in the way of progress, and it is not uncommon to find both children and adults unable to walk whose trouble is not due chiefly to the paralysis, but to the secondary deformity. One girl, four years of age, having spastic paralysis, the adductors being strongly affected, had never learned to walk because she could not carry one knee past the other. There were other troubles in the same child, namely, strongly marked flexion at the knees through contracture of the hamstrings and some deformity of the feet. Within three months of the time when all these contractures and deformities were overcome, so that the knees and feet could be kept in a correct position and the knees be fully extended, and the legs abducted so

as to make with each other an angle of 60 degrees, the child was able to walk about the house from one room to another.

Because of multiple neuritis following typhoid fever in a young woman of nineteen, and because of the deformity of feet and flexion of the knees resulting from contracture of hamstrings and calf muscles, she had not walked for nearly eighteen months. Rectification of the deformity was easily accomplished, and when followed up by physical training, including massage, her recovery was speedy and satisfactory. Without first getting rid of her deformities the power to walk could not have been restored.

Of other forms of disease of the nervous system concerning which advice is sought because the power of locomotion is defective, spastic paralysis is the most common. Section of the tendons of the muscles most affected, and pulling widely apart of the cut ends and their continued separation until healing has occurred, results in much benefit. A most important element in prognosis is found in making an accurate estimate of the patient's mental condition. More than half of these patients suffering from spastic paralysis are below par mentally. The better the mentality the more hopeful the prognosis.

Even cases of locomotor ataxia, pseudo-hypertrophic paralysis, and obscure forms of progressive muscular atrophy, seek advice because of defects of locomotion. It is only in rare instances and in limited measure that orthopedic surgery affords them any help.

On the other hand, neurotic patients frequently seek advice because of supposed disability of spine and of other joints. They are a class deserving of much judicious sympathy and are very amenable to treatment. A regularly constituted and well-equipped gymnasium is a powerful aid in the successful management of these patients.

Permit me to summarize:

1. Many patients who seek the advice of the orthopedic surgeon are suffering from some form of nervous affection—usually chronic.
2. When deformity exists it should be corrected.
3. When there is lack of balance at a joint an effort should be made to restore equilibrium.
4. Tendon transposition is an effective means to secure this end in selected cases.
5. Braces and splints should not be employed except in meeting the clearest indications.
6. Mechanical means wisely employed may do much to supplement the defective lower extremity.
7. Arthrodesis of a "flail" joint is often better than mechanical aid.
8. Amputation of a limb because of paralytic disability should seldom or never be performed.
9. The gymnasium is a powerful means of enforcing the discipline which is essential to successful treatment of so many neuroses.

MELANCHOLIA AND ITS TREATMENT.*

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Assistant Physician, State Hospital.

It would be impossible in a paper of this kind to attempt to give an exhaustive essay upon such an extensive subject. I will, if possible, give an outline of some cases as we see them every day in hospital duties, and very frequently in private practice. Melancholia has been defined as "A disease of the mind, due to the excitement of the depressive emotions." There is no doubt but what this disease was recognized and described by ancient authors. Burton, who wrote his *Anatomy of Melancholia* 300 years ago, a book made up largely of quotations, cites often from Galen, Hippocrates and other ancient authors. The immortal Shakespeare, in his writings, evidenced considerable knowledge of melancholia. In *Hamlet* some of the lines show an excellent conception of the disease. Heredity has been said to be a predisposing cause in this form of mental disease less often than in any other, yet Clouston states that he found a neuropathic history in 30% of the cases admitted to the Edinburgh asylum. All causes which tend to produce profound mental disturbance, by causing worry and anxiety, no doubt act as exciting sources. The disease is more common in females than in males; this has been attributed to the influence of the various diseases incident to menstruation, lactation and the numerous disorders of pregnancy. Ill health and chronic disease are no doubt prominent factors, as they tend to depress the mind. The stage of incubation is usually of long duration, unless it follows a severe shock or sickness of some kind. In simple melancholia, which usually precedes the more serious affection, the patient complains of weariness, insomnia, headache, loss of appetite; has indigestion, becomes irritable, and often has a sense of oppression and danger. It is a common symptom for the person so affected to think that they are to undergo some unique punishment, that their eyes are to be put out, that they are going to be placed in a vat of boiling water, burned up or something equally as dreadful. There is a loss of interest in their daily pursuits, they become indifferent to their family and closest friends. At this time they are able to give a tolerably clear account of their symptoms if desired. Food is either refused or taken reluctantly, the tongue is furred, the face presents an anxious look, and the eye loses expression. From this condition they often pass into the agitated form, hallucinations and delusions are manifest, they imagine that everybody is against them. A subnormal temperature is not uncommon; suicidal and occasionally homicidal symptoms make their appearance. We had a patient in the Columbus State Hospital at one time who jumped on the attendants or anyone who came near him; if they would take hold of him he would not make the least resistance; on being asked why he did this, he replied that he had no desire to injure any one, but that he attacked others with the hope that they might be provoked to

attack him and kill him, as he wished to die. This man afterwards made a complete recovery and remained so. Individuals sometimes have delusions so strong that they will permanently mutilate themselves. I recall two instances where patients have destroyed one of their eyes. The first on being asked why he did it, replied that his right eye offended him, and that he accordingly followed the advice of the Bible, which says: "If thy right eye offend thee, pluck it out. The second gave about the same reason, said that God told him to destroy the offending member. In the stuporous form of melancholia the patient usually refuses to talk, or is induced to do so with great difficulty. They will sit for hours and never move, sometimes this is due to a delusion, they think that God has commanded them not to stir, and that something terrible will happen to them or somebody else if they do. There is a fixed condition of the muscles, a catatonic rigidity at times, so that if you fix the hand in one position they will hold it that way for some time. The pupils are dilated, and the eyes have a staring expression; the skin presents a glistening appearance, and often a cyanotic hue. The odor from the breath is very offensive, and at times they will void their urine and feces in their clothing; they will hold their food and saliva in the mouth until their cheeks puff out and attention is drawn to it. This is, of course, due to defective inhibition and a suspension of will power. Hypochondria resembles melancholia and may lead to it. Every physician comes in contact with these cases in his practice; they persist in talking about their imaginary troubles until they become great bores. It has been said that a hypochondriac who is able to attend to his daily pursuits, is not disturbed in his family relations, and has no actual delusions, cannot be said to be dangerous to others. Cases of this kind need restraint when they lapse into melancholia of a dangerous character. The tendency to suicide in melancholians is met with quite often. If this tendency is in an aggravated form, they will resort to every possible plan to accomplish their purpose; this thought seems to be in their mind to the exclusion of everything else. They will throw themselves violently against a wall or the side of a door, and sometimes cut their heads badly; this is seldom successful, and is so painful that they rarely try it more than once. They will try to get hold of a knife or a piece of glass, a handkerchief or rope, or anything likely to accomplish their purpose. A short time ago we had a patient in the hospital who was the most persistently suicidal person I ever saw; he would wrap the sheet around his neck, and try to strangle himself; endeavored in every possible way to get hold of something by which he might destroy himself. The attendant had him in the bath room one day, by some means he got hold of a crooked nail; he pushed this through the walls of the chest, barely escaping the apex of the heart. He persisted in saying that the nail was in the cavity of the chest, and we were very uneasy until it was found among his bed-clothing, where he had hidden it. We put a special watch on him night and day, the wound healed up, he improved, and the suicidal impulse left him en-

*Read before the Academy of Medicine, Columbus, Ohio.

tirely. Unfortunately, however, he relapsed into dementia, developed tuberculosis, and died. We could not get an autopsy on the case.

At the Columbus State Hospital we have not had a suicide for nearly three years. The plan followed now is to have them all in one ward, a night watch is kept on duty, and in aggravated cases, such as the one I have mentioned, we put on a special attendant, who is not allowed to leave them alone at any time night or day.

When melancholia relapses into the chronic form, the chances of recovery are very small, especially if the patient has been affected over two years. The symptoms of depression continue, they will pick at their clothing, sometimes at their hands and face, until the skin becomes eroded and sores form.

They may also pull out their hair and beard. The face presents a blank expression, and it is difficult to get them to talk, often impossible. These cases usually gradually pass into the condition of dementia. Of the pathology of melancholia but little is known, notwithstanding the fact that we have more deaths occurring in this form of mental disease than any other. Berkley says: "It seems to be a disease of inanition. The only possible explanation lies in a constitutional instability of the nervous system, which may be inherited, or the seeds may have been acquired in early childhood. In the chronic cases, says this same author, coming to the autopsy table there are evidences of old anemias, venous congestion of a passive form, edema of the pia, and of the brain substance, and even general atrophy of the convolutions."

In all cases of melancholia acute, you have indigestion, constipation and coated tongue, offensive breath, and an irritable stomach, evidence of a profound disturbance of the digestive tract; the patient seems to have a perfect distaste for all kinds of food; if they take anything on their stomach they will immediately eject it. The vomited matter is very offensive, in many cases presents the appearance of undigested food that has laid on the stomach for some time without being assimilated. This condition may exist throughout the entire alimentary canal. In these cases lavage of the stomach is often of great value. At the State Hospital recently we have made this a uniform practice, where these conditions exist, and have found it of great value. It is astonishing how rapidly some cases will improve under this method of treatment. It can be done either with a stomach tube, or by a nasal tube. In many cases we find where the stomach is very irritable, they seem to do better when the nasal tube is used; it appears to excite less nausea. If your patient resists, as they most all will, in this class of cases, the nasal tube is the only thing. We usually take water warmed to about 100 degrees Fahr., or thereabout, and add a small quantity of boric acid. After inserting the nasal tube, we pour through a funnel about a pint; or a pint and a half of the fluid; by bending the tube and making a syphon of it, you can usually empty the stomach. If the contents are tenacious, by attaching a Davidson syringe you can draw out the contents of the stomach; this can be repeated several times, depending upon the strength of the patient until the water runs clearer.

The quantity poured into the stomach, and what is removed, should be measured, so that you can tell if you are getting it all away, and not leaving a quantity of medicated solution which might act as an irritant. This should be kept up every day until the patient is able to retain nourishment. The washing out of the stomach in these patients produces such relief that after the first time or two the patient, unless very insane, makes but little resistance. When they become accustomed to it and do not resist, the tube can be placed back over the tongue and so introduced. After the stomach is washed out you can then introduce nourishment in the same manner, beginning usually with a little broth or eggnog, and gradually giving more until you can introduce a considerable quantity every day. As a rule, the patient begins to eat voluntarily. Where emaciation and exhaustion have previously existed, milk, eggnog, any of the predigested foods, soups, etc., should be given as often as possible.

It has been said that moral suasion does little good in these cases, and that there is no use in trying to argue a person so affected out of their delusions. This may be true to a certain extent, but when we are aware that in the majority of cases a person who has improved or recovered from acute melancholia can remember everything that occurred while they were at their worst, it seems reasonable to suppose that they remember your advice, and that it may have done them good. It is of advantage to divert their minds as much as possible from their troubles, and when they are in a condition to do so, we urge them to attend our entertainments and have them taken out in the fresh air as much as possible.

In the way of medication it is almost always necessary to give something to produce sleep, for as a rule they suffer from insomnia.

The hydrobromate of hyoscyne hypodermically is a valuable drug in the badly disturbed cases. A tooth of a grain will often be sufficient to produce a good night's rest. Trional and sulphonal answer the purpose often, and if necessary can be given by the tube while you are feeding the patient, and they refuse to take medicine, as they often do.

Chloral and conium may be used, but are more irritating to the stomach. Calomel in small doses gives satisfactory results in many cases, as it quiets the irritability of the stomach as well as aiding to restore the digestive tract to its normal tone. The bitter tonics, iron, quinine and strychnia, also cod liver oil combined with Parrish food, will be found valuable in many cases. If the patient is weak and exhausted they should be put to bed, and the treatment otherwise can be carried out just the same. The prognosis in acute melancholia is good at least 60% recovering. There is no doubt but what many cases of melancholia can be treated at their homes, where a suicidal tendency is not a marked feature.

When a patient begins to develop delusions of persecution, and evidences a tendency towards suicide, it is dangerous for them to be kept where they have access to weapons of any kind. In the majority of cases a hospital or sanatorium

is the safest place to treat such cases, a change of surroundings will often accomplish a great deal of good by its influence alone.

THE TREATMENT OF ACUTE OTITIS MEDIA.

By FREDERICK L. JACK, M. D.,

of Boston, Mass.

The title of this paper was given me by our Secretary, not I fear with any idea that I should add to the knowledge of one of the most important of ear diseases, but rather to provoke discussion of its treatment. It is important not only because it affects hearing, but because it affects life. To detail before this society the dangers of its extension to vital parts is quite unnecessary.

A personal experience in the line of treatment must necessarily enter into my very brief consideration of the subject. For the sake of emphasizing a few important points in the treatment of this trouble, we may refer to two of its stages. The first one in which there is an hemorrhagic or congestive condition with slight if any bulging of the drum membrane. The second in which there is a secretion of fluid collection in the middle ear with bulging of the drum membrane. As, however, one stage may quickly merge into the other a sharp differentiation apparently cannot be made. To instance a few pathological conditions, there is usually an inflammation and obstruction of the Eustachian tube. In the first stage the injection of blood vessels is often confined to the membrane of Schrapnell and superior posterior quadrant of the drum membrane. In the second stage the bulging of the drum is often confined to the posterior half. Pain is the symptom most complained of by the patient and the one for which he seeks relief.

In the treatment of the first stage we seek to keep open the Eustachian tube. With this object in view in addition to treatment postnasal we resort in children to gentle inflation by means of the Politzer bag, in adults by means of the Eustachian catheter. I believe in early inflation gently performed, without pain to the patient, for by using too much energy we increase rather than diminish the amount of inflammation. Inflation by catheter when practicable seems best, as there can be no danger of exciting trouble in the other ear. It is useless to enumerate the many remedies employed in the region of the fossa of Rosenmüller with the object of diminishing the swelling. Glycerine for its dehydrating properties, and of the more recent ones, adrenalin, seem most efficacious. Heat is often useful for pain. Shall it be dry or moist? In my opinion, always dry. Poultices cannot be too strongly condemned. Consider for a moment the small opportunity for swelling in the ear tract walled in as it is by bone, and that very thin bone separating many important structures. We are all familiar with the boggy condition not only of the ear itself, but also of the surrounding tissues resulting from the use of poultices, which defeats it seems to me what should be our object, i. e., to reduce the amount of swelling. Instillations of warm ear drops for the relief of pain are sometimes useful, but soon produce a macerated condition of the tissues, thereby rendering difficult a proper inspection of the drum.

Oily mixtures for example, olive oil or a preparation of oil and chloroform, are the least objectionable. I consider them, however, no more useful than the external application of dry heat. Of the various anodynes or narcotics for the relief of pain, some form of opium has proved most useful. Milder remedies failing to control the pain, the continued use of potash during the inflammation (in small doses) of bromide or soda on account of its inhibitory action is indicated. In repeated attacks of inflammation in the ear, I naturally believe in eliminating all possible causes, such as adenoids, nasal or post-nasal obstructions.

Second Stage.—A collection of fluid in the middle ear with a bulging drum membrane. Such a condition, in my experience, rarely finds relief from pain or undergoes resolution without a perforation of the drum. A free incision of the drum is of the greatest importance. It is to the practicability of the operation under these conditions that I would call special attention. In speaking of the indications for an incision of the drum membrane, I cannot improve on what I have already stated in a paper read before the meeting of the Massachusetts Medical Society in 1897. "By the operation several desirable ends are at once attained. In the first place, the loss of blood, together with the evacuation of collected fluid, relieves the pressure, and thereby lessens, if not stops, the pain. The rapid healing of cut surfaces, as compared to that of the ragged tear generally produced by spontaneous rupture, has a decided bearing upon the subsequent improvement of the hearing. I believe, also, that an early incision prevents the chances of mastoid or cerebral complications. Ear trouble in very young children is frequently overlooked at least by the general practitioner, a chance observation of aural discharge first attracting the attention. Children usually offer little in the way of objective symptoms; they seldom place the hand over the affected ear, or in any way direct attention to the seat of trouble, whereas the general reflex nervous disorders, caused by the auditory disturbance, cover a wide range of symptoms, from slight twitching to a condition practically of opisthotonos, and to marked retraction of the legs, like that seen in acute abdominal affections." Although it is unnecessary at this time to dwell upon it, I can never allow an opportunity to escape of emphasizing the importance of carefully inspecting the ear in doubtful cases.

There is still another condition in which the opening in the drum membrane is of great service, not only in preventing a possible relapse, but also in restoring hearing. Its importance is less frequently recognized than that which we have just considered. I refer to the collection of fluid, either serous or mucous, in the tympanic cavity, usually following an acute catarrhal inflammation without bulging of the drum membrane as seen in the first stages. The drum membrane, upon inspection, is found depressed from closure of the Eustachian tube, but there is seldom any considerable injection of blood vessels. The color of the drum varies with the relative thickness of the membrane and the nature of the fluid, serous exudation producing a strange color, mucous a dark gray. Often the level of the

fluid is indicated by a dark line. In many cases it is impossible to see the fluid on account of pathological changes in the membrane tympani previous to the attack. We then rely somewhat on the history and upon hearing tests by means of the autoscope after inflation of the middle ear.

I am fully aware that many of these cases improve under other treatment, but I am equally certain that many cases of progressive catarrhal deafness are made permanently worse by neglecting to free the middle ear of its fluid contents. I make this statement advisedly, and with considerable experience in the treatment of these cases, both in the usual way, and by incision through the drum membrane. I have yet to meet a case in which complete evacuation of the fluid through an opening in the drum proved other than satisfactory. On the contrary, it is not an uncommon experience for cases with doubtful history of fluid in the middle ear to present themselves for treatment after the usual means have been employed, with membrane collapsed held more or less firmly in place by adhesive bands. The operation is not difficult, provided the field is properly illuminated; it is only slightly uncomfortable, and the opening usually heals in twenty-four hours.

The auditory canal and drum are first rendered aseptic by instillations of a one to five thousand corrosive sublimate solution. The point of election is in the posterior lower quadrant. A very small incision is very quickly made by a quick thrust with a sharp triangular knife, the fluid being forced out by inflation. The ease and rapidity of evacuation depend upon the nature of the fluid, thick mucous often requiring the use of small forceps, after presenting at the opening; serous fluid, on the other hand, escapes into the auditory canal, and is removed by means of absorbent cotton. Several inflations of the middle ear, by means of the catheter or Politzer bag, are usually necessary to completely evacuate the middle ear. A small plug of cotton is placed in the meatus for twenty-four hours, then removed, and subsequent treatment is directed to the naso-pharynx and Eustachian tube. The relief afforded by paracentesis is immediate, and, with appropriate treatment, the danger of refilling slight. Early paracentesis, under the two conditions I have indicated, will often avert alarming symptoms, and prevent serious results not only as regards the hearing, but even the life of the patient.

By early incision in the second stage less chance is offered for a nipple formation of the drum, an early indication that the healing may be delayed or that serious complications may arise. However, as the condition may be considered subacute, it hardly comes within the scope of this paper.

The point of election for opening is naturally over the portion of the greatest bulging. It is quite unnecessary at this time to describe the technique of operating. Suffice it to say that the incision should be as free as possible to secure good drainage. In adults an anesthetic may be used if so desired, primary anesthesia with ether is preferable, although nitrous oxide or chloroform can be used. It is my feeling that children suffer more from the use of an anesthetic than from a quick operation like an incision of the drum. It is my custom to proceed

without its use. Personally, I have little faith in the anesthetic properties of local application of cocaine on the inflamed ear, nor have I found any drug satisfactory in lessening the pain of an incision. I consider the treatment after the operation important. The use of dry wicks tends, in my experience, to shorten the subsequent course of the inflammation. Syringing is employed after several days, but only in cases in which the secretion becomes thickened and interferes with a free discharge. Many antiseptic fluids are used, although water made sterile by boiling is often sufficient.

Inflations of the middle ear, at intervals, are necessary to evacuate thoroughly the middle ear and should be continued until the healing is restored. It is with a feeling of some embarrassment that I have presented this brief communication upon a well-known subject before experts. The importance of the subject, however, cannot be ever estimated and is one well worthy our thoughtful consideration.

THE CLOSE RELATIONSHIP EXISTING BETWEEN EPILEPSY AND DYSPEPSIA.*

By CHARLES D. AARON, M. D.,

of Detroit.

Professor of Clinical Gastro-enterology in the Detroit College of Medicine, Consulting Gastro-enterologist to Harper Hospital, etc.

Epilepsy is characterized by periodic loss of consciousness accompanied with more or less pronounced general convulsions which run a typical course. It is either a simple symptom of various grave diseases of the brain or a functional neurosis with no traceable anatomical changes in the brain.

Patients may be perfectly well during the interval between the attacks. We have not found a completely satisfactory explanation why the convulsions, loss of consciousness and the complete cessation of reflex action occur simultaneously. We are compelled to assume that there are functional disturbances in the central nervous system, which arise from time to time, and disappear quickly, and that these disturbances are the cause of the epilepsy. We can not doubt that the central nervous system is thus affected, for a proof of this fact lies in the loss of consciousness and in the convulsions.

The phenomena of epilepsy in pronounced cases are so frequent and obvious that the diagnosis presents no difficulty. It is often difficult, however, to differentiate the symptomatic from the idiopathic. Epilepsy is introduced in most cases by an aura, with nervous phenomena which immediately precede the real attack as a prodroma and are designated respectively according to the region through which they have their course. These attacks in a given case usually recur in the same way. The aura may be absent in a very large number of patients, that is, the attack comes suddenly in the midst of complete health.

We must not forget that epilepsy is a complex of symptoms which form an independent disease. In every case, even when the epileptic paroxysm is clearly manifest, we must ascertain whether or not a symptomatic epilepsy may be assumed, especially

*Read before the Michigan State Medical Society at Battle Creek, Mich., May 15th and 16th, 1901.

must we determine whether or not we have an affection of the cortical substance of the brain, such as tumor, etc. Important in the diagnosis of real epilepsy are the irritations which precede the attack and produce the convulsions reflexly. We may have epileptic convulsions after continued irritation of peripheral nerves through cicatrices, foreign bodies, tumors, inflammatory exudates, intestinal worms, diseases of the sexual organs, etc. There is an intimate relation of epilepsy to lesions and irritations of the peripheral nervous system, for we have clinical experience to the effect that the epilepsy disappears completely after the irritation of these nerves has been removed by means of excision. In other cases the connection between epilepsy and an injury due to poisons is less clear. We know that epilepsy attends constitutional and infectious diseases, intoxications, and especially chronic lead poisoning.

The influence which dyspepsia exerts with regard to attacks of epilepsy has been studied for a long time. Galen (1) took care of a young Grammarian whose mental work predisposed him to such crises. He advised good digestive regimen and made this the basis for the treatment. He prohibited for an epileptic infant aliments which produce flatulence and such foods as carry the blood to the head. He forbade wines and other alcoholic drinks and recommended a milk diet. In the study of idiopathic epilepsy we cannot help but notice that there obtains a certain relationship between it and dyspepsia. In some of these cases we see a coated tongue, dilated stomach, abnormal fermentation, fetid stools, and find indican in the urine. In a report by Herter and Smith (2) of thirty-one cases of idiopathic epilepsy they observed a certain relationship between epilepsy and the putrefactive processes in the intestine. They concluded that epileptic paroxysms in many cases were due to the toxic substances in the blood. The degree of putrefaction in the intestine was based upon the analysis of the urine and the amount of indican present. They were able to control some cases of epilepsy by controlling the products of putrefaction in the intestine. I myself have examined the stomach of a few epileptics and in the majority of instances have found it normal.

Eclampsia is due to the retention of the products of metabolism and the convulsions this produces are of various kinds. Reasoning from analogy we may assume that the absorption of toxic material from the stomach and intestine may act upon the cerebral cortex directly or reflexly and thus cause the spasm. Then, again, the substances which irritate the gastric mucosa, in cases where the secretion of hydrochloric acid is excessive or acids of fermentation are present, may act upon the cerebral cortex in a reflex manner and cause the spasm. I do not mean to say that true epilepsy is always connected with digestive troubles, but I hold that there is a class of patients whose epilepsy seems to be directly traceable to gastro-intestinal irritation. When these patients are about to have an attack, the digestive difficulty seems to precipitate the crisis. Then, again, when the digestion is corrected, the crisis seems often to abate.

The following case will illustrate the above. On May 30th, 1899, Mr. N., age 21, consulted me for convulsions with loss of consciousness and indigestion. He gave a history of pneumonia at three years of age and scarlet fever at ten. In the last three years he has had some trouble with his head. He says he feels as though he were going into another world and then there is a loss of consciousness. He could feel a creeping sensation in the head and dimness of vision for an hour previous to the attack. After these attacks he would vomit and belch large quantities of gas. He was examined by Dr. Spratling, medical superintendent of the "Craig Colony for Epileptics," and he declared stomach trouble as the cause, and the case, accordingly, was placed into my hands. The patient suffered somewhat with headache. His attacks were accompanied by an irritation in the stomach. He had such attacks every month at first, but of late they came every eight to eleven days, and they were becoming more and more frequent. The patient did not have the appearance of a dyspeptic, and he ate and slept well. His bowels were regular and the tongue was clean. His stomach contents showed a condition of hyperchlorhydria. The urine contained indican only at times. The patient was put on anti-fermentative remedies as benzosol and resorcin. Atropine was given for the hyperchlorhydria. There was an immediate improvement. After taking the remedies his first attack came only after three months, the next took place in seven months. His diet was small in amount but frequent. Up to four weeks ago he has had three attacks within seventeen months. The crisis are diminishing in frequency and a cure seems to have been achieved. For the past four weeks the attacks have reproduced themselves with less frequency and with less intensity.

In infants, stomach trouble frequently produces convulsions which resemble epilepsy. These cases usually respond quickly to rational treatment. March 15, 1898, I was called by Dr. Delos Parker, of Detroit, to see Master H., age two and a half years. The history brought out the fact that the patient had spasms nearly every night since birth. There was mucus in his feces, eructations, and all symptoms of gastro-intestinal fermentation. The patient was placed upon benzosol and resorcin and the attacks decreased. He has improved in health and has made a complete recovery, for he has not had a spasm in three years.

Digestive troubles are frequently latent and it is to be recommended in all cases of epilepsy and suspected stomach disorder that an analysis of the stomach contents and urine be made. To determine the condition of the patient this should always be done, even if there be a want of subjective symptoms. The examination of the patient is not complete unless the digestive organs are also examined. This examination is of the greatest importance here, because success depends upon making the diagnosis as comprehensive as possible.

1. Robin, *Les maladies de l'estomac* 1901.

2. Herter and Smith, *New York Medical Journal*, Aug. 20, 27 and Sept 3, 1892.

Changes in the Medical Corps of the Navy, Week Ended
September 28, 1901.

ASSISTANT SURGEON F. A. ASSERSON, ASSISTANT SURGEON J. W. BACKUS, ordered to the Naval Hospital, Cavite, P. I.—Sept. 20.
ASSISTANT SURGEON A. E. PECK, ordered to Manila, Sept. 20.
ASSISTANT SURGEON C. R. BURR, resignation accepted to take effect Sept. 25—Sept. 24.
ASSISTANT SURGEON D. G. HEHE, detached from the Marietta, and ordered home to wait orders, when vessel is put out of commission.—Sept. 24.
ASSISTANT SURGEON E. J. CROW, detached from the Castine, when put out of commission, and ordered home to wait orders—Sept. 24.
PASSED ASSISTANT SURGEON E. M. SHIPP, detached from the Naval Hospital, Cavite, and ordered to the Celtic.—Sept. 26.
ASSISTANT SURGEON W. L. BELL, detached from the Celtic and ordered to the naval hospital, Cavite, P. I.—Sept. 26.
ASSISTANT SURGEON J. W. BACKUS, detached from the Naval Hospital, Cavite, and ordered to the Brooklyn.—Sept. 26.
ASSISTANT SURGEON F. A. ASSERSON, detached from the Naval Hospital, Cavite, and ordered to the General Alayut, Sept. 26.

Official List of the Changes of Station and Duties of
Commissioned and Non-Commissioned Officers of the U. S.
Marine Hospital Service for the 7 days ended September 12,
1901.

J. O. CORB, passed assistant surgeon, granted 5 days extension of leave of absence from September 13, 1901.
RUPERT BLUE, passed assistant surgeon, granted 5 days extension of leave of absence—September 6, 1901.
J. A. NYDEGGAR, passed assistant surgeon, relieved from duty at Cape Charles Quarantine and directed to proceed to Cairo, Ill., and assume temporary command of service during absence of Passed Assistant Surgeon J. H. Oakley, on leave—September 12, 1901.
Granted 2 days leave of absence from September 10, 1901—September 9, 1901.
J. F. ANDERSON, assistant surgeon, directed to report to medical officer in command, Immigration Service, New York, N. Y., for duty—September 9, 1901.
C. W. WILHE, assistant surgeon, directed to assume command of service at Cape Charles Quarantine, relieving Passed Assistant Surgeon J. A. Nydegger—September 12, 1901.
G. H. ALTREE, acting assistant surgeon, granted leave of absence for 14 days—September 9, 1901.
F. N. BARNESBY, acting assistant surgeon, granted leave of absence for 1 month from September 1, 1901—August 30, 1901.
R. E. EBERSOLE, acting assistant surgeon, granted 3 days' extension of leave of absence from September 9, 1901—September 7, 1901.

Official List of the Changes of Station and Duties of
Commissioned and Non-Commissioned Officers of the U. S.
Marine Hospital Service for the 7 days ended September 19,
1901.

EUGENE WADDIN, surgeon, relieved temporarily from command of the service at Buffalo, N. Y., and assigned to special duty with the President—September 13, 1901.
Detailed to represent the service at meeting of the American Public Health Association, September 16-20—September 13, 1901.
W. J. PLETTS, surgeon, granted leave of absence for 2 months from September 15—September 14, 1901.
R. M. WOODWARD, surgeon, detailed to represent the service at meeting of the American Public Health Association, September 16-20—September 13, 1901.
M. J. ROSENAU, passed assistant surgeon, detailed to represent service at meeting of the American Public Health Association, September 16-20—September 13, 1901.
Granted leave of absence for 1 day, September 14—September 15, 1901.
DINLOP MOORE, assistant surgeon, relieved from duty at Nome, Alaska, and directed to proceed to the States and await orders—September 13, 1901.
G. H. ALTREE, acting assistant surgeon, granted leave of absence for 14 days from September 9—September 14, 1901.
J. G. STANTON, acting assistant surgeon, granted leave of absence for 18 days from September 13—September 14, 1901.
W. O. WETMORE, acting assistant surgeon, directed to assume temporary command of service at Buffalo, N. Y., during absence of Surgeon Eugene Waddin on special detail—September 13, 1901.
J. W. STEVENSON, acting assistant surgeon, granted leave of absence for 16 days from September 9, 1901—September 11, 1901.
W. S. WALKLEY, acting assistant surgeon, granted 3 days leave of absence, from September 12, 1901—September 10, 1901.
JUAN R. XIQUES, acting assistant surgeon, granted leave of absence for 30 days from September 1, 1901—September 12, 1901.
J. Y. PORTER, sanitary inspector, directed to visit Key West, Miami, Jacksonville, Fernandina and Mayport as appraiser—September 6, 1901.
I. W. RYDEK, hospital steward, directed to report to Director of Hygienic Laboratory for temporary duty—September 11, 1901.

Official List of the Changes of Station and Duties of
Commissioned and Non-Commissioned Officers of the U. S.
Marine Hospital Service for the 7 days ended September 26,
1901.

S. D. BROOKS, surgeon, granted leave of absence for 11 days from September 23—September 24, 1901.
H. S. CUMMING, passed assistant surgeon, granted leave of absence for thirty days, on account of sickness—September 26, 1901.
S. B. GRUBBS, assistant surgeon, granted leave of absence for 11 days from September 25—September 20, 1901.
H. B. PARKER, assistant surgeon, to proceed to Jacksonville, Fla., for special temporary duty—September 23, 1901.
W. C. HOBDY, assistant surgeon, to proceed to South Atlantic Quarantine as inspector—September 21, 1901.
P. J. THORNBURY, assistant surgeon, relieved from duty at Dutch Harbor, Alaska, and directed to return to the States—September 20, 1901.
L. P. GIBSON, acting assistant surgeon, granted leave of absence for 10 days on account of sickness—September 17, 1901.
E. B. HALLETT, acting assistant surgeon, granted leave of absence for 3 days from September 24—September 23, 1901.
A. B. McDOWELL, acting assistant surgeon, granted leave of absence for 20 days from October 12—September 21, 1901.
HENRY OWEN, acting assistant surgeon, granted leave of absence for 10 days from September 24—September 16, 1901.
S. D. ROBBINS, acting assistant surgeon, granted leave of absence for 30 days from September 6, on account of sickness—September 20, 1901.
M. R. MASON, hospital steward, relieved from duty at Dutch Harbor, Alaska, and directed to return to the States—September 20, 1901.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended September 28, 1901.

SMALLPOX—United States.

			Cases.	Deaths
CALIFORNIA:	San Francisco	Sept. 1-15	4	
DISTRICT OF COLUMBIA:	Washington	Sept. 14-21	9	
MASSACHUSETTS:	Boston	Sept. 14-21	9	
MICHIGAN:	Detroit	Sept. 14-21	1	
NEW JERSEY:	Newark	Sept. 14-21	6	
NEW YORK:	Elmira	Sept. 14-21	2	
	New York	Sept. 14-21	3	1
PENNSYLVANIA:	Lebanon	Sept. 8-15	5	
	Philadelphia	Sept. 11-21	38	4
WISCONSIN:	Green Bay	Sept. 15-22	1	

SMALLPOX—Foreign.

BELGIUM:	Antwerp	Aug. 31-Sept. 7	4	
	Ghent	Aug. 31-Sept. 7	1	
BRAZIL:	Rio de Janeiro	Aug. 4-18	114	
COLOMBIA:	Panama	Sept. 9-16	12	
EGYPT:	Cairo	Aug. 26-Sept. 7	1	
FRANCE:	Paris	Aug. 24-Sept. 7	10	
GREAT BRITAIN:	Edinburgh	Aug. 31-Sept. 7	1	
	London	Aug. 31-Sept. 7	92	8
INDIA:	Bombay	Aug. 20-27	1	
	Calcutta	Aug. 18-24	2	
	Madras	Aug. 10-23	19	
ITALY:	Naples	Aug. 24-Sept. 7	182	26
NOVA SCOTIA:	Halifax	Sept. 14-21	9	1
RUSSIA:	Moscow	Aug. 24-31	1	2
	St. Petersburg	Aug. 24-31	4	
SPAIN:	Madrid	June 17-July 15	6	
	Malaga	Aug. 31-Sept. 7	5	
	Valencia	Sept. 3-10	1	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Aug. 4-18	2	
COSTA RICA:	Port Limon	Aug. 1-Sept. 14	12	6
CUBA:	Havana	Sept. 7-14	1	
MEXICO:	Norlida	Aug. 24-31	several	
	Progreso	Aug. 21-31	1	

CHOLERA.

INDIA:	Bombay	Aug. 1-27	4	
	Calcutta	Aug. 18-21	10	
	Madras	Aug. 10-23	201	
JAPAN:	Yokohama	Aug. 18-24	1	
STRAITS SETTLEMENTS:	Singapore	July 27-Aug. 3	2	

PLAGUE—United States.

CALIFORNIA:	San Francisco	Aug. 29-Sept. 20	4	2
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PLAGUE—Foreign.

CHINA:	Hongkong	Aug. 3-10	10	12
INDIA:	Bombay	Aug. 20-27	203	
	Calcutta	Aug. 18-24	32	
	Karachi	Aug. 11-25	8	5

The Philadelphia Medical Journal

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See Advertising Page 8.

VOL. VIII, NO. 15

OCTOBER 12, 1901

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Some Timely Papers.—We publish this week a series of short papers illustrating some phases of the surgery of the stomach. In view of the lamentable case of President McKinley these papers are especially timely and instructive. The case reported by Dr. Roberts had some striking resemblances to that of the President; and it illustrates the fact that the policy of non-intervention can be quite as fatal as operation. And yet, let us suppose for a moment that the President had been treated on this expectant plan. What an outcry there would have been from the over-zealous and too eager critics!

The case reported by Dr. Penn is of especial value because it appears without a doubt to have been one of pistol-shot wound of the stomach followed by recovery. Of course, as there was neither operation nor autopsy, it is impossible to state exactly what the surgical lesions were, but the clinical evidence of a wound of the stomach is quite conclusive. This case gives an embarrassing reply to the pessimists who have been claiming that recovery in cases like that of President McKinley is impossible.

Dr. Hammond's paper illustrates what surgery can accomplish in an elective operation on the stomach. If the viscus tolerates such manipulations, why not also in the case of some gun-shot wounds? We know, in fact, that it does.

Dr. Fischer's paper, which is entirely clinical and pathological, relates a case of tubercular ulcer of the stomach.

Traumatic Surgery of the Upper Abdomen.—The case of gunshot perforation of the kidney, with incidental non-perforating wound of the stomach, reported by Dr. Roberts in this issue of **The Philadelphia Medical Journal**, emphasizes the difficulty of diagnosis and treatment in traumatism of the upper regions of the abdomen. The patient had a wounded kidney, from which the blood slowly flowed, and death followed in thirty odd hours from hemorrhage and sepsis combined. Yet there was no discoloration of the urine from blood, no tympanitic distension of the abdomen, and no evidence

at bedtime on the day of injury that the patient was in a dangerous condition. The woman was carefully watched, by nurses, resident surgeon and attending physician, for symptoms pointing to the need of exploratory celiotomy, and yet no symptoms were recognized that seemed to demand such a step, until too late. Death occurred, and the autopsy showed that immediate operation might have saved life by stopping the renal hemorrhage and averting the dangers of sepsis.

The injury was much like that of the late President McKinley, except that the gunshot wound in the latter instance did more damage to the stomach and less to the kidney and also involved the pancreas. The surgeons, who attended the President, promptly and wisely opened the abdomen and sutured the gastric perforations. Yet death occurred as in the case of Dr. Roberts, who refrained from operation. In both instances there was clinical evidence before death of septic contamination of the wound. It is probable that the President's death was due to septic gangrene due to the missile, and that death in the case reported to-day was partly due to septic contamination from the bullet.

Cases of this character illustrate the great responsibility of the surgeon in dealing with penetrating wounds of the belly above the navel. Such lesions are known to be less likely to cause intestinal perforation, with consequent extravasation of feces and fatal septic peritonitis, than injuries lower down. Hence it might be inferred that they are less dangerous than wounds below the navel. This deduction is probably incorrect. Though intestinal perforation is less probable, injury to stomach, pancreas, gall bladder, kidney and larger vessels is very common. Some of these lesions do not seem to lead so promptly to septic peritonitis as bowel wounds, but their fatality points to the need of prompt exploratory abdominal section.

The recent experience of military surgeons, in the Spanish-American and the South African wars, has seemed to suggest a reconsideration of previous opinions on this subject. It is probably true that, during the exigencies of a campaign, wounds of the abdomen, due to jacketed bullets of small

calibre, will have less mortality, if treated on the expectant rather than the operative plan. Such injuries occurring in civil life, where aseptic surroundings, accurate hospital nursing and skilful operators can be assured, will doubtless do better, if prompt recourse is had to abdominal section for direct treatment of the internal lesions.

A recent case in the writer's hands seems to confirm the wisdom of this course. A young man received an antero-posterior gunshot wound in the lumbar region. The ball was found under the skin on the anterior side of the body. The patient showed no shock and so little evidence of injury that it was supposed that the bullet had been deflected and traveled between the muscular planes of the trunk. The attending physician was so convinced that no internal lesion had occurred that he put the patient on ordinary diet, though he kept him in bed for observation. Repeated examination of the abdomen by the surgeon, accompanied by a careful register of the pulse rate, respirations and temperature, served only to confirm the diagnosis of no intra-abdominal damage. The patient was, however, given no food by the mouth and treated tentatively as a possible case of perforation of the intestines; largely because of the size of the bullet and the manner of the shooting. In a few days the man suddenly became worse and died. Autopsy showed several intestinal wounds.

This case indicates the impossibility of treating abdominal wounds with safety when the surgeon is in the dark as to the nature of the damage done to the viscera. Under modern methods aseptic exploratory incision is practically free from danger. A knowledge of the condition within the abdomen is more necessary to efficient treatment than celiotomy is dangerous. Civil surgeons will therefore probably continue to adopt exploratory incision in stabs and gunshot wounds of both the upper and lower regions of the abdomen, despite the recent experience of military surgeons.

Many valuable contributions have recently been made to the literature of the surgery of the upper abdomen. The Transactions of the American Surgical Association for 1900 and 1901 are especially rich in papers dealing with this region. The trend of opinion seems to be toward an extension rather than a restriction of operative diagnosis and treatment. Readers of *The Philadelphia Medical Journal* interested in this department of surgical practice will find much material for thought in Maylard's "Surgery of the Alimentary Canal," Frazier's article on the "Surgery of the Stomach" in the *American Journal of the Medical Sciences* for May, 1900, and Keen's "Cartwright Lectures on the Sur-

gery of the Stomach" in the *Philadelphia Medical Journal* for May and June, 1898.

The Emergency Hospital at the Buffalo Exposition.—Physicians who have visited the Pan-American Exposition must have been interested in the Emergency Hospital. We recently had an opportunity to inspect this now historic building, and were much impressed with its excellent arrangement and equipment. It is under the direct care of Dr. Roswell Park, who has for his assistants Dr. A. F. Zittel, Dr. G. McK. Hall and Dr. E. C. Mann. There are twenty-four beds, and five thousand cases have been treated since the opening. The great majority of these cases have been of minor surgery and slight medical ailments. But few operative cases have occurred, the most serious one having been that of President McKinley. Considering the size and character of the Exposition this immunity from grave cases is quite remarkable, and speaks well for the general management and hygiene of the big show. The Hospital is free to all; no charge is made to any one, visitors and attendants at the Exposition having all alike the privileges of the institution. The expenses are borne by the management of the Exposition. Many of the instruments and appurtenances are exhibits—a very practical way of showing their efficacy. The operating room is small, but well lighted and well equipped. It was in this room that the operation on the President was performed. Six nurses are in attendance.

The architecture and general appearance of the building are pleasing. The place is always open for inspection and is in perfect order. This little hospital is not only a useful object lesson, but in its brief existence it has played a most important rôle in the public eye. The managers of the fair are to be commended for providing such a model little infirmary.

A Yellow Fever Institute.—It has been a happy thought to establish an institute for the special study of yellow fever. We publish elsewhere Dr. Wyman's letter and announcement. It would be a good thing if each of the principal diseases besides yellow fever—such as tuberculosis, typhoid fever, malaria, and perhaps syphilis and leprosy—were to be taken under the special care of the Government in some such an institute. The test will probably be made in the case of yellow fever; if this proves successful, separate institutes will be established for the other diseases. We know that whatever the general Government does in such matters is usually well done—in marked contrast to what is sometimes seen in the various States and cities. By the proposed method the medical officers of the Marine Hospital Service will be stimulated to exert them-

selves outside of the routine hospital work, and the activity of others, not connected with the service, can also be utilized. We should suppose that membership in this institute could be by invitation. Doubtless prominent physicians would be glad to avail themselves of such invitations, and undeserving and undesirable members could be excluded by the exercise of a little care.

The field covered by the Marine Hospital Service is very extensive; in fact, it extends almost over the world. Medical officers in Central and South America, and all consular officers, could thus be not only invited but urged to work. The scheme is a most satisfactory one, and we shall look with confidence for valuable results. Whatever the Government says, generally goes.

Man Proposes but the Mayor Disposes.—An earnest effort was made last winter by the Philadelphia County Medical Society and the Pennsylvania Society for the Prevention of Tuberculosis to have pulmonary tuberculosis added to the list of infectious diseases returnable to the Bureau of Health of Philadelphia. The advantages of registration are fully appreciated in New York City and in the States of Maine, New Jersey, Michigan and Washington, where laws have been enacted and where the health boards cooperate earnestly with physicians in endeavoring to limit the spread of tuberculosis. If every case of tuberculosis were registered, the Bureau of Health would watch houses which are occupied by consumptives and require their disinfection when vacated. The medical profession and the public would welcome the protection which judicious measures would afford. The Bureau of Health of Philadelphia adopted a resolution in March which was pronounced to be within its province by a legal opinion from the City Solicitor, providing for registration; it met with the approval of the Director of Public Safety—and there it stopped. His Honor, the Mayor, said "Thus far shalt thou go and no farther," and placed his objection on the ground that there are not sufficient funds at this time available to allow the Bureau of Health to extend their work beyond their present labors. He is the arbiter of matters of hygiene in the municipality.

Almost all large cities in the New England States and in New York and the better regulated Western cities have ordinances providing a penalty for spitting in street cars, in public places and on the sidewalks. In New York City and Boston the penalty is not over \$100. A resolution of a moderate nature was framed and presented to the Common Council, providing for a penalty of \$10 for the

first offence and \$50 for each subsequent offence. The Bureau of Health knew the value of such a law and would have welcomed it—but the Mayor heard of it and it was tossed aside. Paul may plant and Apollos water, but one unsympathetic executive who does not understand preventive municipal and personal hygiene, may be fairly charged with the failure to bring Philadelphia, in this respect, in line with the best regulated cities in the country. The tubercle bacillus seems to be a privileged character. He can hold his head erect and walk up and down our streets, ride free on our street cars, and settle himself comfortably in our offices and private apartments; he seems to have police protection and no one can say him nay. The only place where he has any difficulty in effecting an entrance is in some of our well known hospitals. But he is really the worst anarchist that ever came to our shores, and instead of electrocuting him we give him a front seat on our mortality report every week.

The New Psychology.—Professor G. Stanley Hall, of Clark University, attributes the birth of the "New Psychology" to the work of E. H. Weber on sensation. The "New Psychology" seems to us to have had so many births that one birth more or less does not seriously matter. Weber, it will be recalled, tested the sense-perception by noting at what distances two pin points could be distinguished on the various surfaces of the body. The New Psychologists have always claimed that this work was "epoch-making," but this praise seems to us to be rather extravagant. There is a deal more in psychology than can ever be measured at the point of a pin. The great weakness of the New Psychologists consists in this very fact, that they think they can measure psychological phenomena with such instruments of precision as are used in the physiological laboratory. To point out the rate of speed of a sensation; or the time reaction of a voluntary motion; or the rapidity of a thought; or the power of perception to distinguish two pin points at a certain distance—all this slight-of-hand, and much more like it, will never solve the real problems of psychology. Such phenomena are but superficial and mostly irrelevant manifestations of the "psyche" within. It does seem sometimes that medical men and other physical scientists take a very inadequate view of the functions of nerve-matter. We do not intend to disparage physiology or any of its methods, but we sometimes wonder whether in our quest for the new psychology we have not swung too far away from the old psychology with its introspective method of study by means of self-consciousness.

Variations in the Activity of the Tubercle Bacilli.

—In view of the interest in the subject of tuberculosis excited by the recent Congress in London, the results of some experiments performed by Lartigau (*Journal of Medical Research*, July, 1901) are of considerable interest. Starting out with the idea that possibly bacilli derived from different sources might vary considerably in virulence, he obtained cultures from various lesions in human beings, such as tuberculous lymph glands, pulmonary tuberculosis, and bone and joint tuberculosis. He found that the morphological features were fairly uniform. In those organisms in which the virulence was greatest, the growth upon culture media was usually least. In one instance a bacillus was obtained from a human being that produced a culture not unlike that described by Theobald Smith, as characteristic of bovine tubercle bacilli. This bacillus was excessively virulent, and corresponds also in this respect with Smith's description of the bovine bacillus. The inoculation experiments confirm Lartigau's belief that the virulence of the tubercle bacillus varies considerably. Now, supposing that his hypothesis is correct: we have presented to us the interesting fact that the tubercle bacillus may manifest great variability in its virulence, and we should expect as a result, that the clinical manifestations of human tuberculosis would also be very variable. Of course, clinical experience has long taught us that this is true. We might expect, moreover, that types of infectious disease hitherto unrecognized as tuberculosis, might possibly be due to this germ situated in such a position, and producing such lesions, that is has hitherto not been recognized, or at most, only occasionally. This appears to be true also of the chronic recurrent fever of Ebstein-Pel. The field thus opened to clinicians and pathologists is very great.

Up to the present, with the exception of Lartigau's experiments, careful studies of the tubercle bacillus obtained from different cases, or rather different varieties of this infection in human beings, have not been made, and Lartigau characterizes his communication merely as a preliminary report. It would be of the greatest interest, and, we believe, of the greatest importance to human beings, if such studies could be made, and could be made available clinically for the purpose of prognosis. It so frequently happens that patients in the early stages of the disease are sent to favorable climates, and nevertheless die of what appears to be a fulgurant form, while other patients, in whom the lesions are well advanced, are sent to the same climates and recover apparently completely. If, in some way, we could

understand why this occurs, it would be of the greatest value in guiding our treatment.

Malta Fever.—Malta fever is a very curious and interesting disease. In spite of the careful studies of Bruce, and of the School for Tropical Diseases at Netley, the profession at large has scarcely become so familiar with it either by reading or by personal observation that they are on the lookout for cases. Nevertheless, there is reason to believe that the disease will soon exist in the United States; for its existence in the Philippines has been conclusively demonstrated and cases have been reported from Porto Rico; and from both these places patients suffering from the disease have returned to the continent. Curry (*Journal of Medical Research*, July, 1901) has recently reported four cases which he observed in the Army and Navy General Hospital at Hot Springs, Arkansas. The patients were all soldiers or sailors who have served in the Philippine Islands. The diagnosis upon admission was chronic rheumatism. The duration of the disease had been from six to sixteen months. The patients suffered from anemia, sweating and constipation. Typhoid fever, malaria and rheumatism were readily excluded, and the blood of all gave the characteristic serum reaction with the germ. In view of these observations, and of the report of a case of the disease in Philadelphia two years ago, it behooves us to be on our guard in all cases of persistent disease of febrile course, the nature of which is obscure.

The Supraorbital Reflex.—Of the finding of reflexes there is no end. Everywhere that there is a sensory nerve that bears the slightest relation to any motor nerve, it is discovered that irritation of one produces a response in the other. The last, and in some respects, the most interesting of all newer reflexes is that of McCarthy, of Philadelphia (*Neurologisches Centralblatt*, Sept. 1, 1901). This is elicited by striking with a percussion hammer upon the trunk of the supraorbital nerve or one of its branches, which produces a momentary, lightning-like contraction of the orbicularis palpebrum. Exaggeration of the reflex is detected by the fact that percussion upon any portion of the distribution of the nerve causes the twitching; diminution, by the fact that the twitching is slight, and that the blow must be struck exactly upon its trunk. The arc of this reflex apparently consists of the fifth and seventh nerves. The reflex is lost occasionally in locomotor ataxia, and was absent in one case of paralysis of the fifth nerve, without involvement of the seventh upon the same side. McCarthy regards it as important because it is an example of a purely sensory nerve (the supraorbi-

tal) producing motion in a purely motor nerve (the seventh). Clinically, its value has not yet been demonstrated, but we do not doubt that in time it will be found to be of service in various conditions.

Correspondence.

UNUSUAL AFTER EFFECTS OF A SNAKE BITE, THAT MIGHT HAVE BEEN CAUSED BY THE LOCAL USE OF CARBOLIC ACID.

By JOHN GLENDON SHELDON, M. D., of Telluride, Colo., Surgeon in Chief to the Montrose Hospital; Consulting Surgeon of the Telluride Hospital.

To the Editor of the Philadelphia Medical Journal:

Lawrence E. Holmes, in a paper entitled "Unusual effects of a snake bite", published in the *Philadelphia Medical Journal*, September 14th, 1901—reports a case of snake bite that was dressed with carbolic acid and was followed by anesthesia of the affected member. The purpose of my writing is to review the clinical cause of Holmes' case and to suggest that the unusual symptoms might have been due to the use of carbolic acid.

Holmes' patient—a female twenty-one years of age—was bitten, on the ulnar side of the right forearm, two inches above the wrist joint, by a supposedly non-poisonous snake. The wound was incised; after which it was washed and dressed with a 10% solution of carbolic acid. Everything went well till the fifth day; then the patient complained of weakness and of numbness in the right hand. On examination complete anesthesia was found, which extended, posteriorly, to the carpo-metacarpal articulation, anteriorly, as high as the wound. The pain was severe. Two days later, the pain was less marked and the entire extremity below the wound was anesthetic. Movements of the hand were impaired; but the circulation seemed normal. In a few days the symptoms disappeared. No necrosis or gangrene occurred; and no exfoliation of the skin was mentioned.

Dr. Holmes thought the symptoms were due to hysteria, or to toxic neuritis caused by the serpent's venom. The patient was not a neurotic; there were few, if any, general symptoms and the symptoms did not appear till four or five days after the arm was dressed.

The anesthesia, in this case, cannot be reasonably explained unless it is attributed to the carbolic acid; and I am inclined to believe that this drug was responsible for the local changes that the doctor described. I have not read reports of similar cases, but if carbolic acid is capable of producing such grave conditions as sloughing and gangrene—as it sometimes does—I can see no reason why less severe injuries, as in the case reported, might not result from its use. This case—characterized by symptoms which might be explained by nerve involvement with absence of circulatory changes—might be cited to uphold Krotum's theory of carbolic acid gangrene; namely, that the gangrene results from specific action on the nerves.

Multiple Hemorrhages of Hysterical Origin.—At a meeting of the Medical Society of the Paris Hospitals, (*Bulletin et Memoires de la Societe Medicale des Hopitaux de Paris*, 1901, No. 13), Paul Sainton reports the case of a woman of 25, of neurotic ancestry, four months pregnant, who complained of hemorrhages from the mucous membranes. After being very angry, metrorrhagia occurred, lasting four days, without affecting the pregnancy. Following this, auricular, mammary, buccal hemorrhages, and epistaxis appeared. The otorrhagia occurred three times, always from her right ear. From the nipples the hemorrhages were frequent, and have persisted irregularly since. In each case she has some odd feeling before the hemorrhage begins. The mouth shows no ulcers or other possible cause of hemorrhage. Her general condition is excellent. There is some leukocytosis (18,000), probably due to the pregnancy. There is some anesthesia and pain over the ovaries. She is very neurotic. The symmetrical condition and its rarity make the case most interesting. There was no doubt that the hemorrhages were of hysterical origin. [M.O.]

Reviews.

The Ready Reference Hand Book of Diseases of the Skin. By George Thomas Jackson, M. D., (Col.) Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York; Consulting Dermatologist to the Presbyterian Hospital, New York, and to the New York Infirmary for Women and Children; Member of the American Dermatological Association, and of the New York Dermatological Society. With 80 illustrations and 3 Plates. Fourth Edition. Thoroughly Revised. Lea Brothers & Company, New York and Philadelphia, 1901.

The fourth edition of this manual, although no bulkier than its predecessor, contains new sections upon the following more recently described dermatoses: Acne keratosa, acne urticata, caraté, craw-craw, endothelioma cutis, erythrodermic pityriasis en plaques disseminées, Fordyce's disease of the lips, granuloma necrotica, lichen annularis, lichen pilaris, pityriasis lichenoides chronica and verruga peruana. The consideration of these affections is succinct yet sufficiently comprehensive to convey an intelligent idea of their nature. The author has kept his book thoroughly up to date, at the same time preventing it from becoming voluminous by careful pruning and condensation of the text. The chapter upon new local remedies is fully abreast of the advances in therapeutics both here and abroad. The liberal space devoted to formulae of prescriptions and recent innovations in treatment will commend itself to practitioners. In view of the general excellence of the work it is perhaps hypercritical to call attention to its few minor omissions and inexactnesses. No mention is made of the use of large doses of quinine in lupus erythematosus, although this will probably be proven to be one of the most useful drugs in this most obstinate affection. Under the pathology of this disease reference is made "to a thrombus brought from some distant part": This is in all probability an inadvertence. The X-ray treatment of hirsuties is described as "apparently successful": this is scarcely justified by recent reports which tend to show that superfluous hair removed by this means is extremely prone to return. The book is a faithful exponent of modern views on dermatology and may be recommended as a safe guide for students and practitioners of medicine. [J. F. S.]

Diseases of the Respiratory Organs, Acute and Chronic. By William Waugh, A. M., M. D. Chicago: G. P. Engelhard & Co., 1901.

In presenting this work, the author remarks in his preface that "the treatment of acute affections of the respiratory organs has progressed far beyond that given in the text books on Practice." With that object in view, he has prepared this work, a book of 201 pages, giving special prominence to treatment. He also states that "the methods of treatment herein advocated are based upon the author's conception of the role played in acute inflammations by the vasomotor nerves, and his belief that the future of scientific therapeutics lies in the study of such pathologic states, and the influence of drugs upon them, rather than in the consideration of these maladies as pathological entities." The book is arranged in two parts: the first is devoted to the consideration of acute respiratory diseases, and the second to chronic respiratory diseases. In discussing the treatment of hemoptysis, he advises quietude for the patient, application of cold to the chest, elevation of the head somewhat, and the administration of atropine, and aconitine or veratrine when the heart action is bounding. He deems a thorough examination of the chest necessary. It is quite generally admitted that an examination of the chest, immediately after a pulmonary hemorrhage, is a dangerous procedure. Opium is not mentioned in the treatment of this condition, yet it undoubtedly is a valuable agent. There are other topics open to criticism, and in conclusion, we desire to emphasize one of the author's prefatory remarks in regard to the vasomotor nerve therapy, which is in accord with our views, namely, "that the subject is but in its formative state, and is by no means presented as a finished product." We do not believe this work will meet with the general approval of the profession of this country.

[F. J. K.]

Kurzgefasstes Lehrbuch der Kinderheilkunde fuer Aerzte und Studierende, von Dr. Carl Seltz, A. O. Universitätsprofessor und Vorstand der Kinderpoliklinik am Reisingerlanum in München. Second Edition, Enlarged and Thoroughly Revised. Berlin, 1901. S. Karger. Pp. viii, 499.)

The author's aim, as stated in the prefaces, has been to present a concise but exhaustive textbook for practitioners as well as for students, touching upon all the topics peculiar to childhood and its diseases, while paying special attention to physiology, hygiene and dietetics. The chapters on the latter subjects have been rewritten and it gives us pleasure to commend especially that on infant feeding. The present edition has been brought up to date by the addition of a number of new chapters among which are to be noted those on scurvy, chondrodystrophy, status lymphaticus, congenital stenosis of the pylorus, etc. Among other well-written parts are those on methods of examination, on tuberculosis and on pneumonia, and in the last-mentioned the statement is very properly made that the croupous form is very common in infancy and childhood. In the diagnosis of meningitis mention is made of the importance of lumbar puncture and its aid when positive results are obtained. In the treatment of intussusception surgical intervention is recommended within 24 or 36 hours. If rectal injections of air or liquid have not effected reduction; the tendency in America is to attempt reduction by these means, and, if not successful, immediate laparotomy. Beyond this and the rather scanty index, with one or two other minor points, it is difficult to find fault with the work, and we heartily commend it to those who can read German and who desire a good text-book on pediatrics as a book well worth buying. [A. H.]

Mt. Sinai Hospital Reports.

Volume II. For 1899 and 1900. Edited for the Medical Board. By Paul F. Mundé, M. D., LL.D. 1901.

The publication of hospital reports made up of studies of cases and disorders under the observation of the attending physicians subserves a useful purpose over and above the inherent value of the work in that it stimulates careful study, so that in this way not alone are the interests of the individual patient safeguarded, but also the literature of medicine is enriched, and the way is paved for the future application of measures of prevention, of palliation, or of cure. The staff of the Mt. Sinai Hospital contains names distinguished in the annals of medicine, and the papers contained in this volume demonstrate the value of good environment, association and example. The more strictly medical side of the hospital work is represented in this volume by 16 interesting essays, while the surgical side is represented by a collective report, in which are detailed many cases of great interest. There are besides reports from the gynecological, the ophthalmological and the otological services, and one or another communication of a miscellaneous character. Mt. Sinai Hospital is already well and favorably known for its work in medicine and surgery and these reports will help to sustain a deserved reputation.

[A. A. E.]

Catherization and Urethral Lavage.—In Catheterizing in stricture of the urethra, Hartmann states that no force should ever be employed. (*L'Independance Medicale*, 1901, No. 21). For it may cause retention, ulceration, cicatricial stricture, abscess, or infiltration of urine. The instrument should be allowed to slide in "by contact," along the urethral wall. Hartmann uses an olive pointed bougie; or, a bundle of thin bougies may be introduced up to the stricture, which one of them may pass. The next day, the same and the next sized bougie may be passed. In some cases, the bougie is left in place a day or two. For urethral injections, Hartmann uses a thin open sound through which the solution is injected as far as he wishes, and is then allowed to run out between the sound and the urethral wall. Upon removing the sound, an injection must be given to wash out the urethral wall from behind forward. But he considers the ordinary injection best, the reservoir being raised 15 m. The solution should be at a temperature of 100° F. As soon as the patient feels like urinating, the injection is stopped. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Temple College Medical School.—An announcement has come to us that the Chair of Pathology and Bacteriology and the Chair of Surgery will be open for application until October 17th.

University of Pennsylvania Medical School.—The following appointments have been announced: Dr. M. Howard Fussell has been appointed assistant professor of medicine. Dr. Thomas R. Neilson, assistant professor of genito-urinary diseases, and Dr. Elsha H. Gregory, Jr., demonstrator of anatomy. Dr. Frederick A. Packard will deliver the lectures upon applied therapeutics, and Dr. H. C. Wood, Jr., those on the physiological action of drugs. In the place of Dr. Horatio C. Wood, professor of therapeutics, who has been granted leave of absence for a year. The appointment of clinical professor of nervous diseases has not yet been made. Provost Harrison announced that the commencement exercises will be held in the future upon the third Wednesday in June. As the term is to begin on the last Friday in September, the session will approximate that of Harvard and Yale in length.

College of Physicians, Philadelphia.—Abstract of the monthly report of the Honorary Librarian, Mr. Charles Perry Fisher, June to September, 1901:

Books, pamphlets and journals received:

General Library: 199 volumes, 2053 pamphlets, 7779 journals

Lewis Library: 17 " 0 " 0 "

S. D. Gross Library: 2 " 0 " 0 "

2010 2053 7779

Accessions, 1716 volumes; Duplicates, 264 volumes; Donors, General Library: 85.

Society Meetings Next Week.—The following sections of the College of Physicians and Surgeons of Philadelphia will hold meetings next week, at 8.15 P. M.:

Monday, October 14, Section on Medicine.

Tuesday, October 15, Section on Ophthalmology.

Wednesday, October 16, Section on Otology.

Thursday 17, Section on Gynecology.

Public Health Report for September.—During September, 116 cases of smallpox, 234 cases of diphtheria, 152 cases of scarlet fever, 407 cases of typhoid fever, and 214 cases of consumption were reported, a total of 1033 cases of the contagious diseases for the month. The number of smallpox cases during the month of September was more than half of the total number reported since January 1st.

The Obstetrical Society of Philadelphia held its regular meeting at the College of Physicians and Surgeons Thursday evening, October 3rd. The Society was called to order by the president, Dr. John C. Da Costa. Following the reading of the minutes, which were approved, Dr. Erck reported a case of **fibromyoma of the uterus in a woman of 46**. She had had two children, both labors having been normal. For six years she has had menorrhagia, and lately metrorrhagia, the hemorrhages being profuse. The tumor reached the umbilicus. Hysterectomy was performed, and the tumor exhibited to the Society. Dr. Erck believes that in fibromyoma of the uterus of this size, hysterectomy is advisable; that all smaller benign tumors should be removed, since they may eventually become malignant. In the discussion which followed, Dr. John M. Fisher stated that hysterectomy was necessary in this case, as the tumor was not encapsulated. When it is encapsulated, he advises enucleation. He believes that all fibromyomata of the uterus should not necessarily be removed, since the tumor often remains stationary and causes no trouble. Dr. Hammond believes that if all such tumors were removed many women would be subjected to the operation who are now in excellent health. In Dr. Erck's case, however, the growth could only be dealt with by removal. Dr. Da Costa also considered the removal of the tumor necessary, but does not think it necessary to remove all small fibroid growths. In these cases he advises the use of thyroid extract. In concluding the discussion, Dr. Erck stated that the growth should only be left if the case remains under observation. Dr. Hammond reported the case of a woman who, until ten years ago, enjoyed good health. She then had a miscarriage of three months, since when she has never been entirely well. Six months later pelvic pains developed which confined her to bed for three

months. Upon examination the abdomen was found markedly tympanitic, and so tender that it could hardly be palpated. Her temperature was 103°, pulse 120 and the bowels had not moved for a week. Digital examination showed the uterus pushed forward directly beneath the pubis. The pelvic cavity seemed filled with fluid. Upon opening the abdomen a large amount of pus escaped from the free peritoneal cavity. The intestines were adherent throughout, the cecum to the parietal peritoneum, and also to the bladder. Two large pus tubes and the ovaries were removed; all adhesions freed, and an artificial anus established. The pus pockets were opened and the cavity thoroughly flushed out with normal salt solution. She died three weeks later from general peritonitis. The autopsy showed a quantity of pus in the peritoneal cavity, a large collection being found directly beneath the liver. All the abdominal contents were adherent. Dr. John C. Da Costa reported two cases of ruptured ectopic gestation. In the first case, upon opening the abdomen he found black blood in the pelvis, the rupture in the tube being covered by the placenta, thereby saving the patient's life. When called to see the second case, he found the patient had absolutely stopped breathing. Artificial respiration, inhalations of oxygen and the intravenous injection of three pints of normal salt solution were practiced, after which breathing began, though the patient did not regain consciousness. An hour later a pint of blood was taken from the other arm and three more pints of saline solution injected. She improved, but later upon examination he found a hard mass over the bladder, in front of the uterus. Celiotomy was performed and an ectopic gestation of about three months standing found. Dr. Fisher reported a case in which ectopic pregnancy was present on both sides, in which the woman made a perfect recovery after operation. He states that an ectopic gestation may develop on the opposite side after it has appeared on one side. Dr. Erik called attention to the fact that where the hemorrhage is gradual the pelvis would be full of black clots. In speaking of puerperal sepsis, Dr. John C. Da Costa stated that indiscrete curettement is often responsible for the condition. He denounces the practice in women in whom labor was apparently normal. Dr. Fisher thinks curettement of the uterus after labor is only indicated when evidences of decomposition exist and advises packing the uterus with gauze after curettement. Dr. Devereaux reported a case in which the temperature rose to 106.4°, the pulse to 115 and respiration to 48. The urine was suppressed, the bowels constipated, and the patient very delirious. Large doses of whiskey and 1/30 of a grain of strychnine (every hour) were administered, also enemata and magnesium sulphate given. The patient recovered. The advisability of administering anti-streptococcal serum in this condition was discussed.

Dr. Malcolm Morris, Editor of the *Practitioner*, was in Philadelphia last week, and was the guest of honor at a reception given by Dr. John H. Musser.

Vital Statistics of Philadelphia for the week ending October 5, 1901:

Total mortality	392	Cases.	Deaths.
Inflammation of the appendix 1, bladder 2, brain 7, bronchi 6, heart 2, kidneys 12, lungs 25, pericardium 1, peritoneum 7, pleura 1, stomach and bowels 15, nerves 2, spine 1			82
Marasmus 18, inanition 14, debility 11			43
Tuberculosis of the lungs			49
Apoplexy 20, paralysis 7			27
Heart-disease of 15, fatty degeneration of 2, neuralgia of 2			19
Uremia 18, Bright's disease 6, diabetes 2			26
Carcinoma of the bowels 1, breast 2, stomach 2, uterus 2, jaw 1, esophagus 1, pancreas 2, rectum 4			15
Convulsions			10
Diphtheria 10	56		10
Brain-sclerosis of 1, softening of 3			4
Typhoid fever	79		9
Old age			5
Scarlet fever	53		3
Smallpox	40		6

Alcoholism 1, anemia 2, aneurysm aorta 1, burns and scalds 1, casualties 7, cholera infantum 14, cirrhosis of the liver 7, croup, membranous 2, cyanosis 4, diarrhea 5, disease, kidneys 1, drowned 1, dropsy 3, epilepsy 1, extra uterine pregnancy 1, gall stones 1, gangrene, senile 1, hemorrhage from lungs 1, hemorrhage from uterus 1, hernia 3, indigestion 1, insanity 1, leukemia 1, obstruction of the bowels 1, purpura hemorrhagica 2, rheumatism 1, septicaemia 1, sarcoma, breast 1, rectum 1, stricture of the esophagus 1, suicide 6, strangulation 1, syphilis 1, tetanus 1, tetanus, traumatic 1, unknown 1, whooping cough 4

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NEW YORK.

Long Island College Hospital.—It is announced that George Foster Peabody will give \$50,000 for the construction of an operating-room in the Long Island College Hospital, as a memorial to the late Dr. A. J. C. Skene.

An Old Embalming Method.—The late Dr. Thomas Holmes, of Brooklyn, embalmed the body of President Lincoln, which was found to be in a most excellent state of preservation when viewed recently. His process was a radical departure from the ordinary mode of embalming by means of fluids. Dr. Holmes placed the body in a glass case and subjected it to pressure of a peculiar gas, the action of which hardened the flesh to a degree approaching the toughness of leather. That is all that is known of the process to-day.

St. Luke's Hospital, New York.—The directors of St. Luke's Hospital have cancelled their contract with the House of Rest for Consumptives, because the wards of the hospital have accumulated more tubercular patients than were desired. They have also determined upon the construction of a pavilion on the northwest corner of 113th street and Morningside avenue, to be devoted exclusively to private patients. Plans for the new building have been ordered. The sunlight and air to be had on Morningside Heights makes the site attractive to those who want private accommodations. The pavilion will be similar in appearance to those on either side of the main entrance. The cost is estimated at about \$300,000.

Professor Czerny, of Heidelberg, Germany, has been a guest of Dr. Roswell Park, at Buffalo.

The New York Juvenile Asylum, founded in 1851 to afford shelter for poor children, will in a few years be moved from its present site near Amsterdam avenue between 175th and 178th streets, as the directors have just acquired possession of 275 acres of land at Echo Hills, between the Hudson and Saw Mill rivers, on the line dividing Hastings from Dobbs Ferry. The property extends about 3600 feet along the New York and Putnam Railroad at Chauncey station, and includes the mountainous country running westerly to within 3000 feet of Broadway, being nearly half a mile wide. It is mainly wild land with a fine growth of trees and a small lake. On all sides are the country places of wealthy New Yorkers. Before the change is made, money for the project will be obtained by selling ground now owned by the asylum. The institution at present has about 1200 inmates.

Virchow Dinner.—To-night New York will celebrate the eightieth birthday of Dr. Rudolf Virchow, the noted pathologist, by a dinner given by his pupils, friends and admirers. Dr. William Osler, of Baltimore, will preside.

The Merchant Marine Hospital Service.—Dr. W. T. Jenkins, formerly Health Commissioner of New York city, is now in England, establishing a system of medical assistance for sailors, known as the Merchant Hospital Service. Each ship pays a membership fee of £3.—Doctor Jenkins says: "I make a contract to give to the members of the crews of ships, while at the different ports, medical and surgical treatment, to which quarantine laws do not apply, for \$15 for each ship, and this, I think, prevents any rebate. I have contracted for nearly 1,000 ships. My service covers thirteen or fourteen ports on the Atlantic seaboard. I will give medical attendance and visit the ship every day while she is in port, prescribe for the crew, and provide them with medicine. If a ship leaves a sailor

In the hospital, then the captain gives a pay order, but it would be my duty to see that he was discharged as soon as possible.

"A sailor is a carrier of disease, and if he does not get proper attention, he goes on and becomes a chronic invalid, and his progeny are probably affected and frequently become inmates of public institutions. We are trying to prevent that."

NEW ENGLAND.

New England Deaconess Hospital.—Plans are being made to build the New England Deaconess Hospital at Longwood, where a plot of ground has recently been purchased. The hospital is to be a structure of three stories and a basement, eventually to have three wings, one of which will be erected at once. There will be room for 120 beds, and the building will cost about \$100,000. As only \$24,000 have as yet been collected, a fair is to be held in Boston next month, when it is hoped that a large sum will be raised. It is probable that the first wing to be erected will be the surgical department. It will have wards with one, two, three, and four beds each, well equipped with modern appliances and furniture.

Tufts College Medical School.—The new building for the Tufts College Medical School was opened on October 3d. Dr. Elmer T. Capen, president of the college made the opening address. The building was then accepted by the trustees of the institution.

The City Emergency Hospital, Boston, Massachusetts. was opened to patients on the first of October. The hospital is three stories high, well equipped throughout, and has a roof-garden.

WESTERN STATES.

The Plague in San Francisco.—The fortieth patient died of suspected bubonic plague August 30, 1901. The autopsy showed a large left inguinal bubo with hemorrhage, in which plague bacilli were found. The heart muscle showed fatty degeneration and there were numerous plaques upon the aorta. One lung was edematous, the other congested. The spleen was enlarged and hemorrhagic; the kidneys small, soft, and congested. The mucous membrane of the stomach also showed hemorrhages. Animals inoculated died of typical plague. Four other suspicious cases and one death from the disease have been reported during September.

The Emergency Hospital, now in the course of erection in the Golden Gate Park, San Francisco, will be finished by January, 1902. It will have 60 beds, and will cost over \$8000.

Butte County Hospital.—The commissioners of Silver Bow County have decided to erect a new county hospital in Butte, Montana. It will cost about \$20,000.

The Utah State Medical Society held its annual meeting at Provo City, October 1-2, 1901.

Utah.—General W. J. Palmer and George Foster Peabody, former president and vice-president of the Rio Grande Western Railway, have given St. Mark's Hospital and the Hospital of the Holy Cross, Salt Lake City, each \$10,000, and have donated the sum of \$20,000 for the erection of four emergency hospitals in the mining districts of Sunnyside, Castlegate, Winter Quarters, and Cedar Creek.

New Mexico School Teachers.—In accordance with the new law that no person suffering from tuberculosis shall be allowed to teach school, 22 physicians have been appointed to examine school teachers of New Mexico.

Dr. Woodbridge Dead.—Dr. John Elliott Woodbridge, of Cleveland, whose peculiar views concerning the treatment of typhoid fever at one time kept his name prominent in the professional mind, died on August 31 at Bad Nauheim, Germany, from heart disease. Dr. Woodbridge was about fifty-five years old, and during the Spanish-American war was a volunteer surgeon in charge of the hospital at Fort Meyer.

An Aged Doctor Honored.—A banquet was given October 5th at the Auditorium Hotel, Chicago, by the medical profession in honor of Nathan Smith Davis, M. D., L. L. D., of Chicago. The colleagues of Dr. Davis united in this way to show their esteem and affection for one who has given his life to the uplifting of their profession. He was long ago dubbed the father of the American Medical Association, and held every position of honor within the gift of the association. He was its president in 1864-5. At Detroit

in 1874 it was ordered that a medal be struck, bearing Dr. Davis' likeness upon one side, and the name and date of the organization upon the reverse. Dr. Davis was born January 9, 1817, at Greene, N. Y. He began the study of medicine in 1834, and at his graduation wrote a thesis, "Animal Temperature," which was highly commended and selected to be read as a part of the commencement exercises. Dr. Davis is especially well known for his prominence and active interest in scientific organizations, being one of the founders of the Chicago Academy of Sciences, the Chicago Historical Society, the Illinois Microscopical Society, the Union College of Law and the Northwestern University. He was instrumental in organizing the State Medical Society of Illinois, and was its president in 1855. In journalism he is also well known. While in New York he filled the position of editor of the *Annalist*, and after moving to Chicago had editorial charge of the *Chicago Medical Journal*. Later he founded the *Chicago Medical Adviser*. He is the author of many medical works, the most notable being "A Lecture on the Effects of Alcoholic Drinks on the Human System, and the Duty of Medical Men in Relation Thereto." Dr. Davis is a Methodist, and is a member of Grace Church, Chicago. He has the peculiar habit of wearing on all occasions the white tie and swallowtail coat which characterized doctors in early days.

A New Phthisis Hospital in New Mexico.—St. Joseph's Hospital, an institution fully equipped for the practice of modern phthisis therapeutics has been established at Silver City under the charge of the Sisters of Mercy. Silver City possesses exceptional climatic advantages, the maximum annual rainfall being a little under 15 inches. The atmosphere is dry, summers are cool and winters warm, the result of an altitude of 6000 feet, making outdoor life practicable and comfortable all the year round. In this respect the climate of Silver City differs from El Paso, Tucson and other southwestern resorts, where the weather is enervatingly warm. The medical director is Dr. E. S. Bullock, former pathologist of the U. S. General Hospital for Tuberculosis, Fort Bayard, N. M.

A University Professor on the Philippine Board of Health.—Dr. Paul C. Freer, professor of chemistry at the University of Michigan, who was recently granted leave of absence for one year, has gone to the Philippine Islands to take charge of a branch department of the Board of Health. He expects to make a special study of tropical diseases, paying attention to typhoid, malaria, dysentery and plague, in which diseases the death rate in the Philippines is very high. It is probable that an improvement in the existing sanitary conditions among the natives will soon be noted.

SOUTHERN STATES.

University College, Richmond, Va.—A Pasteur Institute, in charge of Dr. A. G. Hoen, lately of the anatomical department of Johns Hopkins University, has been opened in the University College of Medicine, Richmond, Virginia.

Knoxville City Hospital.—The Knoxville City Council has appropriated \$2000 to finish the City Hospital, which will be ready for patients October 15, 1901.

Fire in a Soldiers' Home.—The Confederate Soldiers' Home, just east of Atlanta, Ga., was destroyed by fire, September 30. No lives were lost, but several narrow escapes were made. About seventy veterans were inmates of the building, some of them being invalids, who were rescued with difficulty. The loss is estimated at \$25,000, covered by \$22,000 insurance. The home, which was opened for the Confederate veterans of the state on June 30 last, was paid for by popular subscription.

The Baltimore Municipal Hospital.—On October 1, 1901, the Municipal Hospital Commission bought the Condon property on the Reisterstown road, as the site for the proposed hospital for infectious diseases. The price paid for the property, which consists of ten acres, was \$20,000. This leaves the Commission still \$5,000 from their appropriation. A letter has been sent to the Finance Commissioners requesting them to sell at once the old Quarantine property, the proceeds of which will be turned over to the commission. With this amount work will at once begin. The present frame building on the lot—the old Three-Mile House—is worthless and will be torn down. It is proposed to have four separate buildings—an admission building, a building for scarlet fever cases, one for cases of measles, and one for diphtheria cases. All the

buildings will set back from the road. The Western Maryland Railroad is in the rear of the property, and a station, to be known as the Municipal Hospital Station, will be established. There is also a small lake on the property. The commission regards the location as ideal for its purposes. As soon as the Quarantine property is sold, the Board of Awards will advertise for bids for the erection of the Municipal Hospital building. It was said that the owners of the property surrounding that bought for the hospital would protest, and, if necessary, go to court to prevent the establishment of the hospital there. The members of the commission claim there is absolutely no danger or reasonable objection that can be urged against the establishment of the hospital in the neighborhood.

The South Carolina Interstate and West Indian Exposition.—Dr. Manning Simons, one of the most distinguished physicians and surgeons in the South, has been elected medical director of the South Carolina Interstate and West Indian Exposition.

The New Medical Law of Texas.—Not only must future physicians of Texas pass a State Board Examination, but every physician who has registered since 1891 is compelled to show his diploma to the new Board of Medical Examiners, just appointed, in order to secure a license to practice. It seems that the law is being violated, unwittingly, perhaps, by undergraduates who act as assistants to a licensed physician. They often visit a patient for their chief, and while they are not paid by the patient, itemized accounts of their work are kept, for which a bill is duly sent out by the physician under whom they practice. Many of the undesirable, unlawful practitioners have already moved out of the state.

The Church Hill Medical Society, Richmond, Va.—The following papers will be read at the bi-weekly meetings of the Church Hill Medical Society this winter: Pneumonia in Infancy and Childhood.—Its Recognition and Treatment, by Dr. Garclu; Broncho and Lobar Pneumonia in the Aged.—Recognition and Treatment, by Dr. Parker; Pleurisy.—Its Varieties, Recognition and Treatment, by Dr. Blankingship; Croup, Simple and Membranous.—Recognition and Treatment, by Dr. Beazley; Acute Rheumatism in Childhood and Adults.—Its Symptoms and Treatment, by Dr. Virginius Harrison; Acute Tonsillitis.—Varieties, Symptoms and Treatment, by Dr. Barksdale; La Grippe, Complications, Varieties and Treatment, by Dr. St. J. Oppenheimer; Neuralgia, Varieties, Recognition and Treatment, by Dr. Gay; Acute Bronchitis.—Recognition and Treatment, by Dr. Cosby; Diphtheria.—Recognition and Treatment, by Dr. C. W. Massie; Measles.—Diagnosis and Complications, and Treatment, by Dr. Hord; Chicken-Pox.—Diagnosis and Treatment, by Dr. Collins.

MISCELLANY.

A Proposed Yellow Fever Institute.—The following announcement by Dr. Wyman explains itself. The object is one of such great importance that we quote the letter and memoranda in full.

Treasury Department,
Office of Supervising Surgeon-General,
U. S. Marine-Hospital Service,
Washington, D. C., September 13, 1901.

The Honorable, The Secretary of the Treasury.

Sir: I have to invite your attention to the subject of yellow fever, and to discussions which have been published in the medical journals and in the daily press during the past few months regarding its transmission. The subject is one with which the U. S. Marine-Hospital Service, through legal responsibility, has been intimately associated since its reorganization in 1871, the publications of this Service being the chief residuary of the statistics and other facts pertaining to this disease. The annual reports are largely devoted to this subject. In 1889 a volume was published entitled "Yellow fever, its nature, diagnosis, treatment, and prophylaxis, and quarantine regulations relating thereto," consisting of contributions by medical officers intimately acquainted with the disease, either by scientific or clinical work. A volume was published in the same year containing a report of a commission of medical officers detailed by authority of the President to investigate the cause of yellow fever. The Service, through its national quarantine stations and

cooperation with State and local stations, has many times prevented the introduction and, by its detention camps, the spread of the disease.

Within the last year a medical commission of the United States Army, operating in Cuba, has made a report, showing that the mosquito conveys yellow fever and declaring that this is the only method by which the disease is conveyed to man and that it is a particular species of mosquito only which thus transmits it. In their conclusions, it is stated that the cause of the disease is unknown. Based upon their findings, demands have already been made upon the Bureau for certain modifications of the quarantine regulations, which, for the present season, the Bureau, with its deemed justifiable conservatism, has declined to make, but the matter will undoubtedly again be urged during the next season and it is incumbent upon the Bureau to have definite scientific grounds upon which either to modify its present regulations or to maintain them. On the one hand the Bureau has no desire to perform unnecessary labor, nor to impose unnecessary restrictions upon commerce, its traditional policy being to maintain a scientific quarantine and to impose no restraints upon travel or commerce not demanded in the light of science and experience. On the other hand the Bureau can not, in the interest of commerce, remove time-honored measures without definite justification therefor.

Since the announcement of the findings of the above-mentioned army commission, the Service has continued the prosecution of its inquiries concerning this disease with special reference to the findings of this commission. This has been done not only in the hygienic laboratory, but by special orders transmitted to the officers assigned in April to the several fruit ports of Central America, to the medical officers in Cuba and Porto Rico, and to those at the southern quarantine stations of the United States. A number of reports have been received and published in the Public Health Reports containing facts of interest on the subject. To estimate these facts at their full value, to collect additional facts, and to give direction to future investigation, it has become necessary to devise a plan for a complete study of the subject in all its phases. This duty is incumbent on the U. S. Marine-Hospital Service by reason of the quarantine law of 1893, which provides for making the necessary quarantine regulations against this disease.

Section 4 of this law also requires—

That the Secretary of the Treasury shall also obtain, through all sources accessible, including State and municipal sanitary authorities throughout the United States, weekly reports of the sanitary condition of ports and places within the United States, and shall prepare, publish, and transmit to collectors of customs and to State and municipal health officers and other sanitarians weekly abstracts of the consular sanitary reports and other pertinent information received by him, and shall also, as far as he may be able, by means of the voluntary cooperation of State and municipal authorities, of public associations, and private persons, procure information relating to the climatic and other conditions affecting the public health.

That public health work of this character is incumbent upon the Service is further shown by the act of Congress approved March 6, 1901, in which an appropriation is made for a new building for hygienic laboratory, U. S. Marine-Hospital Service, the function of this laboratory, as stated in the law, being for the investigation under the Surgeon-General of contagious diseases and matters relating to the public health.

Moreover, Congress has provided a fund for the prevention of epidemic diseases which may be applied to this investigation, as there is no epidemic disease of greater importance as affecting the United States than this one.

In view of the foregoing facts, I have prepared and submit herewith a plan for the organization of a yellow fever institute in the U. S. Marine-Hospital Service, whose object will be to collect all facts concerning yellow fever, to designate the specific lines of investigation to be made, and to make the investigations. The members of this institution are to be the medical officers of the U. S. Marine-Hospital Service, and others specially qualified. They will be assigned for duty to one of four sections, each section having a special list of topics for consideration. Each of the four sections will be under the direction of one of the medical officers on duty in this Bureau and said Bureau officers, with the director of the hygienic laboratory,

the Surgeon General, and a secretary, will constitute an executive board, which is to have general oversight of all the investigations. This furnishes a convenient method of administration, as the machinery of the Institute will be readily operated in the Bureau, while the actual work will be carried on by members at various places.

At present, the Service work on yellow fever is being conducted by a limited number of officers working on more or less independent lines. The Institute provides for observation and experiment by a large number of workers in accordance with a general system—in fact, organizing and coordinating the work that has been going on and which is to be done.

The stimulus to the members will be not only the scientific interest in the subject, but the publication of their contributions in the shape of bulletins as often as it seems advisable to the board; and with the Department facilities and necessary funds for incidental expenses, it is believed that the organization will meet with a degree of success warranting its existence.

To illustrate the workings of the commission, in addition to the scheme of organization, there is inclosed a series of topics proposed for investigation in each of the four sections.

Respectfully, WALTER WYMAN,

Supervising Surgeon-General U. S. M. H. S.

Approved, September 25, 1901.

O. L. SPAULDING,

Acting Secretary.

ORGANIZATION.

Object.—The object of the Institute is to collect all facts concerning yellow fever; to designate the specific lines of inquiries to be made, and to make them.

Officers.—The Surgeon-General of the U. S. Marine-Hospital Service, ex officio, chairman of the institute; secretary, the medical officer in charge of the bureau division of scientific research.

An executive board to consist of the chairman and secretary, the director of the hygienic laboratory, and the medical officers in charge of the following bureau divisions, viz: division of domestic quarantine, division of foreign quarantine, and division of sanitary reports and statistics.

Duties of the Executive Board.—To direct the investigations, correlate the reports, and supervise publications.

Members.—Every medical officer of the U. S. Marine-Hospital Service and others specially qualified.

Sections.—Section A. History and Statistics.

Section B. Etiology.

Section C. Transmission.

Section D. Quarantine and Treatment.

Each section will be presided over by 1 member of the executive board. The chairman of each section will organize the work of the section, subject to the approval of the executive board. He shall direct operations and receive and classify its reports.

Members of the institute will be assigned to the class or classes for which they express a preference. These assignments, so far as medical officers of the U. S. Marine-Hospital Service are concerned, will be made with the approval of the Surgeon-General, and their duties under the direction of the section chairman shall not conflict with the regular duties and regulations of the U. S. Marine-Hospital Service.

Publication of the reports received from members will be made from time to time as determined upon by the executive board.

SECTION A.—HISTORY AND STATISTICS.

Topic 1. The early history of the disease.

Topic 3. History of recent epidemics (since 1850).

Topic 4. Relation to modern sanitation, especially paving, drainage, etc., in cities.

Topic 5. Why did not New Orleans have it in early times while Boston did?

Topic 6. Mortality statistics.

Topic 7. Maps showing yellow fever zones.

Topic 8. Maps showing the infectible territory in the United States.

SECTION B.—ETIOLOGY.

Topic 1. The cause of the disease.

SECTION C.—TRANSMISSION.

Topic 1. The transmission of the disease by the mosquito.

Topic 2. Can any other mosquito than the *stegomyia fasciata* carry the infection?

Topic 3. Is the progeny of the mosquito also infected?

Topic 4. How many generations?

Topic 5. Can the mosquito become infected by any other means than by sucking the blood of a patient sick with the disease?

Topic 6. Can the mosquito become infected by contact with the dried blood discharges or other infected materials upon fomites?

Topic 7. Can the disease be transmitted by any other means than through the mosquito?

Topic 8. Can the disease be conveyed by fomites, or through the air, soil or water?

Topic 9. The geographical distribution of *stegomyia fasciata* in relation to the disease.

Topic 10. Is the immunity enjoyed by certain localities due to the absence of this variety of mosquito?

Topic 11. A study of the life and habits of the *stegomyia* and allied species, especially with a view to their extermination.

SECTION D.—QUARANTINE AND TREATMENT.

Topic 1. Is disinfection of baggage necessary to prevent the spread of the disease?

Topic 2. Is any treatment of baggage necessary?

Topic 3. Mosquitoes in baggage, in merchandise, in cars, in ships.

Topic 4. Treatment of the patient.

Topic 5. Guards against mosquito bites.

Topic 6. Immunity of individuals, of races.

Topic 7. Individual prophylaxis.

Topic 8. Communal prophylaxis—sanitation.

Obligatory Vaccination.—Vaccination has been compulsory in Bavaria since 1807; in Sweden since 1816; in Württemberg since 1818; in Scotland since 1864; in England from 1867 up to ten years ago, when the famous "conscience law" was enacted; in Ireland since 1868, and in Germany since 1874. The German statistics include re-vaccination, which is also regulated by law. Those for the divisions of Alsace show the results obtained by compulsory vaccination. After a mortality of .21% from 1811 to 1875, when obligatory vaccination was first established, a mortality of .022% followed from 1875 to 1884. In Switzerland, vaccination was compulsory until 1883. In 1881, 7 deaths occurred from variola; in 1882, no deaths, but in 1883 there were 8; in 1884, 11; in 1885, 52, and in 1886, 85 deaths from smallpox. In England, with compulsory vaccination in 1889, there were 23 deaths due to smallpox, and in 1890 only 16. But in 1891 the deaths increased to 49; in 1892 to 431, and in 1893 to 1456. These statistics show the magnificent results of compulsory vaccination, which is as yet unknown in France. In the United States the regulations of the public schools make vaccination among children practically obligatory, but re-vaccination and the vaccination of adults are not compulsory.

Obituary.—Dr. W. G. Thornton, at Victoria, Texas, September 9, aged 47 years—Dr. Josiah A. Ireland, at Louisville, Ky., September 19, aged 77 years—Dr. Daniel E. Thayer, at Adams, Mass., September 29—Dr. Francis E. Hines, at Salem, Mass., September 30, aged 40 years—Dr. James W. Dunphy, at New York City, September 30, aged 26 years—Dr. W. F. McClure, at Jackman, Me., September 30, aged 35 years—Dr. James Walter Allen, at Lancaster, Pa., October 1, aged 48 years—Dr. A. T. Cherry, at Bowling Green, Ky., October 5—Dr. John F. Gudget, at Hazelton, Ind., October 5, aged 51 years.

Death of Dr. Shiveley.—Among the deaths from smallpox reported last week was that of Dr. George Shiveley, who died on Saturday, September 28th at the Municipal Hospital. Dr. Shiveley was 72 years old, a graduate of Jefferson Medical College, and in the fifties filled the position of resident physician at the Philadelphia Hospital. He discontinued practicing his profession about twenty-five years ago. He was a member of the Academy of Natural Sciences, a prominent Mason, and was identified with the Pennsylvania Historical Society.

GREAT BRITAIN.

A New Lunatic Asylum Near Aberdeen, Scotland.—On September 14th the foundation-stone of the hospital at the new asylum being erected by the Aberdeen City District Lu-

nacy Board at Kingseat, Newmachar, about 12 miles from the town, was laid.

Hospital Saturday in Belfast.—Saturday, September 14th was the day on which the annual collection was made for the Royal Victoria Hospital, Belfast, and it is announced that about £700 was realized, the amount for this year being the largest on record.

Obituary.—Dr. John L. W. Thndiehum died in London, September 7, 1901, aged 72 years. He was German born, having been graduated from the University of Giessen. At one time he held the position of lecturer upon pathological chemistry at St. Thomas' Hospital.

A New Tract in the Spinal Cord.—Dr. Purves Stewart, of the Westminster Hospital, London, has discovered a descending tract in the cervical region of the cord, ventro-external to the crossed pyramidal tract, yet separated by a distinct interval at the level of the tip of the lateral horn of the gray matter. It only reaches as low as the eighth cervical segment. Purves Stewart studied it in a patient with dislocation of the fifth and sixth cervical vertebrae, who lived ten weeks after receiving the injury.

Antivenene in India.—Every hospital and dispensary throughout the central provinces of India has been provided with antivenene. Nothing will more impress the natives than the recovery of a patient whom they know has been bitten by a deadly snake; nor will any person suffering from the bite of a snake be allowed to die in the future, without a trial of antivenene having been made.

The British Losses in South Africa.—An official report issued in London, October 5, shows that the British casualties in South Africa, from the beginning of the war to September 30, were 548 officers and 5,823 men killed in action, and 1,529 officers and 28,032 men wounded; 365 officers and 9,177 men are classified as missing or prisoners, of whom 354 officers and 8,471 men have either been released or have escaped. The deaths from disease and accidents numbered 10,738.

New Pathological Laboratory.—The opening of the new Pathological Laboratory of the University of Oxford will take place on Saturday, October 12th, at 3.30 P. M. Sir William Church, Bart., President of the Royal College of Physicians of London; Dr. G. Sims Woodhead, Professor of Pathology at the University of Cambridge, and others will take part in the proceedings.

A Beri-Beri Expedition.—The sum of £1000 has been given to the Liverpool School of Tropical Medicine by the Christmas Islands Phosphate Co. to defray the expenses of a scientific expedition for the investigation of beriberi. This company has also offered passage to members of the expedition on board a steamer which left Cardiff October 4. This ship will stop at Port Said October 18th. Sir John Murray and the Colonial Office have each contributed £100 in aid of the expedition.

Scarlet Fever in Birmingham.—The epidemic of scarlet fever now existing in Birmingham is much greater than any epidemic of the preceding five years. Two weeks ago there were 474 cases in the hospitals.

CONTINENTAL EUROPE.

Appointments.—Brussels: Following the retirement of Professor Rommelaere, Professor Stienon has become the director of the first medical clinic, Professor Destree having been appointed director of the second.—Charkow: Dr. S. Delizyn has been appointed extraordinary Professor of Operative Surgery.—Erlangen: Dr. Ernst Graser, Professor of Surgery at the Rostock Medical School, has been appointed Professor of Surgery at the University of Erlangen, replacing the late Dr. von Heinecke.—Heidelberg: Dr. K. Brauer has been made extraordinary Professor of Medicine. Dr. Ferdinand Petersen, of Surgery, and Dr. Siegfried Bettmann, of Dermatology. Vienna: Dr. Ernst Finger has been appointed extraordinary Professor of dermatology, and Dr. Hans Rabi, extraordinary Professor of histology.—Kasan: Dr. A. G. Agababow has been appointed Professor of Ophthalmology.—Prague: Dr. Andreas Schurtz has been appointed extraordinary Professor of the History of Medicine and of Epidemiology at the Bohemian University of Prague. Copenhagen: Dr. K. B. Pontoppidan has been appointed Professor of medical jurisprudence and hygiene, in the place of Dr. Jaedeken.—Lund: Dr. M. J. C. A. Forssmann has been appointed professor of pathology.—Groningen: Dr. H. J. Hamburger, of Utrecht

has been appointed professor of physiology, replacing Dr. Hulzinga.—Leyden: Dr. G. C. van Walsem has been appointed professor of pathological anatomy, in the place of Dr. Slegenbeek van Heukelom.—Koenigsberg: Dr. Itelnhold Unterberger, physician in charge of the Charity Hospital, has been granted the title of professor.—Warsaw: Dr. E. Negnamow of Charkow has been appointed professor of ophthalmology.

Foreign Obituary.—On August 25, 1901, Dr. Cuneo, Inspector-General of the French Marine Hospital Service, died at Vlehy, aged 67 years. He was Commander of the Legion of Honor and President of the Upper Council of the Marine Hospital Service. At Blankenberghe, Belgium, Dr. Adolf Fick, Privy Councillor and Professor of Physiology at the University of Würzburg, on August 21, 1901. Dr. J. Rubio y Giles, Professor in Seville.—Dr. Alfred Vaucher, formerly Professor of obstetrics and gynecology in the medical school at Geneva, Switzerland.—Dr. Galiani, Professor in Athens.

The Fifth International Congress of Physiology was held from September 17th to September 21st in the physiological laboratory of the University of Turin, under the presidency of Professor Angelo Mosso. The assembled physiologists were formally welcomed by the president in a short address. Sir Michael Foster, K. C. B., M. P., secretary of the Royal Society, was then elected honorary perpetual president. Professor Fano, Professor Fredericq, Professor Grützner, and Professor Sherrington were appointed general secretaries. More than 200 physiologists from various countries were present, and 186 communications were announced.

The Thirteenth International Congress of Medicine.—The General Secretary of the Thirteenth International Congress of Medicine, which was held in Paris, August 2-9, 1900, requests any member who has not yet received all the proceedings of the Congress, to write at once to the editors of the Congress, Masson & Cie., 120 Boulevard Saint Germain, Paris. The proceedings consist of one large volume and seventeen smaller ones containing the records of the separate sections. Claims for these books will not be acknowledged after the 31st of December, 1901.

A Giant Child.—A child of three years was recently exhibited at a medical society meeting in Berlin, who was 3 feet 8 inches high, and weighed 19½ pounds. His feet and hands are large, and his mouth is generally open. His penis measures 2½ inches in length, his pubis is covered with hair, and his testicles are as large as pigeons' eggs. He began to grow at the age of 18 months. He is not particularly intelligent.

French Marine Hospital Service: Dr. Auffret, director of the Marine Hospital Service in Brest, has been appointed Inspector-General of the Marine Hospital Service in France, replacing the late Dr. Cunéo, whose death occurred a few weeks ago.

The Nobel Prizes.—These two prizes, amounting to 200,000 crowns, approximately \$56,000 each, have been awarded to Dr. Finsen, the Danish physician who invented the apparatus for the medical treatment of lupus by electric light, and to Dr. Pawlow, the Russian physiologist, whose work upon nutrition is well known.

The New Staff Surgeon-General of the German Army.—Dr. Rudolf von Leuthold, First Physician to the German Emperor, has been appointed Staff-Surgeon-General of the German Army, replacing the late Dr. von Coler. Surgeon-General von Leuthold received his professional education at the University of Berlin. He has for many years held the post of Professor of Military Surgery in the Kaiser-Wilhelm Academie and was also editor of the *Deutsche Militärärztliche Zeitschrift*.

Sanatorium at Belzig, Germany.—An anonymous benefactor has promised to defray the cost of erecting a building with a capacity for 30 children, in the grounds of the Sanatorium of the Berlin-Brandenburg Sanatorium Association at Belzig.

Nothnagel's Sixtieth Birthday.—On September 28, 1901, occurred the sixtieth birthday of Professor Hermann Nothnagel, director of the first medical clinic in the University of Vienna. This will be appropriately celebrated by his former students about October 15. The committee having the affair in charge consists of Drs. H. Lorenz, J. Manna-berg, and Robert Breuer.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

September 21, 1901. (No. 2125).

1. Note on a Simple and Rapid Method of Producing Romanowsky Staining in Malarial and Other Blood Films. W. B. LEISHMAN.
2. The Value of Neisser's Stain in the Diagnosis of Diphtheria. R. M. BEATON, F. FOORD CAIGER and WALTER C. C. PAKES.
3. Two Successful Cases of Operation for Perforated Gastric Ulcer. E. COLLINGWOOD ANDREWS.
4. A Discussion on the Pathology of Pneumococcus Infection. ALEXANDER G. R. FOULERTON, J. W. WASHBURN, W. S. LAZARUS-BARLOW, E. J. CAVE, J. H. BRYANT, J. MICHELL CLARKE, J. W. H. EYRE, THEODORE FISHER, EDWARD RIST, and GEORGE B. BATTEN.
5. The Bacteriology of Posterior Basal Meningitis. W. S. LAZARUS-BARLOW.
6. Pneumococcus Peritonitis. J. H. BRYANT.
7. The Pathology of Exophthalmic Goiter. E. GLEY.
8. The Pathology of Exophthalmic Goiter. WALTER EDMUNDS.
9. A New Centrifuge for Bacteriological Work. J. W. H. EYRE.
10. On the Urine in Tuberculosis Infection. ALEX. G. R. FOULERTON and WILLIAM T. MILLER.
11. Focal Necrosis of the Liver. C. J. N. LONGRIDGE.
12. The Present Position of the Bacteriology of Rheumatic Fever. F. J. POYNTON and ALEX. PAINE.
13. The Hemoglobin Value of the Red Blood Corpuscles. G. H. GOLDSMITH.
14. The Bacteriology of Cerebrospinal Meningitis. A. W. NUTHALL and W. HUNTER.
15. A Comparative Study of Dysenteric Bacilli. SIMON FLENNER.
16. Further Observations on the Standardization of Nutrient Media. J. W. H. EYRE.
17. The Diagnosis of the Presence of Bacillus Coli Communis by Means of Neutral Red. WILLIAM HUNTER.
18. Typhoid Fever Without Intestinal Lesion. W. S. LAZARUS-BARLOW.
19. A Discussion on the Role of Cocci in the Pathology of the Skin. SABOURAUD, JAMES GALLOWAY, ARTHUR WHITEFIELD, T. D. SAVILL, WM. ALLAN JAMIESON, WILLIAM DUBREUILH, H. RADCLIFF CROCKER, THOMAS COLCOTT FOX, NORMAN WALKER and GEORGE PERNET.
20. Paget's Disease of the Vulva. WILLIAM DUBREUILH.
21. Contribution to the Histopathology of Yaws. J. M. H. MACLEOD.
22. The Nature of the Disease Known as Erythema Induratum Scrofulosorum. ARTHUR WHITEFIELD.
23. On a Case of Pityriasis Rubra Pilaris. WALLACE BEATTY.
24. On a Case of Parakeratosis Variegata. T. COLCOTT FOX and J. M. H. MACLEOD.
25. Some Points in the Management of Eczema. HENRY WALDO.

1. Leishman describes a simple and rapid method of producing Romanowsky staining, which for ordinary blood staining for the examination of smear preparations from bone marrow, from glands such as the spleen and liver and from cancer juice and as a selective tissue stain for sections, appears to present many advantages. A 1% solution of mediate methylene blue (Grubler) in distilled water is made and then rendered alkaline by the addition of 0.5% of sodium carbonate. The solution is then heated to 65° C. in an oil stove for 12 hours, and afterwards allowed to stand at room temperature for 10 days. A 1 in 1000 solution of eosin, extra B. A. (Grubler) in distilled water is also prepared. Equal volumes of these 2 solutions are mixed in a large open vessel and allowed to stand for from 6 to 12 hours, being stirred from time to time with a glass rod. The abundant flocculent

precipitate which results is then collected on a filter, thoroughly washed with distilled water until the washings are colorless or have only a pale blue tinge, and the insoluble residue carefully collected, dried and powdered. The resulting powder, which has a greenish, metallic luster, contains the active staining ingredient in Romanowsky's method. The best solvent for this new dye is pure methyl alcohol (Merck's "for analysis.") The powder is dissolved in the proportion of 0.15%, and the resulting solution kept in stoppered glass bottles until required for use. Three or 4 drops of the stain are allowed to fall upon the blood film, which should be prepared in the usual way. No attempt is to be made to check evaporation. After about one-half minute, double the quantity of distilled water—that is, 6 to 8 drops—is added and allowed to mix with the alcoholic solution of the dye-stain and the film is stained for 5 minutes. The stain is now gently washed off with distilled water, and a few drops of the water are allowed to rest on the film for one minute, at the end of which time the specimen is ready for examination, either directly in water under a 1-6 or 1-8 inch objective, or, after drying (without heat) and mounting in xylol balsam, under an oil-immersion lens. [J. M. S.]

2.—When stained by Neisser's differential stain, the Klebs-Löffler bacillus will show the blue granules, even when it is growing with difficulty owing to the synchronous growth of other bacteria. The observations of Heaton, Caiger and Pakes concern 100 cases, with the following results: Clinical and bacteriological diagnosis both positive, 53; clinical and bacteriological diagnosis both negative, 17; clinical diagnosis positive, bacteriological diagnosis negative, 25; clinical diagnosis negative, bacteriological diagnosis positive, 5. The authors feel convinced that if coverslip preparations are made directly from the throat without the loss of any time, this number of positive results will be increased. As a result of their observations, they feel that Neisser's stain is a valuable one in several ways: (1) Because a positive diagnosis is rendered more certain for those who cannot be considered as experts, since it is often easier to diagnose the Klebs-Löffler bacillus after staining by Neisser than after staining by ordinary methylene blue. (2) Because a trustworthy positive result may be obtained from the microscopical examination of a preparation made direct from the swab. (3) Because the use of Neisser's stain does not appear to introduce any fallacy not found in the application of other methods. [J. M. S.]

3.—E. Collingwood Andrews reports two successful cases of operation for perforated gastric ulcer. In both of the cases there was considerable food in the stomach at the time of operation, and it was impossible to empty the stomach through the pyloric opening. The constant pouring out of the stomach contents through the perforation rendered its closure difficult. Andrews makes it a rule to irrigate, if the contents of the stomach are widely diffused, but is satisfied with careful sponging, if the escape is moderate and limited. The first patient was a young woman, 23 years old, who had suffered for some months from indigestion. She had never vomited blood. The symptoms of perforation were ushered in by a collapse which took place suddenly while the patient was carrying a tray. The patient suffered extreme pain; the abdomen was board-like and exquisitely tender. The abdomen was opened within a few hours and a perforated ulcer found near the cardiac end of the lesser curvature. The opening was closed with two Lambert sutures and the cavity washed out with saline solution. Both a drainage tube and gauze were used. The gauze drain was removed on the second day and the drainage tube on the third. On the fifth day there was a free action of the bowels after an oil injection and the patient was allowed milk by the mouth. The recovery was uneventful. The second case was that of a gentleman 30 years of age. In this case also the onset of symptoms was sudden and violent. When seen by Andrews, two hours after the first symptom, the patient was found in a collapsed condition. The abdomen was rigid and distended and liver dullness was obliterated. Immediate operation was performed. A perforation was found on the lower border of the stomach $\frac{3}{4}$ of an inch from the pyloric orifice. In this case the escape of stomach contents was more or less limited and for cleansing only sponging was employed. A combination of tube and gauze drain was

used as in the other case. The patient was fed per rectum for seven days; the gauze drain was removed on the second, and the tube on the sixth day. Excepting a phlebitis in the right leg the recovery was uneventful.

[J. H. G.]

4. The pathology of pneumococcus infection is concerned with many cases of disease which, in their clinical aspects may have little in common, and in their morbid anatomy might vary as widely. The specific organism of this infection, the pneumococcus, micrococcus pneumoniae or diplococcus lanceolatus, belongs to the class of strict parasites, so far as our present knowledge goes. It occurs as infecting man alone, and has not yet been found as a parasite of the lower animals. It has been but rarely met with outside the human body. The organism exists as a parasite on the mucous membranes of perfectly healthy individuals, infesting more especially the mouth. It is also found in the anterior nares, in the conjunctival sac and in the vagina. Micrococcus pneumoniae, although not found occurring naturally in the lower animals, is actively pathogenic for many of them. This susceptibility is most marked in the rabbit, least in the dog. In testing the organism as obtained from healthy saliva, its virulence for the rabbit will usually be found quite as well marked as the virulence of a strain isolated from a case of pneumonia. When, therefore, the parasite becomes pathogenic for its human host, there is no reason to suppose that infection has happened because of any sudden access of virulence to a previously harmless parasite; but rather, it is probable that the condition of the host has afforded opportunity, which was usually wanting, under the conditions of ordinary good health, for the exercise of a natural pathogenic power. With regard to the exact nature of the toxic substances which are produced in the course of pneumococcus infection, very little is known. The action of the pneumococcus toxins on particular tissues as manifested by histological changes, is also but little known. The simplest form of pneumococcus infection is that resulting from a poisoned wound of the subcutaneous tissues; a localized abscess, or a more or less spreading cellulitis. The first point that has to be considered in connection with the fibrinous lobar pneumonia which results from pneumococcus infection is whether the pneumonia is merely a manifestation of a general infection, or whether it represents a purely local infection. Foulerton thinks that the evidence available shows that the lung infection is usually the primary condition, and that any blood infection is secondary to this. With regard to the actual causation of fibrinous lobar pneumonia, and looking upon the lesion as produced by a local infection of the lung, it is quite likely that the old belief that a chill or exposure to cold has an influence is well founded. There is no doubt that exposure to cold may produce some temporary congestion of the capillaries of the lungs, and under these conditions it is quite likely that there is just sufficient alteration in the state of the cells lining the air vesicles to render them less efficient in resisting invasion by any bacteria which may come to rest on them. The author thinks that what is known as epidemic pneumonia is not caused by the micrococcus pneumoniae. Fibrinous lobar pneumonia is not, of course, the only result of pneumococcus infection of the lung; there is a pneumococcus bronchopneumonia, especially in children, and the pneumococcus perineurular pneumonia found in cases of pulmonary phthisis. The initial pleural effusion which occurs to a greater or less extent in probably every case of lobar pneumonia is, in the majority of cases, due at first to the irritation of toxins passing through from the neighboring infected portion of the lung, and not to the presence of cocci themselves in the pleural sac. In children the pleural lesion is frequently a primary one. Considering how well cases of empyema in children do under surgical treatment, it is difficult to believe that there is a lobar pneumonia, underlying any large proportion of them. Bacteriologically there is a marked difference in the causation of pleural empyema in children and in adults. The two parasites which cause a very large majority of all the cases of empyema which the author has examined are the streptococcus pyogenes and the micrococcus pneumoniae; but in spite of the obvious connection clinically between empyema and pneumonia in adults he finds that

75% of the cases in adults are caused by the streptococcus pyogenes and 25% only by the micrococcus pneumoniae, whereas, in children, at least 75% of the cases were caused by micrococcus pneumoniae and about 25% by the streptococcus pyogenes. When the details of published cases are considered it is seen that the joint affection may take one of 3 forms: It may be purulent from the outset, it may be at first sero-fibrinous and then purulent, or it may remain sero-fibrinous, in the last case assuming sometimes the type of an osteo-arthritis with neighboring tenosynovitis. A pneumococcus meningitis may be acute and purulent, or chronic and sero-fibrinous. The purulent form may be the only lesion that is found due to the infection, and apparently the primary one, and in that case it is possible that the infection occurred by way of the nose. Peritonitis, caused by pneumococcus infection may be sero-fibrinous or purulent. It is most frequently met with in children. Nothing definite can be said concerning the possibility of an acquired immunity in man after a pneumococcus infection. Washburn believes that the pneumococcus exists in Nature outside the body of animals, but in an avirulent form, which, under certain conditions, may become virulent. Bryant is strongly of opinion that cases of so-called idiopathic peritonitis, if examined bacteriologically, will prove to be pneumococcal. Clarke said that the production of endocarditis is best known as the consequence of general infection in pneumonia, but that it is occasionally found under other circumstances, when the source of infection was uncertain. Eyre stated that he is now able to demonstrate experimentally that the same strain of pneumococcus can, by varying the conditions of the experiment, be made to provoke tissue reactions belonging to either the fibrinous or the edematous group. The predominant features of the lesions produced by the pneumococcus depend on at least 2 factors, namely, the virulence of the infecting pneumococcus and the individual resistance of the subject infected. Fisher had seen 5 cases of abscess of the lung as a complication of pneumonia. [J. M. S.]

5.—Lazarus-Barlow reported two cases of posterior basilar meningitis; one in a female child, aged 1 year and 5 months; and the other in a female, aged 9 months. There was not a trace of tuberculosis in the body of either infant. No micro-organisms could be found in coverslip preparations of the cerebrospinal fluid or the inflammatory material at the base of the brain in either case. On cultivation, however, an organism was obtained that presented characters fully compatible with the micrococcus pneumoniae of Fränkel. [J. M. S.]

6.—Bryant reports 3 cases of pneumococcus peritonitis; one in a girl, aged 5 years; another in a man, aged 45 years, and the third in a girl, aged 4 years. Pneumococcus peritonitis may be classified in two ways: (1.) Primary, when the peritoneum is the first structure to be involved, and (2.) secondary, when the peritoneum is infected as a complication of some other pneumococcus lesion. Or according to the distribution: (1.) Local or encysted, and (2.) general or diffuse. In the general or diffuse form the abdomen is distended, partly from the presence of fluid in the peritoneal cavity and partly from tympanitic distension of the intestines. On opening the peritoneal cavity a fair amount of turbid, light, greyish-yellow fluid may be found. If this is collected and allowed to stand, the upper portion becomes much clearer and a thin pale, greyish-yellow deposit of pus cells and flakes of lymph falls to the bottom of the glass. Coverglass preparations of the pus stained with Macdonald's stain show the presence of capsulated diplococci. The peritoneum, both visceral and parietal, is covered with pale yellow flakes of lymph and coils of intestine may be adhering to each other and to adjacent viscera. The lymph peels off with ease, leaving a slightly dull surface, and the peritoneal blood vessels are found to be congested, dilated, and distended with blood. In virulent infections there may be actual extravasations of blood. In the local or encysted variety a similar condition of a portion only of the peritoneal cavity may be seen, and the parts most likely to be involved are the upper surface of the liver, the upper surface of the spleen, the pelvic cavity, and occasionally the right iliac fossa. In some cases the lymph is very thick and there is little fluid. As a rule, there is no obvious primary focus to be discovered in the abdomen to account for the peritonitis. Pneumococci are frequently found in the mouths and throats of

healthy people, and therefore must be constantly swallowed with the saliva and food. If there is severe gastro-intestinal disturbance there will be not only a general lowering of the resistance of the body, but also an altered condition of the gastro-intestinal secretions. Such a series of changes might well predispose to the growth and development of the pneumococcus in the gastric and intestinal mucosa, and might also allow of the passage of the organisms by means of the blood vessels and lymphatics to the peritoneum. The very large proportion of girls to boys affected by this form of peritonitis is very suggestive that the uterus and Fallopian tubes are the channels by means of which the pneumococcus gains access to the peritoneal cavity. It is not easy to explain, however, why it is that, when adults are attacked, they are nearly always men. There is no doubt that many cases die as a result of a general pneumococcus septicemia. Case 1 appears to have been an example of a general blood infection. In Case 2 the clinical evidence points to primary infection of the peritoneum, with a secondary implication of the pleura, which may have been due to a general blood infection, or to a local infection through the lymphatics. Case 3 died from pneumococcus septicemia, pneumococci having been concentrated in the heart, blood, spleen, peritoneum and pleura. The clinical and pathological evidence pointed to the peritoneum as the first structure to be involved, the pleura, probably, being infected soon after. Very frequently when making post-mortem examinations it is found that the upper surface of the liver is firmly attached to the under surface of the diaphragm by means of fine fibrous adhesions, and that the base of the right lung is also fixed to the upper surface of the diaphragm in a similar manner; on the left side the spleen and base of the left lung may be similarly attached to the diaphragm. The author is of the opinion that the majority of these cases are examples of cured local pneumococcus peritonitis, the primary lesion being pneumonia or pleurisy, and the peritonitis being caused by a secondary infection through the lymphatics. The skin is another possible channel by means of which the pneumococcus can reach the peritoneum; but there have been no cases published as far as the author knows, which point to this manner of infection. [J. M. S.]

7.—Gley concludes that **exophthalmic goiter** is due to an alteration in the thyroid apparatus involving, in the first place, the parathyroid, the normal function of which is disturbed. [J. M. S.]

8.—Whether the causation of **exophthalmic goitre** is primarily in the nervous system or in the thyroid gland, there can be no doubt that the abnormalities, wherever they may be, are of a chemical nature. Edmunds has recently been making some experiments with a view of determining the nature of the changes in the central nervous system caused by total excision of the thyroid and parathyroids. The cord and medulla, and in one case also a portion of the brain from dogs were examined by Nissl's method. The Nissl bodies were no longer defined and the chromophilous elements had undergone chromatolysis. Cells were found in every stage of destruction. These changes are very similar to those described by Mott as occurring in some forms of acute poisoning. In fact it appears that athyroidism is a form of acute poisoning affecting the central nervous system. It seems probable that the absence of the parathyroid secretion is in some way the cause of the acute symptoms, and, from the nature of the changes in the cells, it seems that its presence is necessary to the extraction from the blood and deposition in the cells of the Nissl bodies, which are supposed to be the food of the cells. [J. M. S.]

9.—Eyre describes a new **centrifuge for bacteriological work**. [J. M. S.]

10.—Foulerton and Hillier examined the urine from 25 cases of more or less chronic tuberculous, pulmonary phthisis, in each of which the bacillus tuberculosis was found in the sputum. The inoculations were carried out as follows: One hundred and fifty cc. of the 24 hours' excretion were centrifugalized and 5 cc., containing any sediment present, were pipetted off from the bottom of the tube. Of these 5 cc., 2 cc. were injected into the popliteal space of each of 2 guinea pigs. Of 18 patients suffering from more or less chronic, tuberculous, pulmonary phthisis,

the urine contained the bacillus tuberculosis in 9. In 6 of these 9 cases the absence of tuberculosis of the urinary tract was proved by post-mortem examination, and there was no reason to suspect that the condition existed in any of the other 3. So far, therefore, as we can generalize from a series of only 18 cases, we can say that the urine of 50% of fairly advanced cases of tuberculosis, pulmonary phthisis contains the bacillus tuberculosis, such organisms being in a virulent condition for the guinea-pig. A general blood infection, as evidenced by the presence of bacilli in the urine, is more common in cases of tuberculous pulmonary phthisis than is commonly supposed. When the bacillus tuberculosis invades the blood in cases of pulmonary tuberculosis, it does so usually in extremely small numbers, and there can be but little tendency for it to multiply there, but any occasional bacilli that may get into the blood stream are eliminated by the kidneys; these glands showing only a slight tendency to become infected in the of fairly advanced cases of tuberculous, pulmonary phthisis process. It seems probable that in cases of pulmonary tuberculosis the patient is often gradually undergoing a process of auto-immunization, and that after a time the tissues generally are less susceptible to infection than they were when the primary infection occurred; and it is only on this assumption that we can explain the fact that, considering the frequency with which the specific bacilli apparently obtain access to the circulating blood, dissemination of the tuberculosis is comparatively uncommon in the chronic, tuberculous, pulmonary phthisis of adults. The authors were unable to detect any difference between animals inoculated with tuberculous urine and control guinea-pigs inoculated from healthy urine, showing that the urine of tuberculous patients is not increased in toxicity. [J. M. S.]

11.—One of the commonest lesions found in the liver in conditions of toxemia is the presence of more or less extensive areas of **necrosis of the liver cells**. A second well-marked characteristic is the fact that the columns of liver cells are markedly separated from each other. There are also changes to be noticed in the liver cells that are not actually necrotic. There is a marked vacuolation of most of the cells and an evident tendency to division among the nuclei. Reexner has shown, by means of injected specimens, that the more intense capillary lesions take place within the areas of necrosis, and considers that in these capillary lesions the main cause of the necrosis is to be found. In spots where the capillary wall is a little more damaged than elsewhere, the lymph which bathes the cells becomes more concentrated and thus the cells are immersed in a bath of poison, and their functional activity being destroyed, they die. Such seems to Longridge the most feasible explanation of the focal character of the lesion. No casual relationship has been made out between the necrotic spots and typhoid bacilli. [J. M. S.]

12.—When the subject is reviewed with an open mind the view that **rheumatic fever** is due to a diplococcus infection is the one which has met with the greatest support. Roynton and Paine believe that very shortly, if not already, an advance can be made from the position that rheumatic fever is due to **bacterial infection**, to the position that it is due to **diplococcus**. The exact place that the diplococcus will take in the coccus group may take some time to ascertain with certainty, but it seems more likely to lead to advance in our knowledge if we look upon it as specific, rather than if we regard it as an attenuated form of some other coccus infection. In the history of rheumatic fever heredity takes such a prominent place, and the rheumatic constitution is so clearly recognized, that it is hard to escape from the conviction that the disease is not to be explained by the presence and nature of the micro-organism only, but that in addition there must be some condition of the human tissues which also is of importance. [J. M. S.]

13.—The average hemoglobin value of the **red blood corpuscles** was 117 in men and 105 in women. By regarding 117 as the normal, and calling this 100, the hemoglobin value of the corpuscle in woman's blood is 89.7. Goldsmith found an average of 4,860,000 corpuscles per cc. from a series of healthy males and 4,350,000 in the series of females. The average value of 5 mm. of precipitated corpuscles alone was 80 in men. The average count of the precipitated corpuscles

was 12,000,000. The average hemoglobin value of the corpuscle equals 100. In females the average value of 5 cmm. precipitated corpuscles alone was 81. The average count of the precipitated corpuscles was 13,500,000. This gives an average hemoglobin value of 96.6, or corpuscle for corpuscle male and female 100 to 86.5. The average relation of corpuscle to plasma was 37% in men; the average relation of corpuscle to plasma was 39¼% in women, that is to say, under similar conditions a similar number of women's corpuscles will occupy a smaller space than a similar number of men's, and that the average corpuscle in women is smaller than in men; roughly, their bulk is as 11 to 8. [J. M. S.]

14.—Nuthall and Hunter have studied the bacteriology of cerebrospinal meningitis. They conclude: (1) That in 10 cases of meningitis a diplococcus was isolated from the cerebrospinal fluid obtained by lumbar puncture during life. (2) That this diplococcus agreed in its morphological and biological characteristics with the diplococcus intracellularis meningitidis of Weichselbaum. (3) That the diplococcus occurred in 2 slightly different forms, types A and B. (4) That in some cases the diplococcus was present in pure culture, in others associated with other micro-organisms—for example, bacillus influenzae and bacillus tuberculosis. (5) That the clinical picture and pathological changes found in these cases were those met with in posterior basal meningitis. (6) That in all probability posterior basal meningitis is a sporadic form of cerebrospinal meningitis, and is caused by the same micro-organism, the diplococcus intracellularis meningitidis of Weichselbaum. (7) That in the majority of the cases it was impossible, from the clinical aspect alone, to make a correct diagnosis of the variety of meningitis present. [J. M. S.]

15.—Flexner has had opportunities of making a comparative study of several cultures of bacilli obtained from cases of dysentery. These organisms are designated Manila cultures, Kruse's bacillus, Shiga's bacillus, cultures of a Porto Rican and Strong's bacillus. The differences of growth are slight, and probably depend upon purely accidental circumstances. A comparison of the morphology of the bacilli shows only very minor differences. Kruse has not observed motility at any time in his culture; Shiga states his to have been feebly motile, while those of the author were at first slightly motile, but soon became quiescent in artificial cultivation and did not regain motility. Strong's observations coincide with the author's. Vedder and Duval, under the direction of the author, have succeeded in demonstrating flagella by Van Eppengheim's method in several cultures. The serum reactions have been of the greatest importance, and are, moreover, unmistakable in significance; they indicate close relationship between the bacilli from Japan, Manila, Porto Rico, and Germany, and they further render probable the identity of the epidemic dysentery of this country with that of the East and Germany. [J. M. S.]

17.—Hunter concludes: (1) That the bacillus coli communis and a few other micro-organisms possess the power of reducing neutral red to a canary yellow fluorescent color. (2) That the bacillus typhosus never possesses this power of reduction. (3) That it is possible within 12 to 21 hours to diagnose with accuracy by means of neutral red, the typhoid group of micro-organisms from the true colon group. [J. M. S.]

18.—The question of the number of cases of typhoid fever in which the intestinal lesions are absent has been approached from the bacteriological side in 20 instances. In all but 5 or 6 of these cases the investigators have not sufficiently differentiated between the typhoid and the colon bacillus. Lazarus-Barlow report the case of a child, aged 13 months, who was one of a family of 7 individuals of whom 6 suffered from typhoid fever. He was admitted on the sixteenth day of the disease with diarrhea, bronchitis, abdominal distension and rose spots. The spleen could not be felt. Widal's reaction was given in a 1 in 100 dilution in less than 15 minutes, and in a 1 in 50 dilution immediately on the seventeenth day of the disease. At the post-mortem examination there was not the slightest trace of any ulceration, either recent or old, in the intestines. From the spleen of the child, more than one kind of bacillus was obtained. Ultimately the number of

varieties was reduced until 6 were obtained which were certainly either colon bacilli or typhoid bacilli. One of these 6 was ultimately adopted as the true typhoid bacillus because of the positive manner in which it reacted to the tests available for distinguishing between bacillus coli communis and bacillus typhosus. The weakest point in the chain of evidence is in reference to the agglutination test, which required a dilution of 1 in 200, with a serum which agglutinated an undoubted typhoid bacillus in a dilution of 1 in 2000. [J. M. S.]

19.—There are 3 micro-organisms of the genus coccus which play an important role in the pathology of the skin. The first is the streptococcus of Fehleisen, the special cutaneous lesion produced by which is the impetigo contagiosa of Tilbury Fox. The second is the staphylococcus aureus of Rosenbach, the special cutaneous lesion produced by which is the follicular orificial pustule of the impetigo of Bockhart. The third is a grey colored staphylococcus (morococcus of Unna), the special lesion produced by which is pityriasis simplex wherever situated. In the course of streptococcus septicaemia the bullae of infectious pemphigus may arise, and lumps may develop in the skin similar to those of erythema nodosum, which are the result of streptococcus thrombi in the blood vessels of the derm. Direct inoculation of streptococci into the derm may produce erysipelas. The streptococcus may cause dermic ulcerations deeper than mere epidermic erosions. The proper treatment of streptococcal lesions of the epidermis is the local application of solutions of the sulphates, for example, zinc sulphate, 1 gm., distilled water, 100-200 grams. The local remedy for pustular lesions produced by the staphylococcus aureus is sulphur; for example, alcohol 30 gm., precipitated sulphur, 19 gm., rose water, 100 gm. The best topical remedy against the grey-colored staphylococcus and the pityriasis that it causes is coal tar combined with the mercurial peroxide; oil of cade 19 gms., yellow mercury binoxide 1 gm., yellow vaseline 30 gm. Galloway believes that there are 2 elements of difficulty in investigating the bacteriological character of cutaneous lesions. The first is that lesions produced on the skin are rarely the result of one single factor, nor of one single organism; mixed infections are probably the rule. The second difficulty in the way of obtaining trustworthy results is that of bacteriological technique, and especially of obtaining cultures which contain the pathogenic organism and not the normal or accidental flora of the skin. Savill has procured some streptococcus vaccine and with it treated a severe case of furunculosis. The patient had suffered from the boil for 3 months, but after 3 hypodermic injections at intervals of a few days a complete cure was obtained. This does not altogether correspond with the bacteriological results which attributes boils to a staphylococcus infection. [J. M. S.]

20.—Dubreuilh reports a case of Paget's disease of the vulva. [J. M. S.]

21.—MacLeod believes that yaws and syphilis are different histological entities. (1) Because the plasma cells are not so definitely clustered around the vessels in yaws as they are in syphilis, nor do they ever form foci suggesting a tuberculous nodule, as they occasionally do in the latter disease. They are seldom arranged in rows, which frequently occurs in syphilis. Large multinuclear cells (chorioplakes) and true giant cells, which may be present in syphilis, are absent in yaws. No hyaline degeneration, such as may be found in syphilis, is detected in the plasma cells. (2) Because the rarefaction of the collagen is more marked in yaws than in syphilis; organization is not detected, and colloidal degeneration such as occurs in a syphilitic gumma, is absent. (3) Because there is no tendency to thickening of the vessel wall or to endothelial proliferation, such as so frequently prevails in syphilis. (4) Because the proliferative changes in the epidermis in yaws are only equalled in syphilis in the condylomata, while the marked tendency of the stratum corneum (hyperkeratosis), which is an invariable characteristic in yaws, is unusual in syphilis. [J. M. S.]

22.—In discussing the nature of the disease known as erythema induratum scrofulosorum Whitfield expressed the opinion that there were at present 2 diseases described under the same name, one of which was a tuberculosis of

very slight severity, while the other had no relation to tuberculosis at all. [J. M. S.]

23. Heatty reports a case of *pityriasis rubra pilaris*. [J. M. S.]

24. Fox and McLeod conclude (1) That *parakeratosis variegata* is a clinical entity. (2) That it affects chiefly the male sex, usually occurs in adult life, and the patients are generally in robust health when attacked by it. Little is known of its etiology, though from its general configuration and histology it suggests a vaso-motor disturbance associated with edema and infiltration of cells in the corium and secondary changes in the epidermis. (3) That the initial lesion is a macule, or a maculopapule of small size, flat on the surface, and covered with a fine adherent scale, which may be scratched off without causing bleeding. (4) That by the coalescence of the lesions a peculiar retiform arrangement results, in which areas of normal skin are enclosed, and which, combined with differences in the color of the lesions in the more dependent parts of the body, produces the marbled or variegated appearance, which is one of the most pronounced characteristics of the dermatitis. (5) That it affects the skin almost universally, except as a rule that of the face, scalp, palms, and soles. (6) That it is subject to remissions and exacerbations, but is peculiarly chronic in its course. (7) That marked subjective symptoms are singularly absent. (8) That it is strangely resistant to local treatment. (9) That it consists histologically of a superficial inflammation affecting the subepidermal layer with dilatation of vessels, edema, and infiltration of cells; and an e-le-matous condition of the epidermis with more or less defect in the process of cornification. (10) That it may be regarded as belonging to a group of superficial inflammations of the corium, with secondary changes in the epidermis. [J. M. S.]

25.—In the management of eczema neither plain water nor soap must be used. It is safe to cleanse the part with rain water, with the juice of bran, starch or boiled oatmeal once every 24 hours. Immediate drying with a soft towel is recommended. The addition of a drachm of soda bicarbonate or bichlorate to the pint of fluid is useful if there is much exudation in the form of crust. Some antiseptic fluid may also be added with advantage. An important point is to ensure rest to the part. The sound parts of the skin should be washed daily with soap and water. The eczematous surface should always be protected by some application. Waldo does not think the kind of application is so important as the protection of the part. To a wet eczema it is often better to apply lotions, as in this way the local remedy is enabled to come into close contact with the living tissues. Internal treatment must not be ignored; the author recommends blue pill, aperients, quinine and benzo-naphthol. [J. M. S.]

LANCET.

September 21, 1901.

1. Postgraduate Lecture on Chronic Invalidism in Women and Its Cure. W. S. PLAYFAIR.
2. The Occurrence of Green or Blue Urine and Its Most Frequent Cause. F. PARKES WEBER.
3. Two Cases of Blackwater Fever.
FREDERICK SMITH and M. LOGAN TAYLOR.
4. The Pharmacology of Pyraconitine and Methylbenzocaine Considered in Relation to their Chemical Constitution. J. THEODORE CASH and WYNDHAM R. DUNSTAN.
5. Congenital Spontaneous Gangrene.
C. E. RICHMOND.
6. A Case of Deformity Arising from Arrested Growth in One Limb Remedied by Exsection of Bone from the Other. G. P. NEWBOLT.
7. Six Cases of Excision of the Larynx.
F. G. HARVEY.
8. The Localization of Foreign Bodies by the X-Rays.
WILLIAM R. FOX.
9. Some Remarks on and Suggested Amendments to the Habitual Inebriates Acts. L. A. PARRY.
10. Appendicitis: Some General Remarks on the Pathology and Treatment.
FREDERICK GEORGE LLOYD.
11. Three Points in Practical Midwifery.
G. W. ORD.

1. Playfair discusses chronic invalidism in women. Its causes, and cure. He remarks that it was until com-

paratively lately that the group of morbid symptoms characteristic of this condition held a recognized place in textbooks, although it is common enough. The symptoms are altogether functional and therefore irregular, and have given rise to a great many terms, such as nervousness, hysteria, neurasthenia, and spinal irritation. Playfair believes that the best prophylaxis is to be found in the adage, "*Mens sana in corpore sano*." The thoroughly strong-bodied healthy girl very rarely lapse into the invalid woman. Overwork at school is a prominent factor in the production of the condition, and long before the symptoms of break-down become prominent nature throws out danger-signals such as amenorrhoea, menorrhagia, headaches, emaciation, and the like. The school-girl should have plenty of out-door exercise and should not worry. As to treatment, the rest-cure of Weir Mitchell probably gives the best result. The selection of a proper nurse is almost as important as that of a medical man. Suitable food, massage, frequent light feeding, the relief of constipation and physical and mental rest, together with change of air and scene constitute the most useful methods of treatment. [W. A. N. D.]

2.—Weber writes on the occurrence of green or blue urine and its most frequent cause. He states that it occasionally happens that individuals pass blue urine, who are unaware of having taken methylene blue or any other similar anilin dye. The author mentions that individuals are apparently well who pass green or blue urine without any obvious cause, but have, as a rule, indulged in sweets colored with methylene blue. A fact that bears emphasis is that the secretion of such green or blue urine generally occurs in children and young women who partake freely of sweets. He reports a number of instances which illustrate that sweets are often responsible for the secretion of blue or green urine. A number of characteristics by which blue or green urine may be recognized, when due to methylene blue, are mentioned. They are as follows: 1. When one decigram of methylene blue is ingested, the urine which is passed an hour or so afterwards, has a greenish tint. Later it becomes deeper green and finally blue. The color produced by the blue lasts three or four days. Occasionally on the 5th day, the greenish tint may still be noticed in the morning urine, while on the preceding day, the mid-day urine was not discolored. When sweets which contain methylene blue are taken at intervals during several weeks, it is not surprising to hear that only the morning urine was colored green. 2. The amount of methylene blue determines the color of the urine, varying from a faint greenish yellow to a deep blue. When such urine is placed upon white paper or blotting paper it is discolored blue. 3. Boiling sometimes intensifies the color of the urine for the reason that methylene blue is excreted as a colorless chromogen. The color will return when the urine is heated with acetic acid. 4. Filtering lessens the color of the urine. 5. A solution of caustic potash, without heating, decolorizes the urine. Boiling with strong nitric acid or hydrochloric acid also decolorizes, while cold nitric acid produces no effect upon the color. Chloroform has the property of taking up the dye when mixed with urine, and this substance rapidly becomes blue. Later, however, does not become colored. When chloroform is mixed with an aqueous solution of methylene blue, it gradually becomes mauve, and afterward purple or red. When blue or green urine is examined with a good spectroscope, sometimes absorption bands can be made out, identical with those yielded by the aqueous solution of methylene blue. Living bacteria have the property of reducing and decolorizing methylene blue in the urine. When the urine is undergoing decomposition the lower portion of the liquid owing to the action of the micro-organisms loses its color and only the upper portion retains it, because the latter is directly in contact with the oxygen of the air. After the liquid is shaken, thus mixing it with oxygen, the original color is regained. When this experiment is performed in a tightly corked bottle which does not contain oxygen, the blue color will not be regained. [F. J. K.]

3.—Smith and Taylor report two cases of black water fever. Case 1.—This occurred in a non-commissioned officer, who had been in Sierra Leone for over a year. During this period he had enjoyed good health, except that he had occasional attacks of fever. His illness began suddenly in the afternoon about three o'clock, when he experi-

enced shivering, vomited, and complained of pains in his back. Some hours later, he was passing bloody urine. Previous to his illness, he had been taking five grains of quinine three or four times a week. On the following day agonizing spells of vomiting were frequent and the urine still bloody. Within a few hours after the onset of the disease, jaundice showed itself, which became intensified as the disease progressed. Examination of the blood failed to detect any malarial parasites. The medicinal treatment consisted of boric acid and arsenic, and such symptomatic measures as were necessary. Intravenous injections of normal salt solution were given during the last four days of the illness with slight temporary good results. The fever persisted in spite of all treatment, and just before death the jaundice had almost disappeared. Hemorrhages occurred from the buccal, mucous membrane. The stools were scanty; they were bile stained. The fever never rose above 101° F., and with the occurrence of hemoglobinous urine the temperature dropped. On the tenth day death occurred. A number of blood examinations were made which revealed the following: On the second day of his illness, the red corpuscles numbered 1,900,000 and white corpuscles 10,000 per cubic millimetre; third day, red cells 1,700,000, white 10,000; fourth day, red cells, 1,000,000; fifth day, red cells 900,000; sixth day, 1,100,000 white cells 18,000; seventh day, red cells, 1,000,000; eighth day red cells 1,200,000 and white cells 10,000. At autopsy, marked fatty infiltration of the walls of the right ventricle was found; the heart muscle was soft and friable; fatty degeneration in the papillary muscles. The spleen was considerably enlarged, weighing nine ounces, its capsule was adherent to the surrounding structures. The pulp was much congested. A microscopical examination of films from the pulp showed that the splenic substance consisted largely of blood pigment and degenerated blood cells. The liver was enlarged, congested, and the seat of fatty degeneration. The kidneys were also much congested. The mucous membrane of the gastro-intestinal tract was congested; there were also present a number of submucous hemorrhages. Case 2.—This occurred in a West Indian negro soldier who presented symptoms similar to those described in the previous case, except that jaundice was not appreciable and hemoglobinuria was absent. Albumin was found in the urine in considerable amounts. An examination of the blood made on the third day of his illness revealed ring-shaped parasites in small numbers, but not at any other time in the course of the disease were malarial parasites found in the circulating blood. The temperature varied between 103.2° and 98° F. On the three succeeding days after the seventh day, the temperature was normal. It then rose slightly at intervals; just before death it reached 103° F., which was on the 11th day. Towards the close of the illness the patient had diarrhea. At autopsy, pathological changes were found similar to those described in the first case, except that the spleen was not enlarged, and that the femoral vein was the seat of thrombosis. Several abscesses were also found just beneath the splenic capsule; in the pus bacilli coli were present. [F. J. K.]

4.—This article is an abstract of the paper by Cash and Dunstan read before the Royal Society, June 20, 1899, on "the pharmacology of pyraconitine and methylbenzocaine considered in relation to their chemical constitution."

5.—Richmond reports a case of spontaneous gangrene which occurred in a female infant. The mother of this child was confined at full term on May 3, 1898. The labor pursued the natural course with only slight delay after delivery of the head. At birth, two areas of acute dusky inflammatory redness were observed on the child, one just below the occiput and the other over and around the seventh cervical vertebra. The upper inflammatory area sloughed. On the third day after birth the lower patch became gangrenous in its center. A black slough afterward separated. Later, internal strabismus developed, suggesting central cerebral disturbance, which was perhaps responsible for the superficial gangrene. There was no evidence or history of syphilis. The author believes that the lesions were trophic from central nerve mischief, and not caused by septic absorption. [F. J. K.]

6.—G. P. Newbolt reports a case of a girl five years of age who suffered from arrested growth in one limb. The author is uncertain whether this arrest of growth was due to a previous osteotomy for knock-knee, or wheth-

er it originated from rickets. He removed subperiosteally 1½ inches of the right femur with the most satisfactory results. Eight months after the operation the deformed limb had grown 1½ inches. [J. H. G.]

7.—F. G. Harvey describes the Roetter operation of laryngectomy. He thinks this operation has many advantages over the older method of doing a tracheotomy prior to the removal of the larynx. Three of the author's cases were operated upon in this way with very satisfactory results. In his other three cases a preliminary tracheotomy was done. [J. H. G.]

8.—Wm. R. Fox describes and illustrates a wire framework which he has constructed for the purpose of definitely localizing foreign bodies within the cranium by the X-rays. He suggests that this method, with some change in the framework, may be applied to other parts of the body.

[J. H. G.]

11.—Ord gives three points in practical midwifery, as follows: 1. The catheter in the course of a breech delivery is capable of saving life. 2. Hour-glass contraction of the uterus is avoidable. 3. Scoliosis is possibly caused by traction on the infant's body during birth, the rotation and traction together stretching the vertebral ligaments and thereby weakening the spinal column. In addition to this there is danger of injuring the suprarenal capsules during this process of traction. [W. A. N. D.]

MEDICAL RECORD.

October 5, 1901.

1. The Use of Linnations of the Elastic Ligature in Intestinal Surgery. THEODORE A. MCGRAW.
2. The Proper Method of Teaching the Anatomy of the Nervous System. L. HARRISON METTLER.
3. Pre-Medical Education. STANLEY COULTER.
4. The Chest Pantograph and the Manometer—Their Clinical Use and Value. C. B. VAN ZANT.
5. Pistol-Shot Wounds. THOMAS HAYES CURTIN.

1.—Theodore A. McGraw urges upon surgeons the use of his elastic ligature in intestinal anastomosis wherever possible. He points out the disadvantages and dangers of the Murphy button and the end-to-end anastomosis without the aid of mechanical means. He claims that in most instances the anastomosis can be made without these disadvantages and dangers if the elastic ligature be employed. It is the operation of gastroenterostomy that it is to be particularly preferred to other methods. It is said that in this operation and in the operation upon the intestines it is rare for peristalsis to be established within the first 48 hours, and that therefore the immediate establishment of an opening can have little advantage over that produced by the elastic ligature, which requires from two to three days. In many operations upon dogs the author has never found the ligature to fail to produce the separation of tissue about which it is placed. The claims for this method are that there is no incision of the bowel, no loss of blood, no escape of the feces, and no exposure of the peritoneum from bowel contents. The ligature must be firm, hard, perfectly round, and at least 2 mm. in diameter. It is said to be a great time saver where an enteroenterostomy is added to a gastroenterostomy. McGraw also claims that the elastic ligature will be found very useful in a division of cicatricial contraction of the intestine. After the ligature is tied, the peritoneal surfaces about it are brought together by Lembert sutures and by wrapping a portion of omentum about the anastomosis. [J. H. G.]

2.—L. H. Mettler presents a paper on the proper method of teaching the anatomy of the nervous system. He believes that this should be taught along its developmental lines. Studying the evolution of function and development of its constituent parts, which he holds enables the student to grasp the study more intelligently, and to retain it more tenaciously. [T. L. C.]

3.—Stanley Coulter discusses pre-medical education. During the course of this paper he describes the pre-medical course at Purdue University, which is arranged to meet a three-fold demand. 1. To furnish a broad and liberal education. 2. To give special and extended training in those subjects which underlie the strictly professional studies of the medical school. 3. By this correlation of work to shorten the time required to obtain the university and professional degrees. [T. L. C.]

4.—C. B. Van Zant describes the chest pantograph and the manometer, and gives their clinical uses and value.

The first instrument was devised by W. S. Hall, of Chicago, and while it was intended to fulfill physiological purposes, it is capable of considerable practical clinical utility, in estimating and recording certain diseased conditions. It enables clinicians to make and reduce tracings, which can be preserved and be a comparison of any progress of these features of our cases of pulmonary disease. This author thinks it is a definite means of keeping track of many conditions beside those of the thorax, and thus we may record the change in size and shape of the face in acromegaly, of the head in hydrocephalus, of the neck in goiter, etc. Van Zant also mentions the ordinary manometer for which he describes a new field of usefulness in the surgery of the chest. He mentions the elasticity of the lung parenchyma, and states that there is a constant tendency for the lung to pull away from the chest-wall, that is, a tendency to a separation of the pulmonary and costal layers of the pleura. Normally this cannot be accomplished, and leads to a constant condition of negative pressure, known as the intra-pleural or intra-thoracic pressure. If after connecting it with a manometer, you insert a small hollow needle carefully through the chest-wall, the moment it enters the pleural cavity the suction there leads to a movement of the mercury in the manometer towards the pleura. If, through disease, the layers of the pleura are adherent, the pleural cavity is thereby obliterated, and its negative pressure is annulled. Under these circumstances there will be no movement of the fluid toward the chest. Thus the manometer affords an easy and safe method of disclosing the presence or absence of pleural adhesions in any case. [T. L. C.]

5.—Thomas H. Curtin discusses the subject of **pistol-shot wounds from a purely medical standpoint**. In the examination of these cases, we should first look for the wound of entrance, and then for the wound of exit, if it exists, and determine the distance the pistol was held from the person when fired. Means are described for judging this, as well as for studying the penetrating power, and the important question of the caliber of the bullet. Methods of examination of the pistol from which it is to be determined whether the shot was fired, and the study of wounds made by blank cartridges, are included. [T. L. C.]

MEDICAL NEWS.

October 5, 1901. (Vol. LXXIX, No. 14).

1. The University and Bellevue Medical College.
2. Acute Rheumatism. WILLIAM WATT KERR.
3. Anesthesia and Analgesia. A Study of Drug Action and Modern Methods.

WILLIAM SEAGROVE MAGILL.

4. Lager Beer in Acute Vomiting. LOUIS KOLIPINSKI.
5. Conservative Operations Upon the Uterine Adnexa. HENRY T. BYFORD.
6. Acute Edema of the Uvula, Palate, Pharynx and Epiglottis, Following the Excessive Application of Adrenal Solution Preserved with Chloretone. SOLOMON SOLIS COHEN.

2.—W. W. Kerr, describing his treatment of acute rheumatism, says that rest in bed is an essential factor and should be maintained for at least ten days after the temperature has become normal and all other symptoms of the case have disappeared. Freedom from pain in the joints must not be taken as the indication for allowing any indulgence to the patient, because cardiac changes may arise after the joints have recovered; furthermore, myocardial changes may exist with very few symptoms until the muscle yields under imposed strain, and therefore the patient should be kept at rest so that both myocardium and endocardium may have ample opportunity to recover from any injury to their structure. Sodium salicylate is the remedy most frequently used in the treatment of rheumatism. It should be given in doses of twenty grains every two hours until the fever is reduced and the acute articular pain subsides; after this the intervals between the doses may be increased to four or six hours, and continued in this way for at least four weeks. If the drug be discontinued before this time, the patient is almost certain to suffer from a return of symptoms, and hence it has been said that acute rheumatism, like other fevers, is a self-limiting disease and that salicylates do not shorten its duration, but merely prevent its injurious effects upon the tissues. If the salicylates distress the stomach, depress the heart,

cause delirium or other nervous disturbances, or give rise to various skin eruptions, then salicin or salol may be substituted, if there is no renal disturbance. He also advises an alkali in addition, such as citrate of potash, twenty grains at a dose. Cardiac complication can be cut short by small blisters. As to diet, milk should be the chief food until the symptoms abate; then broths and farinaceous substances may be gradually added. Bland's pills are advised while there is anemia. [T. M. T.]

3.—W. S. Magill concludes his article as follows: Absolute purity is the only condition by which ethyl bromide can be admitted as an agent of almost perfect safety for the induction of anesthesia. The dangers of its cumulative dose and consequent restriction to short narcosis have been previously explained. For prolongation of unconsciousness, the narcosis induced by this drug is easily and safely continued with chloroform in very small quantity. A teaspoonful of chloroform (in drop doses) is frequently all that is needed to continue the ethyl bromide induced anesthesia for the space of an hour. [T. M. T.]

4.—L. Kolipinski recommends the use of lager beer in acute vomiting, and says that the beneficial effects are most marked in women and in those who are not habitual consumers of alcohol as a stimulant or intoxicant. Of the two varieties of beer—the pale and the dark—the latter is preferable. As to the quantity to be given, the amount need be but small, a bottle or two suffices. Singularly good results can be obtained from small doses. This is illustrated in the attacks of nausea, bilious vomiting, vertigo and sleeplessness, often a striking syndrome of epidemic influenza in women; a wine-glassful of beer, repeated in half an hour, will immediately soothe the disturbed organ and give a night of refreshing sleep. [T. M. T.]

5.—Byford remarks that it is very seldom necessary to remove the uterine adnexa for inflammatory disease. He believes that after the age of 30 years these organs have already served their function in stimulating individual development. After that age they are only of use to propagate the species, and, in functioning, act more or less as a drain upon the general system and tend to hasten senility. Women prefer as a rule to suffer with unhealthy organs rather than have them removed. He endeavors, therefore, to practice conservative gynecology and to preserve sufficient ovarian tissue for normal function in women under forty years of age even at the risk of their being obliged to undergo a subsequent castration. There are cases in which the conditions require the complete abolishment of the monthly hyperemia of the sexual organs. There are other cases in which separation of adhesions and suturing of the parts on the higher level may be all that is indicated. Again there are others in which the diseased portion of the ovaries must be excised, the tubes made pervious, and the patient left unaltered as far as her sexual functions are concerned. The septic cases of disease of the uterine appendages should not be treated in a conservative manner. [W. A. N. D.]

THE NEW YORK MEDICAL JOURNAL.

October 5, 1901.

1. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
2. Laryngology and Its Place in Medical Education. HENRY L. SWAIN.
3. The Influence of Climate upon Nervous Diseases, considered from a Physiological Standpoint. F. SAVARY PEARCE.
4. Was the Epidemic that Raged in Athens, B. C. 430, Genuine Bubonic Plague? HENRY M. FISHER.
5. Acute Amygdalitis: Its Treatment by the Local Application of the Tincture of Iodine. SAMUEL FLOERSHEIM.
6. Review of a Few Cases of Wounds Caused by Bullets from Revolvers of Moderately Large Calibre. J. HOBART EGBERT.

3.—F. S. Pearce states that functional disorders are more particularly affected by climate. Organic diseases, it will no doubt be found, are especially influenced by meteorological conditions as yet not definitely known to the physician, but in each type, the gleanings of clinical facts at our command seem to place the said therapeutic climatic results as principally dependent on states of atmospheric pressure and the consequent nutritional improvement produced thereby. The great altitudes favor circulation of the blood in the periphery of the body, and

assist nutrition, both by aiding the absorption of nitrogen from the air at low barometric pressure, and also by producing a much more active circulation of the blood, and therefore of its proteids containing nitrogen received from food products of digestion, thus doubly fortifying nutrition in some cases; therefore, the trophic function may advance too rapidly by the patient's ascending great heights. So that a great altitude is not good for the neurasthenic, who must appropriate nutriment slowly on account of the weakened central nervous system. Insomnia is benefited by lesser altitudes, while chorea, hysteria, and most of the functional maladies, are likewise favored by a sojourn at the sea level, provided other meteorological conditions are good, such as equable temperature, heat, and the non-prevalence of atmospheric moisture. Melancholia and depressive diseases are helped by high winds and moderate heat, to aid in general, bodily metabolism. In organic disease depending upon central or peripheral lesion, perverted function, as pain and sluggish circulation, will be helped by altitude; a greater altitude being desirable for diseases of the central nervous system, a lesser altitude being the desideratum in the cases of peripheral diseases, as in neuritis and vasomotor palsies, exemplified in Raynaud's disease, exophthalmic goitre, and allied affections.

[T. M. T.]

4.—In H. M. Fisher's article, the author tries to show that the epidemic that raged in Athens, B. C. 430, was true Bubonic plague, and says: (1) As to its origin. Thucydides tells us that it was rumored that it came from Ethiopia, beyond Egypt, and it is, the author thinks, reasonable to suppose that Southern Arabia may have been meant. This part of the world has been known from time immemorial to have been one of the chief breeding-places of the plague; (2) As to mode of propagation. Common rumor had it that the Peloponnesians had poisoned the cisterns of rain water used for drinking purposes in the Piræus; (3) In Thucydides' brief description of the disease, as he had observed it, he calls attention to the lividity of the hue of the skin covered with small pustules and ulcers; (4) The few patients who survived often, developed, during convalescence, gangrene of the fingers and toes and of the external genitals, and often became blind; (5) The disease was transmitted to the lower animals. Thucydides remarks that birds and beasts of prey that fed upon the many unburied bodies of the victims of the epidemic invariably died very soon. [T. M. T.]

5.—S. Floersheim concludes his article as follows: (1) The tincture of iodine is the most powerful antiphlogistic in inflammations of the throat; (2) Its action is very rapid, relief being often experienced within five minutes; (3) It has relieved the intense inflammation completely when all other remedies had absolutely failed to benefit; (4) Its use in sixty-eight cases of acute amygdalitis has been followed by marked benefit in every case; (5) The method of application is simple. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

October 3, 1901.

1. A Case of Myeloma of the Spine, etc. JOHN J. THOMAS.
2. Hydrotherapy in Chronic Disease. SIMON BARUCH.
3. Association of Anemia with Chronic Enlargement of the Spleen. ARTHUR H. WENTWORTH.
4. Infantile Scurvy. EDWARD L. PEIRSON.
5. Rachitis. ARTHUR R. CRANDELL.

1.—Thomas reports the case of a man, 39 years old, who was attacked by a severe pain between the shoulders which confined him to the bed for 4 or 5 days. Since that time he had more or less pain in the back, but had been about. He noticed a slight uncertainty in the use of his legs. Once, on stooping to pick up something, he fell upon the floor. This uncertainty was no more noticeable in the dark than in the light. The feet had felt numb, and there was a sensation as of something tight about the abdomen. There was no ataxia. All the reflexes were normal except the desire to micturate had come on, and there was occasional difficulty in starting the stream. He had also noticed a slight lessening of the sexual desire, but no loss of power. There had been no dizziness and no headache. There was no ataxia. All the reflexes were normal except the skin reflexes. A diagnosis was made of pressure upon the spinal cord, probably from tumor in the upper dorsal

region, and a plaster-of-Paris jacket, massage, and a vigorous treatment by antisyphilitic medicines were advised. Later, the gait became slightly ataxic, Romberg's symptom was present, and there was slight incoordination in the movements of the legs, though this was not present in the arms. Still later, marked general paresis of the legs developed. The knee jerks were increased and equal; there was a slight patellar clonus and ankle clonus on both sides. The sense of pain and temperature were absent, and that of touch diminished to the level of the sixth rib. The urine which had previously been normal was found to contain albumin and albumose. An operation was advised, and as much growth as could be curetted out was removed. After the operation the patient developed a complete paraplegia with retention of urine, but this gradually improved, and the wound healed well. Under treatment by bone marrow and injections of Coley's toxins cure was effected. The tumor was a myeloma. [J. M. S.]

2.—Just as in acute disease the application of those agencies which maintain a healthy condition of the organism may be utilized to advantage when the latter is attacked by disease, so may we in chronic maladies obtain better results from the systematic application of the so-called hygienic agencies. Of these agencies water is probably the most effective. Phthisis affords the most striking illustration of the advantages of the hygienic treatment. Baruch attributes the favorable results to the irritant effect of cold water upon the sensory terminals in the skin which arouses the central nervous system to reflex effect upon the respiration, deepening it; upon the heart, improving the pulse, enhancing glandular action and excretion; upon the stomach, improving appetite, digestion and hematosis. Neurasthenia has proved very amenable to hydropathic treatment. Home treatment should be begun by allowing the patient to stand in water at 100°, covering the ankles, and washing him rapidly with a large piece of gauze dripping with water at 80°. This temperature is to be daily reduced 1° until 60° are reached. Diabetes, nervous dyspepsia, hysteria, sciatica, neuritis, lumbago, asthma and angina pectoris may be benefited by hydrotherapy.

[J. M. S.]

3.—Will be abstracted when finished.

4.—Pain is the first symptom that we notice when called to see a child with scurvy. The pain is first felt in the legs, then in the back and the arms. Next, swellings appear, and later the gums become spongy and ulcerated. There is no fever as a rule, and the tender swellings are not hot. The most common error is to call the cases rheumatism, yet rheumatism, Peirson believes, is extremely rare under 2 years, especially in the first 6 to 12 months of life, when these cases of scurvy appear. Rachitis, Pott's disease, acute anterior poliomyelitis, purpura and syphilis have been mistaken for infantile scurvy. Treatment consists of modified, uncooked milk with orange or lemon juice, fresh beef juice and iron. [J. M. S.]

5.—Rachitis results from chronic malnutrition, often reinforced by poor hygiene and unsanitary environment. Rachitic children are usually fat and may appear, at first glance, to be well developed. The muscles, however, are weak and flabby, and their action is enfeebled. Another very noticeable characteristic, the enlarged abdomen, or "pot belly," is due to weakness of the abdominal muscles, the condition being accentuated by the flaring of the lower costal margin and the atony of the muscular coats of the intestine, which results in distension of the bowels. Weakness of the back muscles produces a rounded kyphosis. Weakness of the muscles of the extremities may be great enough to stimulate paralysis. The ligaments show evidence of impaired nutrition in an undue laxity, especially in the lower extremities, resulting in hyperextension of the knee-joints, weak ankles and flat foot. Prophylaxis is the most efficient treatment; this includes painstaking and accurate feeding, careful hygiene and supervision of the methods of living. If prophylaxis has been neglected, active treatment should be instituted. A proper percentage of fats and proteids must be supplied, and improper elements in the diet must be eliminated. There is no specific for the cure of the disease. It is sometimes expedient to administer fat as cod-liver oil in assimilable doses. The anemia is said to be treated by the use of iron. Deformities may be prevented if creeping, walking and sitting up are restricted until the bones begin to harden. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

October 5, 1901.

1. The Etiology and Classification of Cirrhosis of the Liver. VICTOR C. VAUGHAN.
2. On the Treatment of Cirrhosis of the Liver. J. H. MUSSER.
3. A Case of Acromegaly Presenting Certain Features of Unusual Interest. CHARLES LYMAN GREENE.
4. The Increasing Sterility of American Women. GEORGE J. ENGELMANN.
5. The Mortality of Appendicitis. JOHN B. DEEVER AND GEORGE G. ROSS.
6. Symptomatology of Cerebral Hemorrhage. F. SAVARY PEARCE.
7. Dangerous Hemorrhage after Removal of Enlarged Tonsils and Adenoids, with the Report of a Case. A. C. GETCHELL.
8. Notes on One Hundred and Fifty Cases of Smallpox in Private Practice. ALBERT SOILAND.
9. A Satisfactory Operation for Certain Cases of Retroversion of the Uterus. J. CLARENCE WEBSTER.

1.—Vaughan classifies cirrhosis of the liver into the atrophic, hypertrophic, and mixed varieties. He gives the etiology, symptomatology, and pathology of these forms. In summarizing a comparison of the two diseases, he mentions the following which we quote in substance: "Atrophic cirrhosis is sometimes designated as the cirrhosis of Laennec and the hypertrophic disease as the cirrhosis of Hanot. The former is known as atrophic cirrhosis because from its earliest possible recognition the liver is less than normal in size; while hypertrophic is known as such because at every stage of the disease the liver is larger than normal. The atrophic is known as venous cirrhosis because of the early and constant involvement of the intra-hepatic branches of the portal vein; the hypertrophic is known as biliary cirrhosis because early appearance and constancy of icterus. The former might be known as toxic, and the latter as infectious cirrhosis. In the atrophic disease, ascites is an early manifestation and is often marked; in the hypertrophic, ascites is frequently absent and is never great. In the atrophic, icterus appears late, if at all; in the hypertrophic it appears early and is constant. Finally, in atrophic cirrhosis the primary destructive changes are in the hepatic cells; in hypertrophic cirrhosis the epithelium of the gall ducts is the site of the primary involvement." [F. J. K.]

2.—Musser outlines the treatment of cirrhosis of the liver when dealing with portal obstruction, ascites and biliary obstruction. In dealing with the first condition (portal obstruction) he does not deem it necessary to outline the treatment for its relief to practical and scientific men. He believes calomel is of great value in the treatment of ascites. Another drug which has proved serviceable in reducing ascites is apocynum cannabinum, in doses of fifteen, twenty or thirty drops, four times daily. When medication is without avail, tapping should be resorted to early. Musser has seen ascites cured after the hundred and fiftieth tapping. He calls attention to the necessity of surgical relief in cases of obstruction of the biliary passages with cholangitis and cholecystitis. [F. J. K.]

3.—Greene reports a case of acromegaly with enormous enlargement of the hands, wrists, feet, and ankles, which occurred in a man 25 years of age. Thyroid treatment was employed with the result that marked amelioration of the symptoms followed. [F. J. K.]

4.—In his paper on the increasing sterility of American women, Engelmann bases his investigation upon 1700 cases in private and dispensary practice in St. Louis; 1146 American born, 357 Irish and Germans, 197 negroes. In addition there are 2038 women taken from the gynecological records of Massachusetts. The results obtained indicate that at the present time 20% and over of married women are childless, whilst in the preceding centuries, in the earlier days of the country, only 2% were sterile; and when we compare these figures with the generally accepted rate of sterility, 11%, found by Simpson, and so generally accepted as to be called "Simpson's law," the difference is so great that it would appear that proof is needed before these facts can be accepted. An examination of the gynecological writings, however, of this country and elsewhere show that the figures are correct. By sterility Engelmann understands the condition of the woman who is married three years without giving birth to a

full-term child; by absolute sterility he means a woman who has never conceived; by relative sterility he means that she has conceived and miscarried. Greater luxury and wealth invariably go hand in hand with higher sterility. The number of the absolutely sterile is greater than that of the relatively sterile. That is, the number of those who have never conceived, natural or artificial causes preventing, is greater than that of those who have borne no full-term child, but admit of having miscarried one or more times. In this country this group of relatively sterile is over 8% of all married women. In his dispensary practice the absolutely sterile were 11.6% and the relatively sterile were 3.8%. The absolutely sterile he finds to be about 12% among Americans. The sterility is highest among college graduates, 33%. [W. A. N. D.]

5.—Deever and Ross analyze 268 operations for appendicitis performed at the German Hospital during the year 1900, and devote considerable time to the discussion of the mortality of appendicitis. 144 of these cases were operated upon during an acute attack and 26, or 17.8 per cent., died either from the disease or some inter-current trouble. One patient died of diabetes, another had advanced phthisis, and a third died of a postoperative pneumonia. If these three are eliminated the mortality is reduced to 15.9 per cent. for acute appendicitis. Seven of the 26 fatal cases had a general purulent peritonitis at the time of operation and in 7 others this condition followed operation. Septicemia was the cause of death in 8 cases. Secondary collections of pus were met with 11 times; 7 times in the pelvis, 3 times in the post-cecal region, once to the left of the appendix region, and once in the abdominal wall. Gangrene of the cecum and colon was encountered 7 times; 5 times it was met with at the time of operation and twice it developed subsequently. The most common cause of death in cases not submitted to operation is septic peritonitis. Obstruction of the bowel is also a frequent cause of death in these cases. Occasionally septic material is deposited in distant organs, such as the liver, brain, heart, etc. Occasionally an abscess will rupture into the bladder, producing a fatal cystitis or pyelitis. In cases of chronic appendicitis where no adhesions are present, or in acute appendicitis where the disease has not extended beyond the peritoneal coat, the mortality should not be below that of any aseptic abdominal operation. The presence of adhesions adds considerably to the mortality rate. Of 124 cases, which included all the chronic cases and those acute cases in which the inflammation had not extended beyond the peritoneal coat, there was but one death. Particular attention is called to the rapidity with which the disease progresses in some cases. The authors do not think it is possible for a patient to recover from a general purulent peritonitis. Cases of this nature reported in literature the authors think are cases of extensive but not general peritonitis. Stress is laid upon the necessity of evacuating and draining all pus pockets. Excepting in a few instances it is thought that the appendix should be removed in all pus cases. Necrosis of the bowel probably due to septic emboli in the veins of the mesentery, metastatic abscesses, septic endocarditis, and obstruction of the bowel, account for the death in many of the acute cases. Of the 118 acute cases which recovered after operation, in 61 pus was present. In 21 of these 61 the appendix was perforated and gangrenous. Fecal fistulae occurred six times; four closed spontaneously and two required operation. During the year 1900 there were 11 cases of appendicitis at the German Hospital which were not operated upon. Three of these died and five left the hospital with a mass in the right iliac fossa. It has been the authors' experience that appendicitis increases in severity with each attack. The authors next discuss the diseases complicating appendicitis, among which are diabetes, nephritis, septic pneumonia, etc. In phthisical cases operation is advised only as a last resource. Appendicitis due to typhoid bacillus is thought to be much more common than is generally believed and the fever is no contra-indication to surgical treatment. Delay is said to be a greater causative factor in the mortality of appendicitis than any of the complications of the disease. Deever has not found the subarachnoid infection of cocain of advantage in operations for appendicitis. [J. H. G.]

6.—Pearce discusses the symptomatology of cerebral hemorrhage and reports two cases which included the necropsy findings. [F. J. K.]

8.—Solland relates his experience with 150 cases of small-pox which came under his observation during the past twelve months. The cases occurred principally among negroes in Central Louisiana. The course of the disease was typical, except in that secondary fever was not well marked in most of the cases. In 34 instances the disease was of the confluent variety. There was only a single death in this series which the author states occurred in a mulatto, 25 years of age, who had suffered from the hemorrhagic type of the disease. [F. J. K.]

9.—Webster describes a new operation for retroversion of the uterus as follows: The patient being in the Trendelenburg position, the abdomen is opened, adhesions are separated and other pathological conditions which may be present attended to. The fundus of the uterus is elevated and pushed forward. A small hole is then made through the broad ligaments on one side under the utero-ovarian ligament near the uterus. Through it a pair of forceps is passed from behind in order to grasp the round ligament about an inch from its uterine end. The latter is then pulled through the broad ligament in a double fold. It is carried across the back of the uterus a short distance above the utero-sacral ligaments and is then stitched in this position with chromic cat-gut. A similar procedure is carried out on the other side, the second round ligament being stitched to the back of the uterus above or below the first one or crossing it. The amount of overlapping of the round ligaments depends upon their length or laxity. Each ligament is also stitched to the edge of the hole in the broad ligament. As a result the round ligaments are much shortened and act both in elevating the uterus as a whole and preventing it from returning to its retroverted position. [W. A. N. D.]

AMERICAN MEDICINE.

October 5, 1901.

1. Primary Cancer of the Gallbladder and Bile-Ducts. W. P. MANTON.
2. The Heredity of Appendicitis. F. FORCHHEIMER.
3. Cleft Palate and its Relation to Speech. G. HUDSON MAKUEN.
4. A Case of Endocarditis Developed During Typhoid Fever. J. A. SCOTT.
5. The Efficacy of Quarantine and Fumigation in the Prevention of the Spread of Yellow Fever Without Molesting the Mosquito. JOSEPH WALDAUER.
6. On the Agency of Parasitic Vermin and Other Insect Pests in the Spread of Disease. GEORGE HOMAN.
7. The Lane Lectures on the Special Aspects of Dermatology. IV. MALCOLM MORRIS.

1.—W. P. Manton reports a case of villous cancer of the gallbladder with secondary invasion of the liver, duodenum and surrounding structures. The patient was a woman of 58 years. She was operated upon for gall stones and died nine hours after the operation. A case is also reported of cancer of the bile-ducts with probable invasion of the gallbladder presenting symptoms resembling gall stones, in which cholecystomy was performed, and the patient died on the third day. The third case presented is that of primary cancer of the hepatic duct and fibrous occlusion of the cystic duct. Although primary cancer of the gallbladder and bile-ducts is rare, recent investigations go to show that it is not so uncommon as generally supposed. [T. L. C.]

2.—F. Forchheimer discusses the influence of heredity on appendicitis. For twelve years his attention has been called to appendicitis in families, and the results of these observations form the basis of this paper. He summarizes the history of a family of 25 members, five of whom have had appendicitis, of which four were relapsing and one was operated upon after the first attack. Of the four with relapsing form, only one has been operated upon; the other three have been free from relapses 3, 7, and 11 years respectively. There was no mortality. The second group, 17% of the whole family of 52 members and three generations, had appendicitis, of which one case was fatal, one suppurative, 6 mild and 6 relapsing. His third table is of a New England family whose medical history is given. In this whole family there have been 7 cases of appendicitis out of 22 members—33%—1 purulent, 2 of the ordinary type ending in resolution, and 4 relapsing cases. [T. L. C.]

3.—G. Hudson Makuen presents a paper on cleft palate

and its relation to speech. The various defects of the palate which interfere with speech are (1) Perforations. (2) A lack of union between the lateral halves, commonly known as a "cleft." (3) Paralysis of the muscles. Makuen emphasizes the importance of a few minor surgical procedures for the purpose of increasing the available size of the velum and giving it greater freedom of action. Briefly they are follows: (1) Separating the adhesions that often exist between the pillars of the palate on either side, and the remnant of tonsils. (2) Forceful stretching of the velum with the finger after the division of some of the tense fibres of the palato-glossi and the palato-pharyngeal muscles. (3) Training and developing the velum palati muscles by means of both direct and indirect voluntary exercises. [T. L. C.]

4.—J. A. Scott reports a case of endocarditis developing during typhoid fever. A soft systolic murmur at the apex, with a slight increase in size of the left ventricle was discovered on the 27th day of the disease. The patient made a good recovery. [T. L. C.]

5.—Joseph Waldauer gives his personal experience with the efficacy of quarantine and fumigation in the prevention of the spread of yellow fever without molesting the mosquito. He describes the quarantine at Clinton, Miss., in 1897 and of McHenry, Miss., in June, 1898. He concludes by asking that rational quarantine be maintained to avoid a spread of the disease. [T. L. C.]

6.—George Homan presents a paper on the agency of parasitic vermin and other insect pests in the spread of disease. The paper discusses, in a general way, the culpability of the mosquito, gnat, the horse-fly, the cattle-lick, the flea and the bed bug in the transmission of disease. [T. L. C.]

CENTRALBLATT FUER INNERE MEDIZIN.

July 6, 1901.

The Technique of Demonstrating the Presence of Peptone in the Urine and Feces. O. FREUND.

The test recommended is as follows: 10 c. c. of urine are acidulated with 2 or 3 drops of 20% acetic acid, 5 c. c. of 20% lead subacetate solution (or lead acetate) are added, well boiled and filtered. Potassium hydrate solution is added to the filtrate as long as it produces a precipitate, it is then boiled momentarily and filtered. The biuret test is then applied—directly with weak copper sulphate solution, as the mixture is already alkaline. The test is said to have the advantage of excluding any error due to urobilin, uroerythrin, urocasein bile-pigments or hematorporphyrin; the fluid to be tested is practically colorless. The test is used in the same way with feces; a series of tests with normal feces showed the constant absence of substances (albumoses) giving this test. [D. L. E.]

July 13, 1901.

Indicanuria, Oxaluria and Diabetes.

W. v. MORACZEWSKI.

Moraczewski's article is merely a suggestion that, since indicanuria is common in both oxaluria and diabetes, and since these two affections are not uncommonly present coincidentally and seem to have some relation to each other, the indicanuria in diabetes may be the expression of an oxalic acid poisoning in this disease. He believes that oxalic acid poisoning is the primary condition and that this may produce the evidences of acid intoxication seen in diabetes. His idea that oxalic acid poisoning produces the indicanuria is based largely upon the fact that Elsa von der Leyde has found that indicanuria occurs after experimental intoxication of animals with oxalic acid. [D. L. E.]

Typhoid Fever in an Esquimaux, With Positive Widal Reaction.—Cochez reports a case of typhoid fever in an Esquimaux aged 23 years, who died with perforation after laparotomy, in Algeria, on the nineteenth day of the disease. There was a marked serum reaction, with a dilution of 1 to 500. The brain weighed 1370 gm., the spleen only 65 gm. The liver showed a striking amount of sclerosis for so young a man. The diagnosis was difficult. It seems possible that, had surgical relief come sooner, instead of three days after perforation, he might have recovered. (*Bulletin et Memoires de la Societe Medicale des Hopitaux de Paris*, 1901, No. 10). [M. O.]

Society Reports.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fiftieth Annual Meeting Held at Philadelphia, September 24-25, 26th, 1901.

Continued from Page 557.

Reforms in Medical Education, by Dr. H. M. Shallenberger, of Rochester. The author claims that the education of medical students is of a lower grade than in other sciences, and that commercialism in medical colleges is responsible for the many failures. The number of graduates is in excess of the number needed, namely, one physician to eight hundred inhabitants, although even if allowance is made for the increased number of physicians, there is room for them if suitably prepared. The paper was discussed by Dr. E. B. Borland, of Pittsburg, Dr. Bates, of Scranton, and Dr. Beates, of Philadelphia.

The Duration of Immunity from Diphtheria Antitoxin, by Dr. Henry D. Jump, of Philadelphia. The experiments upon animals that were made to determine the duration of immunization show that in goats a maximum antitoxicity was obtained on the fourth day. The literature on the subject was freely consulted and the profession warned against insufficient dosage and delay. The author stated that in his private practice he inoculates every child exposed to diphtheric infection with 500 units of antitoxin, and claims brilliant results thereby.

The Vermiform Appendix, by Dr. Edmond W. Holmes, of Philadelphia. The author's observations were based upon an examination of 110 appendices. He divides the anatomy of the appendix into four subdivisions. The author showed an interesting number of specimens varying from one and one-quarter to seven inches in length. Dr. Holmes explains that therefore the size of the appendix has no relation to the size of the viscera or to the stature of the individual. A seven inch appendix may extend to the left and give rise to pain on the left side. In touching upon the surgery of the appendix, the speaker believes that frequently in searching for it, the edge of the psoas muscle is palpated. The paper was discussed by Dr. J. B. Roberts, of Philadelphia, who expressed his admiration of the specimens and of Dr. Holmes' paper.

The Doctor's Fee—Is it Fixed and Definite? by Louis J. Lautenbach, of Philadelphia. This paper dwelt upon the size of the fees obtained in other professions, and the utter disproportion between them and those received by physicians.

Therapeutic Notes, by Dr. Minnaeus Fussel, of Media, Pa. The speaker related his favorable results with a tincture of the chloride of iron in rheumatism, which, however, proves refractory to the remedy if in the acute stage. In epidemic dysentery he has employed large doses of ipecac with excellent results combined with a mustard plaster to the epigastrium. In addition there was discussed bichloride of mercury in rhus poisoning, and the use of mercurial ointment in pruritis.

Before the next paper was read delegates from the Pharmaceutical Association were presented and welcomed.

Bronchial Affections in Gout and Obesity, by Dr. J. M. Anders, of Philadelphia. Although the pathogenesis of the abnormal conditions in the lungs in obesity is not clear, it can be assumed that the deposit of fat in the body plays a mechanical part. He describes the symptoms concurrent with overfatness, namely pain in the subscapular and intra scapular muscles, more marked when the patients make an effort to maintain the erect posture. The physical signs vary, but as a rule tactile fremitus and percussion notes are enfeebled on account of the abnormal deposition of fat. There is a weakened vesicular murmur, although in rare instances the murmur may be exaggerated. Among the adventitious sounds are moist rales, although the author has also observed whistling sounds, the presence of mucus, however, predominating on auscultation. The author discussed asthma in obese subjects and the theories of its cardiac origin. Asthma in corpulency is due to the high position of the diaphragm in individuals who overfeed.

There is good reason to believe that hepatic inadequacy may be a cause. He believes that the severe paroxysmal dyspnea in asthma can be helped by assuming the erect posture, as there is no characteristic sputum or vaso motor spasm in these conditions. The question of the relation of asthma to polysarcia is somewhat obscure, the author's conclusions being (1) that asthma occurs in about 5% of the cases of obesity; (2) that it only occurs in extreme polysarcia; (3) that there is present a gouty state or history in most cases in which true asthma is secondary to the obesity; and (4) that about one-half of the cases are curable by overcoming the causative condition. (This paper will appear later in the Philadelphia Medical Journal).

Pseudo-Leukemia with Enlargement of the Liver and Spleen Due to Lymphatic Tuberculosis. By Dr. Joseph Sailer, of Philadelphia. Dr. Sailer discussed the forms of pseudo-leukemia, in which the etiology is tuberculosis of the lymphatic structures, and reported three cases of this condition, all of which were confirmed by autopsy. The peculiar features of the disease are moderate anemia, no leukocytosis, enlargement of the liver and spleen, the former being usually tender. Anasarca with terminal ascites and an extremely irregular temperature curve are additional features. In some cases there are sterile tumors springing from the thorax, and a terminal military tuberculosis of the lungs is a frequent feature. The pathological changes are enlargement of the lymph glands that often fail to show cheesy areas, but contain tubercle bacilli. There is subacute tuberculosis of the liver and spleen and occasionally a large fibrous tumor of the mediastinum. He called attention to the important paper of M. Sternburg on this subject, and to the various articles by Askanazy, Claessen, Brentano and Tangle.

The afternoon program terminated with a lawn party given to the Society by the Provost, Trustees and Faculty of Medicine of the University of Pennsylvania, the guests and visiting ladies of the Society being included. The lawn party was given at Houston Hall on the University campus. During the evening receptions were given to the members of the Society, guests and visiting ladies, at Jefferson Medical College, and at the residence of Dr. James Tyson, and Dr. J. V. Shoemaker, Governor Stone and staff in uniform also attending.

THIRD DAY—MORNING SESSION.

The session was called to order at 9.30 A. M. Resolutions were adopted advocating the existence of a psychological laboratory in the Department of the Interior. Resolutions were also adopted advocating vaccination for the prevention of smallpox, believing that it is harmless to the person that is vaccinated, and endorsing compulsory vaccination of school children. The treasurer's report followed. Governor Stone, of Pennsylvania, was next introduced and welcomed. In his reply the Governor made an address which was full of both humor and eloquence. He stated that he always believed that there was more politics in the average doctor than in any other individual. His condemnation of Christian Scientists was vociferously applauded. The Committee of Enforcement of State Medical Laws reported progress. The scientific program of the morning was then begun.

Address in Surgery, by Dr. James W. MacFarlane, of Pittsburg. The author of this address expressed his gratification for addressing the society in Philadelphia, where there had always existed a galaxy of physicians and surgeons of international reputation. His paper was devoted to the arrest of hemorrhage by torsion. He considered torsion first as limited and second as free torsion, the latter being employed as a rule. There is no advantage in limited torsion, as it consumes time and requires two forceps instead of one. He showed a diagram illustrating the method of free torsion. In his experience, if free torsion failed, a ligature is required or compression, and not limited torsion. Torsion has been assigned by many surgeons to a place second to that of the ligature. As a question of time, torsion is superior to the ligature, there is no foreign body of the wound, and not at all of the profession has trained assistants or nurses at their disposal. He has observed that in cases of railroad accidents where limbs have been torn from the body that hemorrhage has been perceptibly arrested by the torsion produced by the car

wheels. The procedure is available both in large and small vessels, atheroma of arteries being no contraindication to its employment.

The Operative Treatment of Bladder Descent and Sacculization. By Dr. George Erety Shoemaker, of Philadelphia. The author discussed the etiology of the various displacements, and in discussing downward displacement stated that it may occur in association with prolapse of the uterus, although it may even be present with the uterus in situ. Suprapubic operations have little immediate or no permanent effect on the bladder position unless supplemented by other methods. The author's method of operative interference comprises several operations. These operations may be done at one sitting if the patient is in the proper condition to undergo them, and if he or she can stand ether for one hour and a half. These operations consist in, curettement of the uterus, amputation of the hypertrophied cervix, attaching the vagina higher to the uterus, taking in all slack tissue, carefully repairing the perineum, taking care to pick up the fascia, and then opening the abdomen and suspending the uterus.

The Present Status of the Bottini Operation as a Means of Treatment in Cases of Obstructing Senile Prostatic Hypertrophy. By Dr. Orville Horwitz, of Philadelphia, whose conclusions are as follows:

1st.—There is less fear on the part of the patient to submit to the Bottini operation than there is to any other surgical procedure so far suggested for the relief of prostatic hypertrophy.

2nd.—The principal advantages to be derived from the method of treatment are: Only a short period of time is required in order to perform the operation; which is attended with but little shock and usually but slight loss of blood; convalescence is rapid and the mortality is lower than that of any other radical measure. Cures are produced in the large majority of cases, especially if the operation is undertaken early. Marked improvement may be looked for in a vast number of cases that otherwise would be condemned to suffer, as the danger attending any of the other radical methods of treatment would be too great to warrant their being employed.

4th.—Failures occur in but a comparatively small percentage of cases; want of success being due to the pathological changes and complications which have taken place. Especially is this true in those instances in which an incurable cystitis exists.

5th.—The operation is contraindicated where a valve-like formation exists; or where there is a greatly increased overgrowth of the three lobes, associated with tumor formation, giving rise to a pouch, above and below the neck of the bladder.

6th.—It may be employed with benefit, and safely, as a palliative measure in cases of prostatic hypertrophy of long standing associated with cystitis, when the general health will be improved, and constipation, which is usually associated with the condition, relieved, mitigating the prostatic spasm of the urethra; and rendering the insertion of the catheter easy and painless.

7th.—Pyelitis, when present, adds greatly to the danger of the operation, but is not a contraindication to its employment.

8th.—The character of the growth has but little bearing on the result of the operation.

9th.—The operation may be employed as a safe and satisfactory means of causing suprapubic fistula to close which is so frequently associated with hypertrophy of the prostate gland.

10th.—In suitable cases it is not only the best radical measure so far devised for the relief of prostatic hypertrophy, but is attended by the smallest mortality.

11th.—The operation is especially indicated in the beginning of obstructive symptoms due to hypertrophy of the prostate gland, and may be regarded as a prophylactic method of treatment.

12th.—The operation is capable of producing a symptomatic cure in a great number of cases of various conditions and configurations of the prostate gland due to hypertrophy, as is shown by the disappearance of prostatic spasm, the restoration of the function of the bladder to its normal condition, and the improvement of general health.

13th.—In operating early, before the prostate has become much enlarged, the safest method to pursue is to perform a preliminary perineal cystotomy, introducing the "peri-

neal galvano-cautery incisor" of Chetwood, so as to make the incision in the prostate.

14th.—In some cases a prolonged preparatory treatment is necessary before the operation can be safely undertaken.

15th.—In cases of prostatic obstruction, which have existed for a lengthened period, where there is chronic cystitis, the physical condition of the patient being below par, both local and constitutional treatment must be persisted in for months after the operation before the great benefit derived from the procedure can be insured, which treatment would be ineffectual unless the obstruction had first been removed. This paper will be published in the Philadelphia Medical Journal.

The paper by Dr. William N. Beach, of Pittsburg, on **Tuberculosis of the Rectum**, and that of Dr. S. Birdsall, of Susquehanna, Pa., on **"Some Practical Points in the Treatment of Typhoid Fever,"** were read by title.

Rare Complications of Appendicitis with Their Treatment. By Dr. Earnest Laplace, of Philadelphia. Dr. La Place stated that if appendicitis was due simply to an unmixt infection, a pathological picture could be drawn and we would recognize in appendicitis a disease of definite incubation and duration, with a crisis and resolution as in the case of pneumonia. But as we know the disease it is from the first a mixed infection with one or the other microorganisms predominating, depending upon the soil afforded by the patient. The extremes are its mildness in one case, to gangrene within 24 hours in other cases. Pain is not only produced by adhesions preventing peristalsis, but also by irritation of the toxins. In cases of a chronic course, abscesses may result which give vent to their contents in places of least resistance, too numerous to mention. The author quoted a case of empyema due to appendicitis on account of the sinus, which had communicated with the thorax. Examination showed that the caecum and ileum had been tied down to the pelvis by dense adhesions which enclosed foul pus, the latter communicating with the thorax. The second case reported was that of a male 26 years of age, who was operated on for chronic appendicitis, and who had an abscess in the right iliac region which had burrowed its way through to the retro-peritoneal region, and had perforated the ureter. The third case was that of a male with pain in the right hypochondriac and iliac regions, and in whom the abscess had burrowed its way upward, finally producing a cholecystitis. Both the urinary bladder and the rectum have been invaded, and in a case where pus had been persistently passed in the urine a probe showed that the abscess had found its way to the bladder. Fever may be absent. Dr. Laplace calls attention that in every case there was a time, had operation been performed, the patient would have been cured. The paper was discussed by Dr. Joseph Price, of Philadelphia, Dr. Adolph Koenig, of Pittsburg, and Dr. Mordecai Price, of Philadelphia, and closed by Dr. La Place.

Radical Cure of Hernia. By Dr. Edmund W. Holmes, of Philadelphia. The author describes the mechanism of hernial descent. He stated that one ought not to put too much emphasis on strengthening the ring or drawing down the rectus abdominis, but that the old ring should be obliterated, as well as the canal, and a new one created in a state of obliquity similar to that in nature. The surgical world still awaits the ideal operation for the radical cure of hernia.

A Case of Perforating Typhoid Ulcer; Laparotomy; Recovery by Dr. Wm. L. Rodman, of Philadelphia. The report of a case of enteric fever in a child aged twelve years, in which perforation occurred after all medication had been tried. There were marked nervous symptoms, at first some abdominal pain and a twenty minute chill. Digitalis, strychnine, nitroglycerine, strophanthus, alcohol and hydrotherapeutic measures to combat the fever had been employed. The abdomen became distended and stupor was employed. Continued vomiting ensued and peritonitis became marked. When Dr. Rodman saw the case he concurred on the diagnosis of appendicitis and found an enormous tympany. As a last resort operation was advised and a four inch incision made in the median line, and the perforation found almost underneath the incision.

(To be continued.)

TWENTY-NINTH ANNUAL SESSION OF THE AMERICAN HEALTH ASSOCIATION.

Continued from Page 558.

Dr. Gorgas believed that with the total extermination of the mosquito there would be no yellow fever. For the destruction of the new-born *stegomyia fasciata* oil has been placed on the surface of standing water, with good results. The yellow fever patients in the hospitals are protected by mosquito-bars, thus isolating them from this insect-contamination.

Dr. Formento, while supporting the theory that the mosquito does carry yellow fever, did not think that that was the only method of infection; it would be very fortunate if it were and would greatly simplify the problem; we should not all at once throw away as worthless the experiments of centuries. He cited several cases of infection by fomites.

Dr. Wasdin asked whether we should go back and displace all of our known methods of quarantine. New Orleans has been kept absolutely free from yellow fever invasion by methods to prevent that disease other than any attempt to kill mosquitoes. While he believed that the mosquito was the medium of yellow fever infection, he thought there were likewise other media.

Dr. M. J. Rosenau reported a case of a mosquito living 13 days in a trunk en route from Neuville to New York (which fact was subsequently combated by Dr. Reed on the basis of "false observations"). Dr. Rosenau had, by repeated experiments, kept mosquitoes alive in a trunk, in the proximity of moisture, for a period of ten days, and said that water was not necessary to their life, merely moisture.

Dr. Reed, in closing, said that he had the greatest sympathy with Dr. Formento in his belief that yellow fever could be transmitted by fomites, for New Orleans had suffered so severely through its epidemics. He had expected the utmost criticism of his methods in Cuba and if those experiments could not stand this criticism they were not worth much. He had expected all the criticism that had been presented as to his theory of yellow fever infection per *stegomyia fasciata*. He had left no stone unturned to produce evidences of contagion of yellow fever by fomites, but could not. The last man experimented with slept in a room, with an average temperature of about 82°, which was kept purposely damp and with no sunlight. He slept for 65 nights in this room, in infected garments, with the pillows and sheet wrung out with blood of yellow fever, in which it was demonstrated that the parasite was present. The doctor cited the epidemic of 1753, in Philadelphia, to prove that contamination was not by fomites; that when the fires in the house were started and ventilation was obstructed, so there could be no ingress or egress of mosquitoes, the epidemic lessened and gradually became extinct. He believed that this parasite of yellow fever does not belong to the vegetable kingdom, but that it belongs to the order of protozoa or some lower order in the animal kingdom.

Continuing Dr. Reed said: "I must mention one point and it is this: When a case of yellow fever enters a city where it may be propagated, a second case does not occur promptly. Please remember that fact. No one has done better work than Carter of the Marine Hospital service. Let me say right here that when we had reached a certain point in our investigation, the observations of Carter on the interval between the infecting cases and secondary cases of yellow fever were the turning point in our investigation. Carter's observations convinced me that the mosquito conveyed yellow fever. I have not a doubt on this subject after reading his splendid observations. What did Carter ascertain? Why, in some 67 cases where he could accurately note the date of the arrival of the infected case in a farm house and the development of the second case, what was the result? Were fomites or the mosquito play-

ing the part of infection? Carter's observation showed that it took from 13 to 21 days before the second case occurred. The mosquito did it."

Col. Chas. R. Greenleaf, Chief Surgeon, Division of the Philippines, spoke of **Sanitation in the Philippines**. The system of sanitation, which is so satisfactory now, was first applied only to the soldiers occupying the city of Manila, but was subsequently extended to the native towns.

In the case of smallpox, which has been greatly reduced through vaccination, the Government experienced great difficulty at first, as the insurgents would kidnap the vaccinators provided for safe guarding the health of the communities, and kill them.

There were 30,000 lepers in the Islands, large numbers freely moving about. These were treated by colonization.

Registration of doctors, dentists, pharmacists and midwives is now required.

The diseases met with in Manila are: *Bubonic plague*, *typhoid fever*, *measles*, *tuberculosis*, *tetanus*, *whooping cough*, and *beriberi*. Compulsory notification is required in all cases except *beriberi* and *tuberculosis*.

Dr. Wm. Foster Smith, Executive of the Superior Board of Health, of Puerto Rico, spoke on "Sanitation in Puerto Rico."

The area of the Island is 3600 square miles with a population short of a million. The great drawback to the establishment of sanitary measures has been the abject ignorance on the part of the native population, who are unable to read any notices that may be promulgated (even when printed in Spanish) for the safeguarding of public health.

Blindness prevails to a great extent, owing to the filthy customs in vogue by the midwives in attendance at birth. *Yellow fever* has not appeared for some time. *Dysentery*, *enteritis* and *gastro-intestinal* diseases carry off hundreds of people. *Tuberculosis* likewise prevails.

A peculiar form of *anemia*, due to an intestinal worm, is a great affliction among the natives. *Smallpox* is on the decrease, while *leprosy* and *elephantiasis* abound.

Prof. S. H. Woodbridge read the Report of the Committee on Car Sanitation. Among its many recommendations for caring for the public while travelling are:

Hard plain polished surfaces, and disuse in railway cars of carvings and grooves which furnish lodgement for dust and dirt.

Material for seat-backs, curtains, berth-bedding, etc., to be non-absorbable.

Ventilation.

Automatic temperature-regulators.

Cleansing of cars.

Removal of upholstery outside for cleaning.

Disinfection of interior of coaches.

Isolation in special compartments of cars for tubercular (or otherwise) infected passengers.

Providing for receptacles for receiving sputum, and prohibiting spitting on floors of cars.

Memorial Service for President McKinley. Held in the 74th Regiment Armory, Buffalo, N. Y., September 19th, 1901, by the American Public Health Association.

The meeting was called to order at 10 o'clock A. M., by the President, Dr. Benjamin Lee, who spoke as follows:

This day, the day which the National and State authorities have set apart as a day of humiliation in commemoration of our late lamented President, the ordinary business of the Association will be entirely given up.

There are, however, one or two matters which could be properly attended to which will take very little time before the resolutions are presented.

The Secretary will read the resolution prepared by the Executive Committee to formulate resolutions. The Chair will call upon Dr. Holton as a member of that Committee to present the resolutions of respect to the memory of the late President.

Dr. Holton:

Mr. President and gentlemen of the Association: Your

Committee appointed to grant resolutions on the death of President McKinley, beg leave to submit the following:

RESOLVED, that the American Public Health Association has received with deep sorrow the intelligence of the sudden and tragic death of the beloved President of the United States.

RESOLVED, that in President McKinley we recognize the highest type of modern civilization, a patriotic citizen, a Christian gentleman and a sagacious and enlightened statesman.

RESOLVED, that we respectfully extend our heartfelt sympathy to Mrs. McKinley in this her hour of bereavement and to other members of the family.

RESOLVED, that a copy of these resolutions be spread upon the records of this Association and given to the press for publication.

(Signed.)

BENJAMIN LEE, Chairman.

WILLIAM BAILEY.

HENRY D. HOLTON.

FREDERICK MONTIZAMBERT.

E. LICEAGA.

President:

The Chair would suggest that before the motion is put, some members may like to express themselves in regard to the resolutions, and we will call upon Dr. Wm. Bailey.

The Chair has but one word to say in this connection—he is in Heaven, we upon earth; therefore, let our words be few.

Dr. Wm. Bailey's address:

Mr. President and Members of the Association: I feel that words fail me to express the depths of sorrow that we all feel. Yet it is a sad pleasure to me to speak a word on this occasion. As expressed, I think, well in our resolution, we recognize in the late President all that is best in modern civilization in every relation in life. As a man, as a statesman, as a soldier and as a Christian, and as to his family relations, we all doff our hats when we contemplate the loyalty of this man to his afflicted wife.

Coming, as I do, from the South, I would like simply to call attention to the fact, that no man since the war—the civil war—has done as much as President McKinley to unify this country of ours. Without partisan bias, when it came to the Spanish war we find that a Wheeler, a Lee, a Breckenridge were his prominent agents in the carrying on of this war. So that to-day in the South, as never since '60, have we had such a feeling toward a President or toward the flag of our country. So for this we may be thankful for this man. The very heinousness of the crime precludes almost its mention, and yet allow me to express in this presence that this country, since its organization, has always been open to receive everybody from other climes who desired to come to us. While that is still our wish for those who come for the betterment of themselves and mankind and who desire to become Americanized, adopting the principles of this government as their own, yet let me say that the day has come when it must be expressed that we have no place in this country for those who come with a view of promulgating principles that are so much at variance with the principles upon which this government is founded, and that there is no longer a place in this country for such spirits to come and concoct their damnable curses.

Simply, then, and briefly, I would offer the seconding or the adoption of these resolutions in their full spirit, that we do recognize an irreparable loss, that we recognize in this man one worthy of our deepest love, and I am sure that we likewise congratulate ourselves and feelingly return thanks for the expressions that have come to us from our sister nations and, I might say, from the world.

Dr. C. P. Wilkinson:

In seconding the resolutions I voice the sentiments of the people of the extreme South in the section from which I come. Our city was very recently very highly honored by

a visit from our now deceased President. Our people turned to him with a smile and extended hands. They held out armfuls of flowers for the man, for the citizen and for the President. The same bells, Mr. President, that rung out paens of praise for that man are now tolling deeply as his body lies just about ready to be consigned to the tomb. There is no section of the country that feels more acutely and more bitterly the killing of President McKinley than does the South. He was their friend. As in the killing of Abraham Lincoln, in the excitement of war, the South was visited, was direly punished for any hand which she might have had in that assassination, so, to-day, Mr. President, the South mourns the loss of that President, who was, since that time, the first to extend the open hand of fellowship and ask us to join in the house of our fathers in the Union.

To-day, sir, we find no place for any reflections upon the previous history of any party, or any man in that party, but we do recognize the onward march of William McKinley towards the prosperity, towards the peace, towards the protection of our citizens alone, regardless of our State or sectional birth.

We mourn, Mr. President, to-day more than we can express, and, on behalf of the South, I join in the deepest regret that we have to pass these resolutions, but, sir, with the most heartfelt earnestness in the truth of every word they express. (Applause).

Appropriate addresses were likewise made by Mr. Bryce (Dominion of Canada) and Dr. Liceaga (Republic of Mexico).

CANADIAN MEDICAL ASSOCIATION.

Reported by

DR. GEORGE ELLIOTT.

(From our Special Correspondent.)

Continued from Page 521.

Symposium on Tuberculosis.—Prof. Russell of the University of Wisconsin, introduced this subject in a careful yet exhaustive paper on human and bovine tuberculosis and their inter-relation. The importance of any phase of investigation relating to tuberculosis and its relation to milk is unquestioned in these latter days, when the general public is beginning to appreciate for the first time the magnitude of the problem that confronts them in attempting to lessen the ravages of the "great white scourge" of the human race.

In considering this subject it may be approached from two points of view:

1. From the standpoint of animal industry.
2. From that of public health.

Bovine Tuberculosis and Animal Industry.

The rapid extension of the disease among cattle within the last few decades has forced upon breeders and dairymen the necessity of considering this subject, whether they desire it or not. It is customary in many quarters, even yet, to decry all consideration of this matter as unnecessary, inexpedient, and harmful to the dairy interests. But as is too frequently the case, the motive for such action rests upon a financial foundation, and many breeders are averse to a calm, judicious discussion of the matter, simply because it may mean financial loss to them.

Since the introduction of the tuberculin test as an aid in the diagnosis of the disease in cattle, it has been positively determined that the malady, at least in its incipient form, is very much wider spread than was formerly supposed, but it by no means follows that all animals that react to the tuberculin test are actually in a condition in which they or their products are dangerous to man and beast.

The slow insidious nature of the disease that characterizes it in the human being is also to be found in cattle, and not infrequently an animal may be infected with the seeds of the disease for a considerable time—even a year or so—without showing in any degree physical symptoms that are manifest to even the animal expert. Such animals are

not diseased in the ordinary meaning of the term, i. e., they are not capable of transmitting the disease, either directly or indirectly, through their milk supply or meat. The affection in such cases is latent, generally confined to various lymphatic glands; but animals so affected are, however, potentially dangerous, for the latency of the disease may be overcome through the operation of various factors, and the chronic type may thus be awakened into an acute phase. It is in this way that the disease spreads slowly and unperceived through a herd. Before it has made such inroads as to cause actual death of any considerable number of animals, many more have acquired the trouble, at least in the earlier phases. Necessity of controlling its spread and eradicating it is evident for the sake of the herd itself, if from no other point of view. Successful animal industry, especially with cattle, requires that herds shall be kept free from all taint of this disease. As to treating milk Prof. Russell said pasteurization and sterilization were the two best forms of applying heat to destroy the organism. He recommended the rotatory pasteurizing machine, one of which has been used in Winnipeg for some years, as the best method of removing organisms from milk.

Dr. Good of Winnipeg, in discussing the paper said that it afforded him some relief to learn that milk is not so dangerous after all. He stated that he had been avoiding milk and all organic fluid for the past year or two, but he was glad to know that he could now go back to its use with the same freedom as in his younger days. He then moved a vote of thanks to Prof. Russell, seconded by Dr. McArthur, which was unanimously adopted.

Dr. A. J. Richer, of Montreal, contributed the next paper on the sanatorium treatment of tuberculosis. This treatment has been introduced by Dr. Trudeau in America under great difficulties, and at the present time this distinguished scientist was able to house and treat over one hundred individuals in his institution. According to Dr. Richer, the treatment is made up of rest, outdoor life, over-feeding and medical supervision. This latter was described as the keynote to success in phthisical treatment. Over-feeding was also emphasized.

The last paper was contributed by Dr. Gilbert Gordon of Toronto, and it referred to the etiology and the early diagnosis of pulmonary tuberculosis. He spoke of the early stages of the disease, and thought that we ought to be able to diagnose it before the appearance of the bacilli in the sputum. Direct inheritance he considers very rare. The inhalation of dried sputum is the most direct cause. Dr. Gordon considered that we are woefully behind in Canada in fighting this plague and more money should be spent by governments and philanthropic individuals in fighting this disease. He went carefully into the symptoms of the pre-tubercular stage and considered that a persistent cough was a very dangerous symptom.

An important discussion took place upon this topic. Dr. Lafferty warned the profession in Ontario against sending advanced cases to the Northwest Territory. Dr. Barriek of Toronto, pointed out that Ontario was leading in regard to the treatment of tuberculosis and he hoped to see the sanatorium brought with a wide open door to all conditions of life. Dr. Brett of Banff, suggested that the Association should pass a resolution pointing out to the Parliament of Canada the necessity of providing for the establishment of sanatoria for the benefit of the community.

THE NEW OFFICERS.

The report of the nomination committee was presented by Dr. W. S. Muir, Truro, N. S., who expressed regret at having to accept the resignation of their general secretary, Dr. F. N. G. Starr. Montreal, was selected as the place of meeting in 1902, and a suggestion was left with the members of the Association that they meet in British Columbia the following year. These officers were elected for the ensuing year:

President, F. J. Shepherd, Montreal; Vice-Presidents,

Prince Edward Island, S. R. Jenkins, Charlottetown; Nova Scotia, T. F. Macdonald, Hopewell; New Brunswick, Wm. Christie, St. John; Quebec, J. Alex. Hutchinson, Montreal; Ontario, Bruce L. Rlordon, Toronto; Manitoba, A. J. Macdonnell, Winnipeg; Northwest-Territories, H. G. McKid, Calgary; British Columbia, J. M. Lefevre, Vancouver. General Secretary, George Elliott, 129 John street, Toronto; Prince Edward Island, H. D. Johnson, Charlottetown; Nova Scotia, J. W. McLean, North Sydney, C. B.; New Brunswick, W. L. Ellis, St. John; Quebec, C. F. Martin, Montreal; Ontario, H. A. Bruce, Toronto; Manitoba, J. T. Lamont, Treherne; Northwest-Territories, G. A. Kennedy, Macleod; British Columbia, C. Morris, Vernon. Treasurer, H. B. Small, Ottawa. Executive Council, Jas. Stewart, T. G. Finley, J. M. Elder.

The Winnipeg meeting of the Canadian Medical Association will go down in the annals of the history of that Association as the best meeting ever held under its auspices. On the first day alone 130 members were registered and the total number at any time present reached 175, a number considerably larger than that at Ottawa last year and second in point of numbers to the meeting at Toronto in 1899. A large number of new members was elected, particularly from Ontario, Manitoba, the Northwest-Territory and British Columbia. Every province was represented at the Association meeting with the single exception of Prince Edward Island, one delegate coming as far as North Sydney, Cape Breton. The meeting was generally voted a pronounced success; and certainly the profession in Winnipeg and Manitoba and the citizens of Winnipeg more than eclipsed, in point of social functions, any previous meeting. The reception by the Board of Governors of the Winnipeg General Hospital, the reception by the ladies of Winnipeg at Wesley College, the special trip down to Old Fort Garry, where Mr. and Mrs. Calpman extended their hospitality to the members and their wives and invited guests from Winnipeg, the visit to the Ogilvie Mills, the reception at Government House by Lieutenant-Governor and Mrs. McMillan and the special trip out to Brandon through the great wheat belt of Manitoba with the entertainment provided by the ladies of Brandon,—all will stand as a series of social functions which have never been surpassed and will probably remain unsurpassed for some years in the history of the Canadian Medical Association meetings. One of the best and most important discussions took place on the formation of a Medical Defence Union; and it is very gratifying to have to record that such an organization was unanimously supported by the Association. All the leading officers of this Protective Association are located in Ottawa and Dr. Russell Thomas, of Lennoxville, P. Q., along with W. S. Muir, of Truro, N. S., is deserving of much praise for the great good work he has performed in this connection. Much regret was expressed at the resignation of the General Secretary, Dr. F. N. G. Starr, of Toronto, who has so long and so faithfully, so ably and so energetically, discharged the responsible and important duties of this position. At a time when the Association is so prosperous it is due to the new General Secretary that a united and earnest effort be put forth by all the members of the Association to continue that prosperity.

An Atypical Case of Addison's Disease.—At a recent clinic at the Beaujon Hospital, Professor Debove demonstrated an atypical case of Addison's Disease in a man of 63. (*L'Independance Medicale*, June 12, 1901, No. 23). He has traveled a great deal, and has had dysentery and malaria. His face, hands, neck, and scrotum are dark brown, and the cheeks, lips, and conjunctivae show brown spots. His spleen is normal. The skin has become hard, rugged, and dry; he is cold, and constantly exhibits "goose-flesh." This melanoderma began 20 years ago. In spite of the absence of all other symptoms, and the long duration of the pigmentation, Debove diagnosed Addison's Disease, and ordered 10 to 40 cg. of suprarenal extract as treatment.

[M. O.]

Original Articles.

A CASE OF GUNSHOT WOUND OF THE KIDNEY
AND STOMACH.By JOHN B. ROBERTS, M. D.,
of Philadelphia.

The report of a single case of abdominal wound has, as a rule, little value; but the injury to this patient was so similar to that recently sustained by a distinguished personage that its record may have some interest. This interest is perhaps enhanced by the fact, that in the present instance no operation was deemed necessary, though the case was carefully watched, with the possibility of operative interference always in mind. Death revealed that operation might perhaps have saved life.

A woman, aged 40 years, of known intemperate habits, was admitted to the Philadelphia Polyclinic Hospital for a self inflicted gunshot wound. A very short time before admission, she had fired at her own heart with a large pistol. There was a wound on the front of the left breast, a little below the nipple. The breast was flabby and pendulous; and on raising it, there was seen a similar wound in its posterior surface and a wound of entrance into the chest wall directly opposite this opening. The bullet had evidently gone directly through the dependent mammary gland and then into the thorax. The patient showed only a moderate amount of shock, and had a slow pulse, rapid respiration and a rectal temperature of less than a degree below normal (97.8°). There was no sign of effusion of blood in the pericardium or pleural cavity, and no evidence of abdominal injury. The rapidity of respiration (28) was accounted for by the pain and the probable interference with the action of the diaphragm. The slow pulse rate recorded (48) was either an error in observation or due to some undeterminable cause. There were no macroscopic evidences of kidney injury shown by blood in the urine; though an examination made next day showed it to contain albumin, epithelial casts, some white and red corpuscles and bacteria. Her nervousness, restlessness and muttering created the impression in the mind of the Resident Surgeon, Dr. R. Max Goepf, and in mine that she was on the verge of delirium tremens.

Careful examination of the patient led me to believe that probably the bullet had missed the heart, perforated the diaphragm and injured the liver. There was some rigidity of the upper abdomen in the liver region, but no tympany, and I was uncertain whether, after all, the traumatism had not been limited to the thoracic viscera. Intestinal perforation did not seem probable and the temperature and pulse record made internal hemorrhage unlikely. I decided not to make any operative exploration.

Six hours after admission, her temperature was 99.8°, her pulse 90, and the respirations 36. These facts still further confirmed the diagnosis of probable limitation of injury to the chest or upper abdomen, the absence of internal hemorrhage, and an intact intestinal tract. During the night, however, the temperature rose and the respirations and pulse increased in frequency, so that in the early morning the record stood: pulse 120, respiration 42, temperature 103°. These symptoms looked like those of a traumatic pneumonia or a septic peritonitis from perforated gastrointestinal tract; but no physical signs could be found of an intrathoracic inflammation, and the abdomen was not tympanitic, though its upper portion showed muscular rigidity and pain. The patient died later in the day, after being under observation about thirty-two hours.

The treatment adopted was medical and not surgical. At no time did exploratory incision into the abdomen seem to me justifiable, though I am rather radical in my views regarding the necessity of exploratory section in traumatisms of the abdomen, and do not believe in dilatory surgery in such cases.

The autopsy showed that the bullet had struck the breast one inch vertically below the nipple, entered the chest in the sixth costal interspace, and perforated the corresponding portion of the diaphragm. The thoracic viscera were uninjured, though there was some clear

serum, but no blood, in the pleural cavity. When the peritoneal cavity was opened "a large quantity of light colored partly disintegrated blood was liberated," and a number of large blood clots were seen in various portions of the abdomen. The intestines were removed and were found to have suffered no injury from the bullet. There was no congestion of their peritoneal covering, and no lymph upon them, except where there were beginning adhesions in a few places between the bowel and the omentum. The spleen and liver were uninjured.

On the lower surface of the stomach, near the cardiac pole, there was found a groove-like wound about $\frac{3}{4}$ inch long. This involved the outer coat, but had not perforated the viscous. Below the spleen was a large mass of coagulated blood surrounding the left kidney. The perinephric fat was badly lacerated at the upper end of the kidney and that organ was perforated in the middle line at the junction of the cortex with the medulla. The bullet had passed entirely through the kidney, from front to back. The kidney tissue seemed normal and contained no hemorrhages. No clots were found in the renal pelvis.

An external incision made in the back disclosed the bullet which was imbedded in the muscles of that region, opposite the first lumbar vertebra, one inch from the middle line.

Death was apparently due to slow bleeding from the wounded kidney and a septic condition of the injured structures. The wound of the stomach was unimportant. The high temperature would probably not have been present, if the hemorrhage had been the sole cause of death; and the increase in frequency of the pulse would not have been so slow, if the bleeding had been rapid. The alcoholic condition of the patient may have had an influence in raising the pulse rate and the temperature. It is possible also that bleeding was started in the night by the patient getting out of bed, unknown to the nurse, in a search for water. The thirst of which she complained may have been incited by the bleeding.

I was much surprised at the result of the autopsy, not suspecting a wounded kidney. Before the autopsy, I had attributed the death to rapid sepsis, basing the opinion on the rapid rise of temperature during the night. The post mortem findings, however, render it possible that the bleeding had much to do with the early death. Indeed it probably was the chief factor in the rapidity of that occurrence; though a septic death would probably have finally occurred. A study of the pulse, respiration and temperature is interesting.

	On admission	7 P.M.	9 P.M.	11 P.M.	1 A.M.
Pulse	48	80	90	104	112
Respiration	28	32	36	32	38
Temperature	97.8°	99°	99.8°	100.4°	101.4°
	(rectal)				
			3 A.M.	5 A.M.	7 A.M.
Pulse			118	120	128
Respiration			46	42	44
Temperature			102.2°	103°	103°

A CASE OF GUNSHOT WOUND OF THE STOMACH IN
WHICH THE PATIENT RECOVERED.

By G. W. PENN, M. D.,

of Humboldt, Tenn.

Apropos of the fateful shot that ended the life of our lamented President, I wish to call attention to a case occurring in the practice of my father, Dr. J. W. Penn, now dead.

The accompanying cut (from photograph taken September 18th) is that of Alex. Mullins, the patient in question.

He is now 52 years old and still an active farmer. I quote from my father's scattered case records: He was shot at 7 A. M., May 22d, 1878, by his own pistol, his opponent having taken it from him, and hence shooting at close range. The similarity to the President's wound is apparent, since the revolver used was of 32 calibre, and the wound of entrance as seen from the cut, only about an inch lower than the shot that killed President McKinley, or to be accurate, it is one and one fourth inches to the left of the median line, and one and one half inches above a line drawn across the navel. The patient had just eaten a hearty breakfast. My father saw him about two hours after the shooting. He vomited freely as soon as shot, the matter consisting of the meal just eaten and copious quantities of clotted blood; he continued to vomit blood during the first day. Patient rested well after a hypodermic of morphine. For 11 days he was fed exclusively on the mucilage of the cactus or prickly pear, which was allowed from the first, and was permitted other forms of liquid nourishment after this time, gradually returning to a full diet. He was in bed just five weeks, and I am sorry the records are so meagre regarding the temperature and pulse, but there was never a decided rise of fever, and no evidence of peritonitis, his long continuance in bed being rather a precaution than a necessity.



A case of Pistol Shot Wound. The point of entrance is shown at the cross.

I wish to add this case to the list mentioned in an editorial of the Journal of Sept. 14th, in which Aleock is quoted as giving one case of recovery from gunshot of the stomach, out of 3000, before the days of modern surgery, and while it is not reported to substantiate the "masterly inactivity" plan of Senn and other authorities on military surgery, it incidentally illustrates the ability of nature to cope with grave conditions, the more that being an inch lower than the President's wound it would seem that both pancreas and kidney were in greater danger of injury. My father believed that the full stomach was a favorable factor in that fewer fibers of the stomach wall were cut by the ball, and hence a closer approximation of the wound edges following the contraction after emesis. As

one of the lessons of the President's case, would it not be well in such wounds to first excise the necessarily contused, and possibly infected edges elliptically, much as an ulcer might be excised, before uniting with suture? Would gangrene of the stomach wall have been so likely had this been done? The above is not said in criticism of the technique of the excellent surgeons in the case, but as stated, a possible advantage to be gained from this sad experience.

PARTIAL GASTRECTOMY FOR HEMORRHAGIC ULCER.

By L. J. HAMMOND, M. D.,

of Philadelphia,

Surgeon to the Samaritan Hospital and Out Patient Department of the Methodist Hospital, Philadelphia, Pa.

The following is the history of a case of bleeding gastric ulcer:

Family History.—Mother is living and well at the age of 67 years—father died twenty years ago, age 50, from smallpox. There were eight children, seven girls and one boy; there are living and well at present six, one having died at the age of two years from whooping-cough, another at twenty from inanition.

Personal History.—Agnes K., age 28 years, height 5 feet, 4 inches, weight 92 pounds, the seventh child of the family, had mumps, scarlet fever, measles, whooping-cough and chickenpox, all from infancy up to the eighth year, no known sequelae having followed any of these diseases of childhood, the patient having been in the best of health from the eighth until the twentieth year (weight at this time, 115 pounds); when at her work as stenographer she was attacked with vertigo and violent pains in the epigastric region, accompanied by diarrhea, the stools being well mixed with blood; there was no vomiting; the excessive diarrhea subsided in about ten hours, though for the next

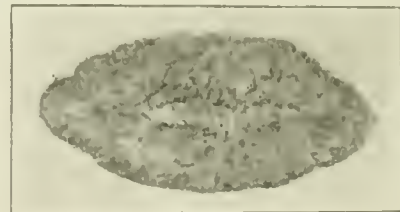


Figure 1.—Ulcer of Stomach Excised.

eight days there were from three to five stools a day distinctly tarry in appearance. The patient at this time was extremely pale, with marked exhaustion, no vomiting, nor was there any pain in the region of the stomach after the first day. She was confined to the bed most of the time for the next month, the only symptoms complained of being fulness in the stomach, some pain and extreme weakness. She rallied from this attack sufficiently to resume her duties by the end of the fifth week, never, however, entirely regaining her former strength.

About one year later she was again attacked with sudden severe pain in the epigastric region, followed in a few hours (about eight) with diarrhea distinctly tarry in appearance, which continued about five months; the stools during this period were not always tarry, though the patient assures me that never a day passed without at least one of the passages containing these characteristic bloody stools.

While at the seashore where she went at this time, the diarrhea ceased and her health again improved so far as to enable her to return to her work. (This was in August, 1895.) The following March, 1896, she was attacked with severe pain over the stomach and for the first time vomited blood, the quantity of which was estimated at about one pint—five days later a second hemorrhage about the same amount. Tarry stools followed this attack for about eight days. The intense pain in the epigastric region always preceded the hemorrhage about twenty-four hours.

After this attack in March, the patient was confined to

her bed for six weeks. She lost flesh and strength from this time on for about two years; during this period she became so reduced in flesh and strength that it was impossible for her to do more than drag about the room; apprehensive of further hemorrhage, she refrained from taking sufficient food until there is but little doubt that much of this loss was due to actual starvation, and only after persuasion was she induced to take more food in a predigested liquid form, when she began very decidedly to improve and in a few months was able to return to work, continuing at it for two and a half years, or until February 15, 1901, when she was again attacked with severe pain. On the 16th,

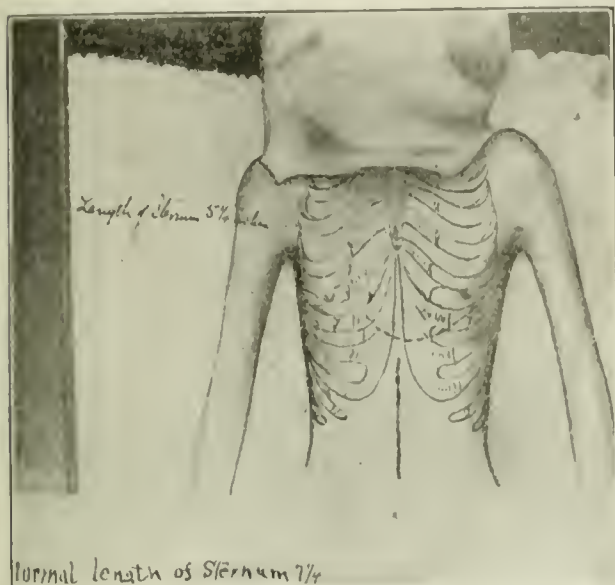


Figure 2.—Illustrating a case of partial Gastrectomy.

another hemorrhage occurred, when she vomited from one to one and a half pints of blood—twenty-four hours later a second attack of vomiting of approximately one half pint of blood, following this about every hour for the next ten hours, she vomited blood in amounts of about an ounce; blood was passed by the bowels for about twelve (12) hours longer.

As to the source of hemorrhage, there was but little doubt that it was from ulcer of the stomach. Operation was advised at the time though it was positively declined by the mother as well as the patient herself, and the extreme exhaustion did not make it advisable to urge it at this time as the patient would undoubtedly have succumbed before the operation could have been completed. The importance of operation was however explained to the mother and advised to have performed if the patient rallied from the extreme condition in which the hemorrhage had left her. Treatment therefore consisted in placing an ice cap over the stomach, internal administration of ten grain doses of tannic acid, and feeding per rectum exclusively, the latter consisting of one and a half ounces of predigested beef juice alternating with the same amount of milk, this being prepared by adding to it one half dram of lime water and twenty grains of sodium chloride; rectal feeding being administered every fourth hour. (This method of administering milk, I have found to be most efficient, the salt apparently aiding in the digestion of the milk, while the lime water through its alkaline action prevents caseation). In addition the patient was encouraged to swallow frequently, one half dram doses of shaved ice.

This line of treatment was continued for six days; at the end of this period, in addition to rectal feeding as above indicated, the patient took per orum, one half ounce of beef juice alternating with same amount of egg albumen every four hours; rectal feeding being discontinued on the tenth day.

She improved daily and by the end of the second week was able to walk about her room, she however manifested much apprehension, fearing a return of the bleeding, and finally gave her consent to be operated upon. (At this

time examination of blood showed reds, 3,600,000, whites, 9,000).

Operation was consequently advised because of (a) the frequent attacks of hematemesis which increased both in severity and duration with each succeeding attack, the last of which was entirely beyond control by any known therapeutic agent.

(b) From the history of a well defined localized soreness to the left of the median line beneath the costal cartilages, there was reason to suspect that perforation was threatened, it being thought that the pain and tenderness which had been continuous at this point, since the last attack, were due to plastic adhesions from the ulceration having reached the visceral peritoneum.

(c) From the history of so long standing a condition, it was thought that a pyloric obstruction likely existed.

The patient was therefore prepared in the usual way and the stomach exposed through a median incision extending from about one and a half inches above the umbilicus upward toward the ensiform cartilage, incision being made from below upward instead of as is usual, from above downward, because of the abnormally high position of the ensiform cartilage, as well as the close proximity of the costal cartilages of the floating ribs (vertebro-chondral which made the precise location of the stomach uncertain.

Photograph shows the great height of the ensiform cartilage which is seen to be pointed and curved anteriorly, as well as the unusual proximity of the costal cartilages below the seventh instead of receding laterally in an oblique direction as is usual; their position is nearer vertical on either side, where they are seemingly held as far as I could determine by examination through the incision, by unusually elongated costo-xiphoid ligaments which appeared to be reflected over, holding firmly together the cartilages from the seventh to the tenth inclusive.

It will be seen that the intercostal spaces are not only unusually wide, but their costal cartilages very nearly approximate each other to within two inches of the umbilicus, the difficulties therefore of even determining the actual position of the stomach are at once obvious. It was necessary therefore, in order to inspect the stomach, to divide this firm ligamentous attachment up to a line with

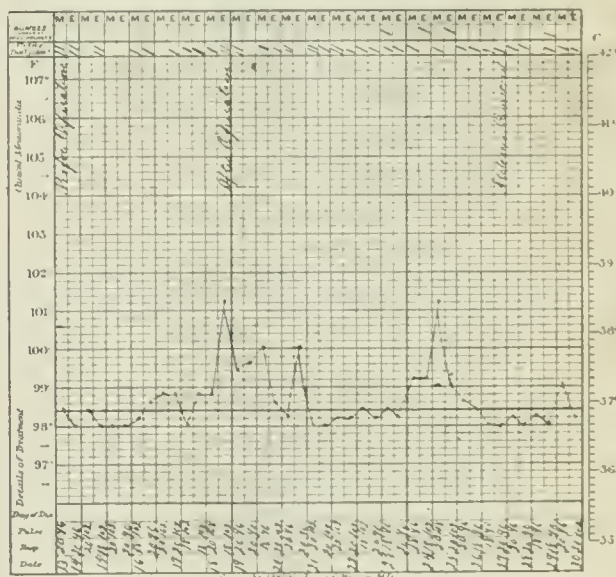


Figure 3.—Temperature in a case of partial Gastrectomy.

the eighth rib, further space being procured by forcibly holding the cartilages apart on either side by retractors. By this means the stomach was brought out through the incision after dividing the greater omentum and folding it upon itself; in order to accomplish this, the lesser omentum and gastro-splenic ligament had to be put quite

thoroughly on the stretch. The subsequent steps in the operation consisted in palpation over the surface of the organ.

There were no adhesions as were expected to be found from the history of pain localized in one spot, which had been continuous since the last hemorrhage.

Palpation began at the pyloric end and consisted of gathering the entire thickness of the wall of the stomach between the index finger and thumb, and gently rolling. After a search of some minutes, the loss of substance, in the absence of uniform thickness was distinctly noted, in the same way that one would detect a hole in the inner lining of a coat by gathering together the thickness and rolling it between the fingers. This seems to me to be one of the simplest, as well as one of the most accurate means of locating loss of substance in any tissues, the walls of which are composed of layers, part of which are loosely held together as those of the stomach, the loose cellular coat between the mucous and muscular enabling one by this method of palpation to at once locate any rent that may exist even if confined alone to the mucous layer, making of course its discovery much easier when ulceration extends to a greater depth.

The seat of ulcer was in the posterior lesser curvature, and was removed by a linear incision on either side of it. After its removal, the mucous surface of the stomach was thoroughly palpated as well as inspected, this being readily accomplished by illuminating it. There was no noticeable amount of stenosis at either orifice. This fact seems to place in doubt the statement that gastric ulcers of

women, though none of these are actually demonstrable as etiologic factors, thrombosis would seem to be in this especial case the most likely cause, as the perfect encasement of the stomach within this firm unyielding cavity, when distended during the act of digestion, might readily receive sufficient trauma to interfere seriously with circulation, thus thrombosis might readily result.

The cut shows an ulcer four centimeters in length with a tendency to lateral spreading about its centre, and extending to the muscular coat. The margins of the ulcer were inverted and adherent, the mucous surface to the muscular coat nearly throughout its entire length on one side, while on the other (which was probably the source of recent hemorrhage) it was free and distinctly granular.

A CASE OF TUBERCULAR ULCER OF THE STOMACH.

By ERWIN FISCHER, M. D.,

of Pittsburg, Pa.

There being but one case of the kind that I am to report, in literature, and this by Petruschky, the following case may be of interest:

An unmarried lady, 23 years of age, with a suspicious family history of tuberculosis. She came into my care one and one-half years ago, complaining of fulness after eating, and occasionally pains in the epigastrium, and extreme weakness. By her own statement she had always been a hearty and fast eater. The lips and conjunctiva were anemic. Body fat was scarce; heart regular in action, and the second sound over the mitral area divided. The respiratory organs apparently free of disease with exception of slight roughness of the respiratory murmur over the right apex. Upon examination both kidneys were found movable, there was gastropotosis, and retroflexion of the uterus. In the hypogastric region, to the left of the median line, tenderness was elicited on pressure. The site and character of the pain were pronounced to be the same as that which gave her trouble after taking the food. A Hoffa bandage relieved the enteroptosis, but the extreme tenderness corresponding to the position of the large curvature of the stomach persisted. HCl. acidity about 2%. I decided upon putting her upon the typical treatment for ulcer, Carlsbad salt internally with hot applications locally. On account of her slight improvement this was followed by the administration of nitrate of silver, which, however, rather aggravated the symptoms. Considering the fact that neurasthenic conditions are very common in those afflicted with enteroptosis, and as there appeared to be reasons for suspecting decided nervous influences, bearing on her condition, I used electricity and similar treatment for some time longer, but in vain. Last spring the patient complained of losing flesh, and of not being able to take nourishment without pain being produced. The diet was regulated, Carlsbad salt and nitrate of silver administered with the same result as previously. I did not risk introducing the stomach tube at this time on account of the very pronounced epigastric tenderness. The unusual resistance of the ulcer, to treatment of which there could be no doubt, in my opinion, led me to suspect that the ulcer was of tubercular origin. Tubercular ulcerations of the stomach have only been noted in post-mortem examinations as complications of advanced pulmonary phthisis. In June, 1899, Petruschky published several observations in which the tuberculin test enabled him to make the diagnosis of a primary tubercular ulcer of the stomach during life, and by specific treatment attain recovery. My patient was subjected to the usual test injections, of which the second and third injection, 5 mcs. each, produced typical local and general reaction. Especially interesting and convincing was the local action, consisting each time of increased pain in the region of the stomach, voluntary, as well as produced by pressure, and followed by nausea. Besides the left apex still showed rough expiration upon auscultation, and in the

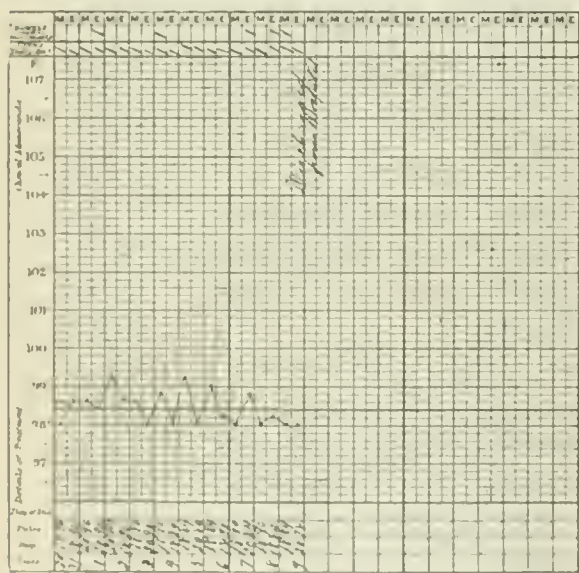


Figure 1.—Temperature in a case of partial Gastrectomy.

long standing produce stricture of the pyloric end, and, as this condition had from the history of the case at least, extended over a period of eight years, there should have been some stricture present, while, as a matter of fact, the index finger could be readily introduced well into the pylorus.

The healthy edges were brought together with fine silk by the Czerno-Lambert method, and the abdominal incision closed with two layers of sutures.

After-treatment consisted in rectal feeding only, of one and a half ounces of predigested beef juice alternating with the same amount of milk prepared as above indicated. After the sixth day the patient was given by mouth, egg albumen ($\frac{1}{4}$ oz.) and beef juice ($\frac{1}{2}$ oz.)

From the first she was permitted to wash the mouth with water every half hour when desired.

Recovery was uneventful; the sutures were removed on the eighth day. The appended chart shows the uniformly normal convalescence.

Among the etiologic factors of gastric ulcer are syphilis, tuberculosis, chlorosis (?), embolism and thrombosis; hyperacidity is said to be generally associated with the condition especially in young

supra-scapular region a few crepitant rales were combined with prolonged extirpation. Symptoms relating to the digestive organs, and especially the stomach, are not rare, as early manifestations of pulmonary tuberculosis. They are probably produced by toxins, and are a warning to physicians to be on guard against incipient phthisis, especially if they persist, and no traceable cause be found. They respond to the test injections, by producing a general reaction, but not always so clearly when the disease is so local, affecting the stomach. In this case the history and general condition of the patient distinctly indicated a circumscribed gastric affection of the nature of an ulcer. That the character of the ulcer was tubercular, was evidenced by the vain efforts at treatment and by the results of the tuberculin test. The comparatively trifling character of the pulmonary phenomena will hardly admit of claiming for them that they were the primary focus, and must be looked upon rather as a coincidence.

The regular treatment with new tuberculin (T. R.) was instituted. The doses were cautiously increased from the routine dose at the onset of 1/500 mg. of the solid substance to 20 mg. The few times that slight general reaction occurred were accompanied by local reaction on the part of the stomach. Two weeks ago the last large dose was injected. The result thus far besides the disappearance of the pulmonary symptoms has been an increase in weight, almost entire absence of pain, even on pressure, good appetite without evil consequences, in spite of her not adhering strictly to careful mastication of her food; in fact, a condition which after a typical course of treatment in a simple peptic ulcer, we should not hesitate to pronounce as recovery. This naturally does not complete the treatment, which will have to be resumed again after a few months.

I should not have reported this case as the history quoted is still incomplete, had it not been for the fact that cases of this character might be diagnosed more frequently if the profession's attention were called to their existence following Petruschky's communication. The failure of the treatment by nitrate of silver in the case of failure in the treatment of the bladder, as well as the stomach, might give rise of the tubercular origin of the affection. The tuberculin test should be used to reveal and oftentimes to heal the concealed tuberculosis which may be the source of disease of the stomach, either by direct or indirect infection.

ADDRESS IN MENTAL DISORDERS AT THE PENNSYLVANIA STATE MEDICAL SOCIETY, 1901.

by ROBERT H. CHASE M. D.,

of Philadelphia.

Superintendent of the Friends' Asylum for the Insane, Frankford Philadelphia

In recent years, there has been a marked departure from the observance of former presidents to summarize in the annual address in mental disorders the progress which had been made in this field of medical science, for the previous twelvemonth. But now, on the contrary, the custom prevails of selecting some particular theme appropriate to the occasion.

In choosing a subject to engage the attention of this meeting, it has seemed to me that your interest could be gained by the presentation of data, which can be marshalled under the title:

*PARESIS FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.

This subject is presented, under the belief that it is one in which the general physician rarely takes but little interest, because the impression widely prevails that it is not a disease that concerns him

Dr. Chase has a work on General Paresis in preparation now about ready for the publisher.

greatly. This attitude is a mistaken one, because it is the disease of mental breakdown of middle life, and, the parietic falling first into your hands, as the family physician, should receive promptly your most skilful attention. At this time he is entering, you will observe, upon a very insidious and treacherous affection, and unless it is staid in its course it inevitably leads to a fatal termination. Hence, in this initial stage—this critical period—the disease should be intelligently studied by you, not alone to enable you speedily to recognize it, but for the weightier reason that at this early day the most favorable season is offered; in fact, it is the only time during its course when any treatment is at all likely to be crowned with success.

I would not presume upon the role of teacher, but if by a timely hint, or through a few suggestions, a friendly spirit can be aroused to dispel apathy in any quarter, my task will be accomplished.

It has been said, with truth, that a thorough knowledge of general paresis is a liberal education in mental disease. Some insight into its complex symptomatology may be had, when it is known that in its course no single function of the brain is free from encroachment, and that in its various phases it may exhibit nearly all of the phenomena observed by the neurologist, as well as most of those known to the alienist. Certain groups of symptoms may preponderate, cerebral, bulbar, or spinal, in variable association, as one or other region of the nervous centres becomes involved; but in the fact that the chief focal point is in the "highest nervous arrangements," all of the authorities are very fully united, and many of them further agree that the cerebral cortex is, also, primarily the affected site.

The date of the discovery of general paresis is not more remote than seventy years ago; and to French pathologists indisputably belongs the credit of having first recognized and described it as a special form of disease. There are, however, passages in the writings of Willis, the anatomist (1670), indicating a knowledge of the association of paralysis and insanity; while Haslam and Perfect, at the close of the eighteenth century, reported cases having a combination of the two series of symptoms, of paralysis and dementia, but both of them failed to appreciate, as did Willis, the clinical import of their observations. In 1815, Esquirol, under the head of monomania in his *Maladies Mentales*, noted the fatal nature of paralysis with failure of speech, but he, in common with the writers just mentioned, did not have a clear conception of general paresis as a distinct affection.

It is to the pupils of Esquirol that the distinction belongs of actually bringing to light this much disputed disease. The subject was studied with much zeal by Georget, Delaye and Calmeil, who regarded the malady as a special form of paralysis, superimposed upon the insanity; in other words, that it was a complication of an already existing disease. They observed in certain cases of insanity a peculiar form of paralysis, which was characterized by speech impairment, and by other motor disorders. In 1824 Bayle, another pupil of Esquirol, differed from other observers by formulating a new theory; he declared the affection to be a separate entity, dissociated

from any other type. He made the existence of expansive delusions its necessary distinctive symptom, assigning to it a regular course, and dividing it into three successive periods, which he named respectively monomania, mania and dementia.

Requin (1846) contended that the malady, to which he applied the prefix progressive, may exist without symptoms of insanity, conceiving the paralysis to constitute the essential part of the disease, though a certain degree of dementia was admitted to be a customary sequel to the paralysis. Other French writers confirmed this view, among them Baillarger, who took a prominent place in the discussion for many years. It was he who first termed the affection paralytic dementia, a title that has been adopted by many of the writers, both old and new. Baillarger upheld this theory to the time of his death in 1883, which postulates two quite distinct disorders, susceptible of existing associated with each other, or separately: (1) paralytic dementia, the principal disease; (2) paralytic insanity, the accessory affection (Regis). This "dualistic theory" has many adherents to the present day.

Again, some other authors, for instance, M. Ball, of Paris, look upon general paresis as a generic term, embracing a variety of diseases, differing in etiology, symptoms, course and final termination.

Hence, we see that there have been in the past several theories respecting the nature of general paresis, of which the prominent ones may be briefly stated as follows:

- (1) As a complication of insanity.
- (2) As a distinct form of insanity.
- (3) If not as a group of cerebral or cerebro-spinal affections, at least as a paralytic dementia, to which is associated more or less frequently, and under various conditions, insanity. (Regis.)

It is remarkable to find, in examining the works of the older writers, that, with all their acumen, they failed to perceive the symptoms that pointed to the slow and insidious nature of general paresis at its onset. It was not until Lasèque, in 1853, described an initial stage, comprising symptoms that had not been regarded as typical, that the medical world was apprised of this feature, but even then his discovery was allowed to be forgotten, because of a lack of conformation. Folsom calls attention to the fact that it was not until the appearance of Professor Ball's work, in 1883, and that of his former Chief de Clinique, M. Regis, in 1885, that any clear statement of the very insidious and obscure character of the first symptoms of the disease can be found in French special medical literature.

Since 1876, the leading German writers on diseases of the brain, especially Wernicke, Schnle, Kraft-Ebing and Mendel, have described the beginning of general paresis as being simply a change of character quietly developing; and, later, so slight are the impairments of the intellect as to admit of the patient continuing his avocation without exciting special notice.

The English and American authors, in years past, have not, as a rule, set a just value on the very early and obscure character of the symptoms of general paresis, although Savage, writing in 1884, mentions

that, when he observes certain vague, variable nervous symptoms, he is disposed to give a guarded prognosis; and Mickle, in 1886, states that "in the history of many a case do we find that some moral or other mental change in the patient, some perversion of the affective sentiments, has been noticed long before the acknowledged onset of the disease." Until a recent date, the impression has been almost universally among alienists and in the medical profession generally, that paresis is a disease in which the signs should be expressed by the classic symptom-complex of early difficulty of speech, pupillary anomalies, muscular tremor and uncertain gait, accompanied, on the mental side, by intellectual weakness, and, in many cases, by delusions of grandeur.

This clinical picture, through brief, is a faithful portrayal of the symptoms of the established disease, but you, as the medical adviser of the family, must deal with these cases ere they assume so distinct a form, and sometimes long before such phases develop.

The very early signs of general paresis are ill-defined, and often so vague that they may deceive even the very elect (the neurologist), whom you may call in consultation. There are two accepted forms of onset, the gradual and the sudden. In the latter there is no forewarning before the storm breaks; an attack of acute mania (beginning abruptly), or an epileptiform or apoplectiform seizure, may be the signal, ushering in the disease.

It is, however, a fact that is well attested that the beginning is seldom sudden. In the gradual onset the changes, at first, are few and slow; but there are certain marks, which may be traced, of a progressive diminution of mental power, and a few indications of a constantly increasing incoordination of particular groups of muscles, followed later by a gradual paralytic invasion of the entire muscular system, which, if detected in time, furnish a means of delay and a ground of hope to this otherwise desperate situation.

The manifestations, at first, are usually mental, although, occasionally, the mental and motor symptoms occur simultaneously; and it is possible, also, for the somatic phenomena to appear first.

It is well to keep in mind when forming a diagnosis in a suspected case, that if the patient can be taken at a disadvantage, the defects to be sought are more readily brought to view. If the symptoms are sly, the patient, for example, should be examined after he has passed a sleepless night, or when he is emotionally perturbed, or excited. In the initial period, the symptoms generally, both mental and motor, do not advance uniformly, but come and go, depending on the rhythm, which characterizes all nervous diseases. In the conditions just mentioned, the physician is much more liable to find evidences of amnesia, or other mental impairment, or to observe the early tremor about the mouth, or other physical signs, which might be absent when the patient is calm and composed.

To pursue our theme in a sequential order, we will examine:

- (1) The early mental phenomena.
- (2) The early physical symptoms; and

(3) Some suggestions as to treatment, applicable to the initial period.

The form that is taken by the disease is significant, whether it be depressive, expansive, or demented, as it tinges very early the ensemble of the patient's mind. A slight melancholy or seeming discouragement in the subject is accounted for by his friends as the effects of some physical cause, or it is passed over by them unnoticed; or an obtrusive and unusual egoism may be falsely interpreted by them, or referred to, only, in the way of fault-finding. This, and similar situations, should evoke close scrutiny by the physician, and if no cause be found to account naturally for the patient's conduct, it remains for him a guide-board to other more intricate signs that the disease may display. At first, the patient is conscious of ill-feeling, that he is not in his normal condition, but as the disease advances, he loses the power of discrimination, and he then insists that he is entirely well. Savage refers to a physician who correctly diagnosed his own case as that of paresis, but soon forgot his misfortune in the blighting effects of the advancing disease. In another case, the patient pointed to the top of his head, and said that, like Swift, he was "going first at the top." For the moment he appeared emotional, but in the feeling of *bien-être*, which was developing, he forgot his troubles when induced to speak of his fine capabilities. Lewis tells of a talented mathematician, in whom the early symptoms were intense despondency, and sudden lapse of attention and memory. Often when solving a problem, he would cover his face with his hands and, rising from his chair with a pained expression, hurriedly remark, "It's no use, it's all gone." He frequently confessed how painful such a state was to him, realizing most fully the sad condition of his mind, before the final disruption occurred.

Generally, among the earlier signs is a lack of mental vigor. This may be manifested, on the part of the subject, by a loss of interest in his business, or an inability to attend regularly to his affairs. It may be impossible to keep his attention fixed for an extended period, and, at the same time, he may be able to follow out in a fair way the routine of his daily duties, if the duties be not too perplexing.

However, the inability to fix the attention is attended with restlessness of spirit, which in turn develops into an alteration of character and disposition. The patient seems erratic and unduly excitable, especially over individual interests. In this change of character, Brierre de Boismont, a long time ago, first called attention to a failure, or perversion of the moral sense, as one of the most important of the prodromic symptoms. In rare instances, even years beforehand, some moral perversion, such as an act of theft or indecency, has occurred, before any other sign of the disease has been detected. Very early in every case, the ethical motives of the patient are prone to be those of a lower, a more selfish, nature than he has held formerly. De Boismont gives the case of a man who began thieving eight years before the diagnosis of general paresis was made. A reputable plumber, among the writer's cases, was arrested for fraudulently tapping a city gas main, without a certificate,

nearly a year before other discernable symptoms appeared. In another case, a sedate married man was arrested, three years before he was adjudged insane, for indecent assault on a colored woman, and he was emulged of a large sum of money before released from his unfortunate plight. Berkley relates the interesting history of a railroad official, who, well-known for his thrift and business ability, concocted a scheme of fraud, which proved to be the first symptom of the disease. Going to a small town in Western Virginia, where he was known, he took a room at the principal hotel, purchased several properties, and told his friends that a railroad was to run through the place, and that he had bought the properties, so as to forestall the projectors of the road, as they wished to locate their depots and offices on these sites. He was so well known for his business shrewdness that a syndicate was formed by the local people, and the land re-bought at an advance of thirty thousand dollars. He left the town with his gains, which he dissipated within a few days. It is not an infrequent experience of asylum life to have patients presented at the door suffering from this disease, who have previously been subjected to imprisonment for misdemeanor, or petty crimes.

Moderate exercise often causes unwonted fatigue of mind and body. Confusion of ideas, temporary forgetfulness, an inability to control the mental processes, as in the past, give occasion for annoyance to the patient, and result in discouragement and irritability on his part. The mental symptoms, at this stage, are seldom considered of any importance by the family or friends.

Transient amnesia, which is apt to be a conspicuous symptom, deserves a passing word. It is noticed early in the patient's writing, in unusual misspelling, omission of letters, and soon of words and parts of sentences, especially does this occur if he be tired. To the same cause may be attributed a forgetfulness of the proprieties of life, and through it many incongruous acts result: A gentleman walked into a drawing room without removing his hat, and lighted a cigar; a woman coming out of a church took a handful of silver from a plate held at the door, without any attempt at concealment; a gentleman in good standing called on a policeman to assist him in disposing of some goods, which he had just purloined from a grocer's wagon in the street; a married woman began to undress herself by a country roadside; and a woman ordered a pair of trousers for her husband, a bricklayer, to be made of *moiré antique*. (Sankey.).

Furthermore, the feelings are intensified, and the patient becomes readily excitable, often about trivial matters. Temporary loss of self-control follows, with an exhibition of temper, on occasion, beyond the degree that is wont to be displayed, even in one nervously fatigued. Sometimes a change in the affection occurs, so that persons previously dear to the patient become abnoxious to him.

Long before this catalogue of mental symptoms has been completed, the physical usually make their appearance; in some cases, as has been said, the two appear together.

The patient may complain of being "nervous."

Insomnia is frequently an early trouble, or the sleep may be very light and unrefreshing, often disturbed by dreams and nightmare. This sign needs to be inquired about, for the patient is apt to regard it as an unimportant matter. There are certain diffuse symptoms that should claim critically the attention of the physician. Conspicuously among these should be enumerated flashes of heat to the head, and alternate pallor and flushing of the face; momentary pains of neuralgic character, felt in different parts of the body, or a localized pain, as a facial neuralgia, or a burning spot on the trunk, or limbs, and also hyperesthesia, followed by tingling of the skin, sometimes anesthesia or paresthesia. To this group may be added others, equally frequent and suggestive; headaches, sincipital, temporo-frontal, or occipital; a capricious appetite and irregularity of the bowels.

Some patients have the feeling that they are walking on air, and are not fatigued after exercise that may be somewhat excessive, while others are easily tired, and experience but little relief from rest. The circulation may be sluggish and congestive attacks not infrequently occur. Ballet reports that one of the most brilliant French novelists of recent years was energetically treated for several months, with douches, as a neurasthenic, before the obvious signs of general paresis were observed. Dr. Stearns, of Hartford, tells of a patient who was unable to attend to business on account of restlessness, and was treated by the family physician for malaria. Again, a woman patient had neuralgic pains six years before mental symptoms appeared. Whenever these pains subsided, as they frequently did, then occurred numbness, and, at times, loss of sensation in feet and ankles.

Close examination reveals, in a great many cases, early pupillary changes—myosis with irregularity and inequality. Myosis is one of the most common of the earlier symptoms, and while its value is a variable quantity with different observers, the apparent constancy with which it appears, in the first period of the disease, associated with the inequality of the pupils, must obviously direct the physician's mind, in these cases, to the probable diagnosis of paresis. Griesinger, long ago, pointed out the fact that pupillary anomalies, the contracted, irregular, sluggish or unequal pupil, may antedate other symptoms for a long time.

These signs, you observe, are indefinite; many of the symptoms would indicate neurasthenia, with or without hysteria, or uncomplicated cerebral asthenia. In this early stage of the disease, to which we refer, there is fear that the physician will fail to catch some of the more subtle signs, unless he be on his guard, and take care to see the patient at different times of the day, and under varying circumstances, as rest, especially a good night's rest, may greatly improve his condition. Folsom observed a marked change in the tremor, which appeared in the handwriting of a doubtful case, after the tiresome effort of a long walk; and Lewis describes how a patient was thrown into convulsions by pressing him into close mental application, in the solution of a mathematical problem.

The first stadium passed, the malady becomes,

sooner or later, better defined in the development of symptoms of greater diagnostic value. On the mental side, the feeling of well-being passes into that of extreme elation and egoism, expending successively into a delusional state of wild scheming and extravagance. On the somatic side, the symptoms advance *pari passu*. Tremor and weakness in muscular control increase, and, as the muscles of speech are the highest in order, they are the first to be affected. The muscles about the mouth are less controlled, the fibrillary trembling of the tongue becomes apparent, together with a slight slurring of the speech, or a hesitating and jerky mode of speaking. Words with a repetition of linguals, as "unintelligible" and "illegible" are impossible of a clear enunciation.

The handwriting takes up the tale. The early tremor shows incoordination. This, however, is not enough to decide the case, for tremor may result from other causes—from age, alcoholism or other nervous defects. But in this instance there is added to the tremor an inability to control the attention; the formation of words grows more irregular, final letters are omitted, reduplications occur, and especially when the patient is tired he indites against himself convincing evidence of both mental and motor failure.

The control of the larger groups of coordinated muscles, controlling gait and station, may continue for a time unimpaired. But the finer and more highly organized muscles are more quickly affected by ataxy; the delicate movements required in engraving, drawing and embroidery are readily affected, and occupations, depending on nice adjustment of the hands and fingers, as watch repairing, piano playing and many of the mechanical arts, must at this stage be abandoned by the paretic.

In making a review of the therapeutic history of general paresis, one is clearly convinced, with substantial proof, of what a mighty struggle there has been waged against this formidable disease. It would seem that there is scarcely any drug or remedial measure, at all applicable, that has not been brought to bear against it. It has long been the opprobrium of medical science that her art fails to strike down the morbid cause of degenerative diseases, on whatever organ of the body the attack may be made. Can there be an exemption in the intractable nature of this disease, so essentially degenerative, that is not shared by other affections of a similar kind.

This query must await the response that scientific medicine of the future shall bring to its solution. It is to the general physician that we earnestly look, for it is he, who is first called into the case, at its very inception, and at a time when the greatest hope for relief may be reasonably expected. Time is an important factor, as in many other affections, and the earlier that treatment can be applied the better.

Meynert held the theory that, preceding and causing the diffuse cortical encephalitis, there is a functional vaso-motor disorder, which he considered curable. My task to-day will be concluded by laying before you briefly a bare outline of treatment in the early stage, such as the indications, from the light of experience, have suggested.

It is necessary to keep in mind the cause of gen-

eral paresis and remove these if possible. The transitional life of the paretic may be compared, in a measure, with the small mountain stream, which, gaining volume and force as it goes, is at last transformed in its onward course into the raging torrent. Could the controlling influences of moderation be applied at the source, how different, in each case, would be the result. Hence, coition should be in great part discontinued; all alcoholic stimulants prohibited; worry and strain of every kind removed; work, both mental and physical, reduced to a wholesome degree; and the most favorable hygienic conditions possible put into practice. Active physical recreation, judiciously pursued, is generally beneficial, combined, as it may be in selected cases, with the partial rest treatment, massage and hydrotherapy. Abstemious habits of living, early hours, watchful care of sleep, a suitable diet, and very careful attention to the bowels should be enjoined. In cases with a history of syphilis, specific treatment should be prescribed, although but little may be expected from this course after the disease becomes established, if it be not, in fact, actively injurious.

The bodily functions should receive attention, the general health built up, with tonics if necessary, and such plan of treatment instituted for this end as best meets the views of the individual practitioner. Some authorities recommend here an alterative tonic course. But rest, fresh air, moderate exercise and regular hours will be found to be, as ever, the great restorers of energy.

Even in suspected cases, where the diagnosis has not been made out, it is well to advise rest and removal from the daily occupation and surroundings. This should not, however, be in the form of extended travel, with its accompanying hurry, annoyance and excitement, for this is attended with more harm than good. There can be no doubt that a change of environment and an avoidance of worry and excitement will always be of benefit. If this should involve loss of salary, or be a serious interference in business, so that the anxiety resulting would be of greater injury to the patient, then a lightening of labor may be insisted on, together with the adjustment of the home life. The patient should be shielded from whatever may cause anxiety or worry, and freed from all such strain. The paretic's brain should be put, as it were, in splints.

There remains for the practitioner one additional duty, a duty that is broader than the interest of the individual case. He should at all times remember his responsible relations to the community at large, in his office, as conservator of the public health. Let this be an important duty, looking to the welfare of posterity, that he shall use his influence to the utmost for the eradication of any tendency towards hereditary predisposition. With less forethought than the breeders of cattle, we never raise our voices against the "sowing of tares" in the indiscriminate marriage of neuropathic persons.

Seldom has there been a time when the teachings of the medical profession have fallen upon more willing ears than to-day; the public is very responsive to medical precepts, and shows a disposition to follow far more closely these injunctions than is realized by the average physician. And, while gen-

eral paresis is not so largely a hereditary disease, as some of the other forms of insanity, yet even here the results of a weakened nervous constitution tell on the next generation with no abatement of force. A very large percentage of adolescent and juvenile cases of general paresis are those who have been born syphilitic. Folsom, in this connection, says: "My own experience leads me to the conclusion that in those cases of general paresis without a previous history of syphilis, the vast majority occur in families in which there have been cases of insanity, epilepsy or apoplexy." Regis has many times found consanguinity in the ancestors of paretics.

The effect in subsequent generations may be a different type of nervous disease, or it may result merely in a reduced moral and intellectual capacity, but it is now very generally agreed that "defect, deterioration and vitiated quality of brain" must and do follow nervous excitement and nervous exhaustion of previous generations.

It is then your duty, let me say, in conclusion, to enlighten and to warn; and in every case, where it is possible, to emphasize the dangers resulting from the overstrain and the overliving of twentieth century civilization, and, by every prophylactic measure in your power, to meet this disease over which too long has been inscribed:

"All hope abandon ye who enter here."

THE PROGRESSIVE MUSCULAR ATROPHIES.*

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The steady progress which neurology has made in the last half century is shown very strongly in the history of the progressive muscular atrophies. It was in 1849 that this subject was opened by Duchenne and Aran's classical work, and not many years after, that Cruveilhier showed that progressive muscular atrophy was a spinal cord disease and soon after him that Charcot found that it was the ganglion cells of the anterior horn which were at fault. The next advance came in the differentiation by Charcot of a group of cases under the name of amyotrophic lateral sclerosis, which he considered to be due to changes in both the anterior horns of the spinal gray and in the lateral tracts—a view which Gowers combated, claiming that both diseases are one according as to whether the cells or the lateral tracts are first involved.

A type of progressive muscular atrophy, preceded by a pseudohypertrophy in certain muscles had also been described and all cases were grouped either under the Duchenne-Aran (the amyotrophic) form, or under the pseudohypertrophic (the myopathic) form. Investigation, however, revealed many types of progressive muscular atrophy in which no spinal changes were discoverable, and in time we had described a juvenile type (Erb), an infantile type (Duchenne), a facioscapulohumeral type (Landouzy-Dejerine), a peroneal type (Marie, Tooth), a pelvic type, etc. This was the condition when closer observation revealed the fact that these clinical pictures were not independent diseases, but were

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simply different forms of the same disorder and were grouped by Charcot under the name of the primitive muscular myopathies, and by Erb as the progressive muscular dystrophies. Attempts have also been made to separate various hereditary types. All the dystrophies were formerly supposed to be hereditary, an observation which time has not borne out. Some, however, still cling to the idea that there is a particular hereditary form of muscular dystrophy (the Leyden-Moebius type), but we cannot even acknowledge this much. Hoffman gives four forms of hereditary muscular atrophy: 1. A Duchenne-Aran type. 2. A form beginning in the pelvic region and extending to the limbs from the trunk. 3. An infantile, bulbar, paralytic, facial type, and 4. a transitional type.

Three general forms of progressive muscular atrophy have been recognized, one in which the muscular changes are primary, the myopathic form or progressive muscular dystrophy; one in which they are secondary and due to changes in the anterior horns, the myelopathic or amyotrophic form or spinal muscular atrophy; and one in which the primary degeneration is in the peripheral nerves, the neurotic or neural type. Such a classification was and remains simple and convenient, but time has shown that neither clinically nor pathologically does it always hold true. Transitional and mixed types are by no means exceptional; symptoms, which were thought to be characteristic of one type, have been found to occur in the others; and what is most important, investigators have shown that even the pathologic muscular changes are not positive proof of the existence of one or the other type.

The neuron theory asserts that that part of the anterior cord extending from the anterior cells to the muscle fibre is one in function—the lower neuron, and that a second or higher motor neuron extends from the anterior cells upwards through the lateral tracts. It is therefore conceivable that a degeneration of the centre—the ganglion cells, if of moderate severity and of long duration, must impair the function of the muscle nerve-ends, and that an atrophy of the muscle must in such cases coexist with an atrophy of its centre. Dr. Spiller has summed up our knowledge on this point in asserting that: 1. Cases of muscular atrophy occur which present the well-known localizations regarded as characteristic of the different forms of muscular dystrophy. In the large majority of these cases, the spinal cord and peripheral nerves are normal. 2. In other rare cases presenting the clinical features of muscular dystrophy, the nervous system is more or less involved. 3. The histologic changes in the muscles are not pathognomonic of any form of atrophy. 4. It is proper to regard muscular dystrophy as a disease usually distinct from spinal muscular atrophy, but transitional forms connect the myopathic and myelopathic types of atrophy.

Before proceeding in detail concerning the various pathologic and clinical changes, we wish to give an account of three cases lately seen by the writer, which show the difficulty in diagnosis:

CASE 1.—Jos. G., Hillsville, Ohio. Italian parentage. Aet. 18. Fruit dealer. Both parents well according to patient and examination of father revealed nothing abnormal. Family history entirely negative. Had severe attack

of scarlet fever when 8 years of age. About eight years ago, he noticed a weakness in his knees, would often sink down to the floor without being able to control himself. He soon afterwards noticed that walking was becoming difficult and that he would tire soon in walking any distance. His legs began to feel numb and he claims that they are so still.

Present condition: An undersized, badly nourished boy. Looks like a child of 14. No stigmata of degeneration. Internal organs are all normal as are also the cranial nerves. Facies normal. Backward and lateral movements of head normal. No dizziness, vertigo, paresthesias or headache. Sleep normal. No spasms or convulsions. Slight tremor (coarse) in hands. Fibrillary tremor in shoulder and arms. No fascicular or choreic movements.

Acromion process lowered, scapula nearer to middle line than normal (8cm.) Winged scapula. Arm cannot be raised farther than shoulder and but slightly backward. Upon attempting to lift patient by armpits the acromion processes are elevated above ears. Shoulder abnormally movable in all directions. Upon extending arms and then attempting to press velar surfaces together, very little power is perceptible. Extension of arms is difficult, spindle shaped arm with difficult flexion and pronation. Thenar and hypothenar are atrophied as are also interosseous spaces. Pronounced lordosis. Protrusion of abdomen. Duck-like waddling gait from exaggerated pelvic movement. Cannot straighten up from reeling position without climbing up upon himself. Thighs extended with difficulty. Cannot raise heels or stand on tip toes. Slight plantar arch. Flat footed. Cannot walk 25 feet without resting. Quantitative decrease of electric excitability without qualitative changes. Reflexes absent. Fibrillary tremor in deltoid and biceps and in supraspinati. No rigidity anywhere. Speech normal. General sensation normal with exception of feeling of numbness in the limbs. Objectively no disorder of sensation was found. Station co-ordinate.

—We have then an 18-year-old boy who has an extensive atrophy and paresis of a slowly progressive nature. The alterations are general and embrace chiefly the shoulder-girdle, pectorals, triceps and biceps, supinator longus, interossei, thenar and hypothenar muscles, erectores trunci, abdominal muscles, gluteals, gastrocnemius and peroneal muscles. The atrophy is symmetrical. Fibrillary tremor. No reaction of degeneration.

Into what class of the atrophies shall we put this case? It is as far as could be ascertained not hereditary as are most of the dystrophies, fibrillary twitchings were present which are not supposed to occur in the dystrophies, and there was no sign or history of true or pseudo-hypertrophy as occurs in the dystrophies.

As in the neural form, the atrophy seems to have begun in the lower extremity, but there is no history of its attacking the toes first and then extending up the leg from muscle to muscle. The atrophy of the pelvic and lumbar muscles were, to judge from their condition at present, affected soon afterward. Indeed, the patient, viewed from this point alone, resembles more the pelvic type of dystrophy. The slight sensory disorder as occurs in this patient is, however, I believe, only noticed in the peroneal or neural type. The simple quantitative decrease in electric excitability without even a partial reaction of degeneration, and its onset in early years speak for the juvenile type of the dystrophies. Again, the distal parts of the upper extremity are more involved than is usually the case in the dystrophies. The time of its onset with the localization of the atrophy at the beginning of the disease speak for the hereditary form, yet no hereditary history is present.

Fibrillary tremors were formerly supposed to be

characteristic of the spinal form, yet so many observations have occurred of its presence in the dystrophies and of its absence in spinal cases that this symptom—hitherto supposed to be one of the most important differential points—has no longer the same value. It is believed, however, never to be as extensive in the dystrophies as in the myelopathies. In this case, it was only present in the deltoid, biceps, and supraspinati.

The time of onset and hereditary character have also not been proven to be absolute diagnostic criteria. Cases of dystrophy have been described as occurring in aged individuals and cases shown after death to have been spinal cases were of an hereditary nature.

Even the electric reactions, supposed to be diagnostic, have not stood the test. The reaction of degeneration need not necessarily be present in the spinal type of progressive muscular atrophy, and has been noticed several times in true cases of dystrophy. This is very easily explainable. In a chronic case where some muscle may still be intact, their reaction will hide the absence of qualitative changes in the atrophic bundles. Again a muscle may be so completely degenerated as to give the reaction of degeneration even though the centres in the cord are intact as the stimulus does not reach them from the muscle even if it did have no muscle to act upon.

Cases vary greatly also as to their course. Although myelopathic cases are generally acute and dystrophic cases chronic, exceptions have been noted. The pseudo-hypertrophy, if present, is a rather absolute symptom of dystrophy. In our case it was not present. We must content ourselves, therefore, in regarding this clinically as a mixed type, although more of a dystrophy than an atrophy. Pieces of the gastrocnemius and triceps were removed and examined microscopically. They will be described and shown later.

CASE II.*—Marie K., Aet. 7. Seen by kindness of Dr. Wm. B. Ewing. German parentage. Family history difficult to elicit, as father, the only one accessible, is very illiterate. He himself is and has been always well and examination of him reveals nothing abnormal. Three children, Marie being the second. Other two well. One died in childhood, from tuberculosis. Mother was strong and healthy when child was born. Died later, aet. 32, from a gynecologic operation. Marie was never able to walk. High grade imbecile. General weakness in muscles which is said to have commenced when the child was 2 years old, was first noticed in the arms, most marked in the left. Child is of average size and of poor nutrition. Very anemic. High arched and narrow palate. Marked myopathic facies. The lips are thick, prominent and protruding, the facial muscles and forehead are smooth and expressionless, the eyes are almost always closed or but slightly open. The right levator palpebrae superioris acts better than the left but it is difficult to get the child to execute any movements upon demand. The lips can be closed but it generally holds the mouth open with the lower teeth showing. In laughing and crying the mouth is drawn laterally but hardly any folds appear upon either side. The angle between the neck and shoulders is very long. The muscles on the anterior and lateral aspects of the neck are slightly palpable, those on the back are atrophic. The head is held stiffly as is the whole body. The child remains perfectly motionless in any position in which she is placed. If the head is thrown back, it falls until it touches the vertebrae and the patient cannot raise it again.

*I am indebted to Drs. Ewing and Henniger for much of the clinical history of this case.

The atrophy of the sternocleidomastoid with intact trapezius which this child presents is not common. Only Erb, Reinhold, Landouzy, and Pick have reported similar cases.



Weight, stripped, 25 pounds.
Height, 36 inches.

	R.	L.
Circumference of chest at nipple	43 3/4 cm.	24 1/4
" " " at xyphoid	50 cm.	25
" " " abdomen	48 cm.	24
Circumference of forearm 10 cm. below olecranon,	R. 8 cm., L. 8 cm.	
Circumference of upper arm 8 cm. above olecranon,	R. 10 cm., L. 8 cm.	
Circumference of upper arm, 20 cm. above olecranon,	R. 12 cm., L. 12 cm.	
Circumference of thigh 15 cm. above patella,	R. 26 cm., L. 26 cm.	

Greatest circumference of lower leg, R. 12 cm., L. 12 cm. The pectorals almost entirely gone, also the biceps. Trapezius atrophied. Peculiar hardness of deltoid and infraspinatus region. Spindle-shaped arm with atrophy of supinator longus. Active motion of upper arm, forearm, and waist very deficient. The arms are in a flexed and abducted position. On passive motion, the arm can be drawn down until an angle of about 160 degrees is reached where it stops with a jerk and all efforts are unavailing to extend it any farther. This is due to contracture of muscle and ligament and not to any rigidity. The hand is in a position of abduction and slight flexion. Attempts to adduct it are difficult on account of contracture. Fingers can be flexed easily but cannot be extended beyond a certain angle, second phalanx is flexed toward the first. The thumb is slightly flexed under the hand instead of being in a position of opposition.

The hip-joints are flexed and abducted, the legs are flexed at an angle of about 60 degrees. Attempts at extension are possible until an angle of about 140 degrees is reached when the leg resists all further efforts. Flexion is free. Feet are in a position of equino-varus, with deficient extension. Atrophy of all the extensors and anterior tibial muscles. Slight lordosis in sitting and recumbent position. If patient could be made to stand, the lordosis would no doubt be very prominent. Peculiar hardness of muscles of thigh. The thigh muscles are in a condition of pseudo-hypertrophy. No fibrillary tremor; absent abdominal, plantar and deep reflexes. Kernig's and Babinski's signs negative. Decreased quantitative reaction to electricity. No reaction of degeneration. The paralysis is everywhere symmetrical and flaccid. The nerve trunks were neither thickened nor sensitive. Pulse 120 and vibratory. Glossy skin and retarded growth of hair. Urine 1023, excess of urates and phosphates. Abdomen swollen with enlargement of mesenteric glands. Temperature ranging between 99° and 101°F., tubercular in nature.

Here we have apparently a case of facioscapulo-humeral dystrophy (Landouzy-Dejerines' type). The peculiar immobility and apparent rigidity of the child was so striking that at first glance the case was thought to be one of diplegic infantile cerebral palsy. Closer examination, however, soon re-

moved this possibility. There was no actual rigidity, no cranial nerve-palsy, no increased reflexes, no history of convulsions, no post-paralytic phenomena.

Palpation showed a peculiar hardness of the muscles such as is found in myositis, but the clinical history excluded this disease. It may, in passing, not be amiss to mention that Jacoby believed pseudo-hypertrophic dystrophy to be due to a chronic inflammation involving both perimysium and muscle tissue and called the process a progressive hyperplastic myositis. Poliomyelitis could also be easily excluded.

Taking up this case, then, as one of progressive muscular atrophy, we find many peculiar features. Its onset at an early age would incline us to believe it to be of an hereditary or familial nature, yet the father is positive that she is the only member of the family affected. Again, Landouzy-Dejerine's type of dystrophy is of slow progression, yet this case seems to have run an acute course. Although this case presents the typical facial and shoulder-girdle atrophy of the Landouzy-Dejerine type, it differs from typical cases in the advanced atrophy in the lower limbs. Indeed, the generalized symmetrical atrophy in this case with the pseudo-hypertrophy in the thighs and not in the calves, as is generally the case, and the early appearance of contractures, is most peculiar. Landouzy-Dejerine claimed that their type of dystrophy is never accompanied by pseudo-hypertrophy, but this has proven false.

CASE III.—J. K. Aet. 23. Painter. Family history negative. About 3 years ago noticed a weakness in hands so that he had to grip his brushes very hard to hold them. Is not positive in which hand this weakness first began but believes it to have been in the left. This weakness gradually progressed until he was compelled to stop work, which was about 18 months ago, when he was first seen by me at the College clinic. He complained also of pains in his limbs and as he had been a painter, lead poisoning was suspected. The extensors, supinators and muscles of the upper arm were involved and it was looked upon as a case of Remak's upper arm type of lead palsy, although the atrophy of the small muscles of the hand and of the interossei was well marked, more so than is usual even in those cases of saturnine neuritis in which these muscles are involved. But 12 months later after a thorough treatment he presented the following picture:

Complete atrophy of the small muscles of the hand of the interossei, of the adductor longus pollicis, biceps, brachialis internus, deltoid, triceps, supinator longus, and brevis, pectorals, the deep muscles of the trunk (erector trunci) glutei.

There was no sensory disturbance objectively or subjectively.

There was also a fibrillary tremor, and a reaction of degeneration could be elicited in a number of muscles. The progression for one year after the supposed cause of his paralysis has been removed, the involvement of the triceps, supinators, thenar muscles, etc., which is atypical of lead palsy, the absence of any benefit from treatment, and the absence of any sensory disorder made the diagnosis one of progressive muscular atrophy.

At one time it had been thought possible to distinguish the dystrophies from the amyotrophies by the muscular changes. Theoretically, this should be the case, but observations have proven its failure in many cases. The spinal type of atrophy was supposed to cause a degenerative atrophy with granular disintegration, the primary muscular type of atrophy a simple atrophy with intact striation and hypertrophy of some fibres. But in some cases in which the autopsy showed spinal changes, the muscular examination revealed a simple atrophy and in

other cases a hypertrophy. Some claim that in these cases the spinal changes are secondary. In other cases again where the muscular changes were supposed to be typical of the spinal form of progressive muscular atrophy, no spinal lesions were discoverable. It has been thought that possibly our present methods of examination are at fault and that nutritive cellular changes occur in the anterior horns which are not discoverable by our present methods of examination.

It is known that simple cutting of a nerve will produce a simple atrophy of it and will be followed later by degenerative changes. The integrity of the ganglionic cells in the anterior horns, it is known, depends to some extent upon the integrity of the periphery which it innervates. We can also assume in some cases that excessive stimulation of the ganglion cells may in time produce degeneration of the peripheral parts without causing any lesion of the ganglion cells.

The pieces of muscle taken from Case 1 were stained by Weigert's, Marchi's, Delafield's and van Gieson's methods. This specimen presented a marked increase in fatty tissue which had in some places completely replaced the normal structures and in other regions was interspersed by some muscular fibres, mostly broken and fissured and showing vacuoles.

The arterioles were markedly enlarged with thickened walls. The muscle-spindles were normal. Numerous intramuscular nerve-fibres colored intensively in the Weigert preparation. The Marchi specimens revealed an extensive lipomatosis.

In Case 2, we found a few hypertrophic fibres, a simple atrophy of many fibres, increase of the nuclei and a few fissured fibres. There was a marked proliferation of the interstitial connective tissue.

The specimens of this case were prepared by Drs. Ewing and Burns.

Many regard the absence of fat-drops characteristic of cases of dystrophy, but numerous observations of their presence in such cases have been made. As myelin also gives the black reaction with osmic acid, and as the protoplasm of muscle-fibre contains a fatty substance, Marchi's methods must be used with caution.

The muscle-spindles, which were intact in both these cases, are, according to the most recent investigations, end-organs which have a special sensory function, being most probably connected with the so-called "muscular-sense." This has not yet been proven, but we are at least satisfied now that they are a normal structure and not an embryonal defect or retrograde degeneration as was formerly thought.

These first two cases illustrate the difficulty in assigning cases to any particular form of muscular atrophy. That the sharp differentiation between the different types is often impossible is accepted, but the significance of symptoms individually or collectively has not yet been shown. Many neurologists are trying to find a neuropathic basis for the dystrophies as well as the myopathies, and look upon them as tropho-neuroses, in which the form or type of cellular change is still unknown. In other words, the impairment in nutrition of the ganglion-cells, invisible to our microscopes at present, causes changes in the muscles which we are able to detect.

Others believe in an embryonal predisposition of the nerve and muscles to malformations and defects, but the experiments of Lenonowa and Petren seem to show that the "embryonal predisposition of the muscles is independent of the nervous system." In want of more exact knowledge, therefore, we can still cling to the idea of a primary muscular disease as no investigator has as yet disproved this.*

POSTDIPHTHERITIC URTICARIA.

By JAS. J. WALSH, Ph. D., M. D.,

of New York.

One of the objections to the use of diphtheria antitoxin which carries most weight in the public mind is the fact that after its administration an urticarial eruption occasionally occurs. Whenever urticaria is noted in cases treated with diphtheria serum it is invariably attributed to the effect of by-products in the antitoxin. It seems worth while then to report a case in which though no antitoxin was employed urticaria developed at just about that stage in the disease when the eruption would probably have occurred if antitoxin were employed.

It seems not improbable that a slight urticaria or erythematous eruption occurs oftener than is reported and has been overlooked because cases untreated by antitoxin are now rare and are usually under the observation of those who would not care to give any special significance to the occurrence of the cutaneous symptoms.

The patient was a girl of about twelve years of age, suffering from a mild form of diphtheria. The throat appearances were not enough of themselves to justify a clinical diagnosis of diphtheria. There were some discrete patches of exudate, especially on the left tonsil. The fever reached 101.5°, the pulse 110. A culture, taken from the throat, however, showed the presence of diphtheria bacilli and the case was reported to the Board of Health and quarantined by their directions.

A number of subsequent cultures were made from the throat, and, according to the health authorities, Klebs-Löffler bacilli continued to be present in the mouth and pharynx for several weeks.

The patient suffered from a previous attack of diphtheria some three years ago. At that time diphtheria serum was employed. The father, a newspaper man, had, as have so many of the literary folk, opinions of his own in medicine. He was persuaded beyond all possibility of change of opinion that, as the result of the administration of the serum on that occasion, the child's throat contained delicate ever since. He had frequently expressed the opinion that he would not permit the use of diphtheria serum if the disease should develop again. At the time of the child's illness he was away, and the child was in charge of a female relative, who hesitated to take the responsibility of allowing antitoxine to be employed, knowing as she did the father's objection to it.

As the case was a mild one, I consented, under the circumstances, to treat it without antitoxin, though with the distinct understanding that if serious symptoms should begin to show themselves, antitoxin would be employed. On the evening of the third day the affection seemed to reach a maximum and began to subside almost by crisis. On the evening of the fourth day, while the child was being transferred from one bed to another for the night, some urticaria was noticed on the parts exposed for the moment. Some itching spots developed on the ankles and on the lower arms. At this time the patient was practically convalescent from the diphtheria.

During the fourth day the exudate had disappeared from the throat, and on the fifth day the temperature was

nearly normal. On the evening of the fifth day there was another attack of urticaria, that lasted as on the preceding day, for about half an hour. At this time the child's temperature and pulse were practically normal and the appetite was beginning to return.

In a word we seem to have had in this case an urticaria that corresponded at least in certain respects with the urticaria that develops after the injection of diphtheria antitoxin. It occurred during the time when nature by her vital reaction was just succeeding in neutralizing the toxin of diphtheria present in the blood. It would almost seem that as in the case of the diphtheria serum certain accessory physiological principles were manufactured in the human system at the same time with the neutralizing principle which modified the course of the diphtheria, and that these by-products aided by external irritation were the cause of the urticarial eruption. The urticaria occurred as is usual in these cases at points where the exposure to the air and the friction of garments produced a certain amount of cutaneous irritation. This was sufficient to predispose to the nervous edematous condition we know as urticaria.

In the light of its significance as regards eruptions produced by the protective serum obtained from the horse this case seems especially interesting. It suggests the idea that urticaria and other cutaneous eruptions should be looked for more carefully in diphtheria. We do not as yet know the reasons for the occurrence of such eruptions. Even in seemingly normal individuals very slight disturbances of digestion are sufficient to produce them in the predisposed. That they are due to an idiosyncrasy in most cases we are convinced by the fact that even slight indulgence in so harmless an article of diet as strawberries may produce decided urticaria, that quinine in very small doses may have a similar effect, and that even small amounts of ordinary shellfish may be followed by an excessive urticarial reaction.

With regard to the urticaria, erythema and other skin lesions which follow the administration of diphtheria serum, idiosyncrasy of the patients and perhaps meteorological conditions would seem to have much more to do with their causation than anything in the serum itself. In a careful series of observations on alternate cases of diphtheria treated with six thousand and with two thousand units of diphtheria antitoxin, the New York City Board of Health found no more tendency to cutaneous eruptions with the larger dose than with the smaller one. In Boston immense doses of serum have recently been employed in seemingly hopeless cases of diphtheria and at times with excellent results. From forty to eighty thousand antitoxin units have been administered within three days and yet the patients have as a rule not suffered anymore from cutaneous lesions than those to whom much smaller doses were given. Certainly the amount of the cutaneous eruptions bore no direct ratio to the amount of serum administered and the skin complications never seemed to prove a contraindication to the use of as large a dose of serum as the physician might care to employ.

The cutaneous manifestations are often accompanied by corresponding conditions of the mucous

*A complete discussion of this question will be found in Pick's article in the 1. Heft, 17th Band of the Deutsche Zeitschrift fuer Nervenheilkunde which also gives a good bibliography.

membrane. These give rise to definite symptoms that have been recognized in many cases. For these too the employment of large doses of serum does not seem to make matters worse. At times albuminuria is noticed at the beginning of diphtheria and at times only after the disease has run its course for several days. In a certain number of cases the albuminuria apparently develops only after the administration of the diphtheria serum. In these cases the antitoxin was supposed to be an irritant for the kidneys, as was assumed also for the skin and the albuminuria was supposed to correspond to the urticaria and erythema. We know that the albuminuria is usually due entirely to the diphtheria itself. The experience in Boston was that when the albuminuria was very marked the administration of large doses of the serum was the best remedy to lessen the kidney symptoms. The neutralization of the toxin of diphtheria seems to reduce the amount of irritating material that the kidneys have to eliminate and so proves ideally therapeutic for the condition.

It is probable that careful study of the conditions produced by the diphtheria itself will free the diphtheria serum from many of the suspicions which have hitherto been attached to it. It has been the custom, so far to a very great extent, to assume that every unusual symptom, which developed after the administration of diphtheria serum, was directly due to the serum. Some of them are undoubtedly due to anomalies in nature's protective reaction against the toxins of the disease. Many of the others find their true etiology in the secondary infections which so often accompany diphtheria and so often give rise to the mild pyemic symptoms that we are accustomed to see not infrequently in so-called rheumatic conditions, under almost the same circumstances.

Obliterating Phlebitis of the Hepatic Veins.—Rendu and Poulain report the rare case of an obliterative phlebitis occurring in the hepatic veins, in a man of 35. (*Bulletins et Memoires de la Societe des Hopitaux de Paris*, June 6, 1901, No. 19). After some months of gastric symptoms, he noted that he was emaciating, and that his abdomen was increasing in size. Later epistaxis occurred frequently, then a sudden chill appeared, and he came to the hospital. The conjunctivæ were injected and jaundiced. He had some fever, his abdomen was tympanitic, with some ascites, and there was tenderness about the umbilicus. The subcutaneous veins of the abdominal wall were markedly dilated. The liver was normal in size, but the spleen had enlarged. Diagnosis was extremely difficult. Cirrhosis of the liver seemed most probable. Before death it seemed possible that a gastric neoplasm existed with secondarily enlarged glands compressing the vena cava. The autopsy, however, showed phlebitis of the hepatic veins. These were obliterated, thus destroying about 4/5 of the liver circulation. To overcome this, the collateral circulation was overtaxed, with the gastric symptoms, the dilated superficial veins, and the ascites resulting. There was no sclerosis of the liver at all, nor was any tumor found in the stomach. The stomach and spleen showed sclerosis, probably from the amount of alcohol taken by the patient habitually. This may explain the phlebitis of the hepatic veins, causing a condition of hepatic apoplexy. [M. O.]

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended September 28, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	San Francisco	Sept. 14-21	1	
INDIANA:	Michigan City	Sept. 24-Oct. 1	4	
KENTUCKY:	Lexington	Sept. 21-28	1	
MASSACHUSETTS:	Boston	Sept. 21-28	2	1
MICHIGAN:	Detroit	Sept. 22-29	1	
NEBRASKA:	Omaha	Sept. 14-21	1	
NEW JERSEY:	Newark	Sept. 21-28	6	5
NEW YORK:	Elmira	Sept. 21-28	4	
	New York	Sept. 21-28	5	3
PENNSYLVANIA:	Philadelphia	Sept. 21-28	29	
OHIO:	Youngstown	Sept. 21-28	1	
UTAH:	Salt Lake City	Sept. 14-28	2	
WASHINGTON:	Tacoma	Sept. 15-22	1	

SMALLPOX—Insular.

PHILIPPINE ISLANDS:	Manila	Aug. 3-10	1	
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SMALLPOX—Foreign.

AUSTRIA:	Budapest	Sept. 2-9	2	
BELGIUM:	Antwerp	Sept. 7-14	1	1
BRAZIL:	Pernambuco	Aug. 8-15	56	
	Rio de Janeiro	Aug. 4-18	114	
COLOMBIA:	Panama	Sept. 16-23	15	
GREAT BRITAIN:	London	Aug. 24-Sept. 7 1899	15	
ITALY:	Naples	Sept. 7-14	57	6
RUSSIA:	Moscow	Sept. 7-14	2	1
SPAIN:	Madrid	June 17-July 15	6	

PLAGUE—Insular.

PHILIPPINE ISLANDS:	Manila	Aug. 3-10	6	3
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PLAGUE—Foreign.

AUSTRALIA:	Brisbane	June 1-30	3	
BRAZIL:	Rio de Janeiro	Aug. 4-18	6	
CHINA:	Canton	Aug. 5, diminishing.		
ITALY:	Naples	Sept. 7-30	15	4

YELLOW FEVER.

BRAZIL:	Pernambuco	Aug. 8-15	1	
	Rio de Janeiro	Aug. 4-18	3	
CUBA:	Havana	Sept. 4-21	3	
	Santiago	Sept. 20	6	1
MEXICO:	Vera Cruz	Sept. 14-21	5	2

CHOLERA.

JAVA:	Batavia	Aug. 3-17	5	3
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Changes in the Medical Corps of the Navy, Week Ended October 5, 1901.

SURGEON P. LEACH, ordered to recruiting duty at Port Royal, S. C.—Sept. 30.

SURGEON P. LEACH ordered to recruiting duty at Port Royal, S. C., revoked—Oct. 1.

ASSISTANT SURGEON E. J. GROW, ordered to proceed home upon detachment from the Castine, modified; ordered to the New York Navy Yard—Oct. 2.

MEDICAL DIRECTOR J. C. AYERS, detached from the Naval Hospital, Chelsea, Mass., October 15, and ordered home and to wait orders—Oct. 3.

MEDICAL DIRECTOR D. DICKINSON, detached from duty on medical examining board at Washington, D. C., October 10, and ordered to duty in charge of the Naval Hospital, Chelsea, Mass., October 15—Oct. 3.

SURGEON S. H. GRIFFITH, detached from duty at the Pan-American Exposition, Buffalo, N. Y., October 9, and ordered to duty as a member of the medical examining board, Washington, October 10—Oct. 3.

SURGEON H. L. LAW, retired, ordered to duty at Buffalo, N. Y., in charge of the exhibit of the Bureau of Medicine and Surgery at the Pan-American Exposition, and as attending medical officer at the naval recruiting rendezvous, October 9—Oct. 3.

ASSISTANT SURGEON D. B. KERR, detached from the Culgoa, when put out of commission, and ordered home and to wait orders—Oct. 3.

The Philadelphia Medical Journal

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See Advertising Page 8.

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The Cerebrospinal Fluid After Spinal Cocainization.—The use of the subarachnoid space for the purpose of producing general anesthesia, without loss of consciousness, by the injection of cocaine after lumbar puncture has resulted in much careful study concerning the physiological action of the drug when thus introduced, the cause of the post-anesthetic symptoms and the application of the method to general surgery. We have twice referred to the dangers of this method of producing anesthesia during the current year (*Philadelphia Medical Journal*, Vol. vii, No. 3, p. 91; No. 8, pp. 359 and 360); once after reading a paper by Richardson, of Boston, and the second time concerning a résumé by Tuffier, of Paris. At the meeting of the *Société de Biologie*, held June 22, 1901, (*Gazette Hebdomadaire de Médecine et de Chirurgie*, June 27, 1901), Ravaut and Aubourg reported the results of a study of the cerebrospinal fluid after spinal cocainization. Although, fortunately, this method of producing general anesthesia has not resulted in many deaths, headache, vertigo and vomiting have been noticeable post-anesthetic complications, sometimes severe enough to cause alarm. The authors, with the idea of lessening the intensity of the headache, have made a second lumbar puncture several hours after the operation, hoping to remove some of the free cocaine from the cerebrospinal fluid and to diminish the tension of that fluid, if possibly it was under increased pressure. The second lumbar puncture seems to have had the result desired, that is, it has lessened the severity of the headache. Furthermore, it was noted that the more the headache, the greater was the pressure of the fluid in the subarachnoid space. In cases of very intense headache, the authors were able to withdraw 20 cubic centimeters of turbid fluid, which, as a rule, flowed in a jet. On the other hand, in cases of slight headache, they obtained a small quantity of clear fluid which dropped from the trochar. In the turbid fluid, which evidently existed under considerable pressure, histological examination showed the presence of polymorphonuclear leukocytes which, in some instances, formed a true clot of pus in the bottom of the centrifuge tube. In other cases, the inflammatory reaction

was so marked that a fibrin clot formed after the fluid was allowed to stand for a time. The number of the leukocytes seemed to vary according to the intensity of the headache. At the same time, in nearly every case, even when there was no post-anesthetic headache, a very slight polymorphonuclear reaction was noted in the cerebrospinal fluid. Indeed, out of twenty-one specimens examined several hours after the anesthesia, the fluid was found absolutely normal once only. In those patients in whom an intense reaction was shown, repeated lumbar puncture showed that in from eight to twenty days the polymorphonuclear reaction gave place to lymphocytic reaction, and this, in turn, disappeared, leaving a normal fluid. This is exactly the course of events that is noted in those cases of acute infection of the meninges that end in recovery. This is not a reaction of infection in the case of spinal cocainization, because, of course, all aseptic precautions have been taken in preparing the solution and in doing the operation. After excluding all sources of infection, the authors concluded that the cocaine itself produced the reaction and that its action on the pia mater and the arachnoid was similar to that of a toxin, thus explaining all the inflammatory, exudative and diapedetic phenomena observed. Clinically, headache is the manifestation of these changes. The authors think that their study shows that, on account of the rapid disappearance of the exudate, the fears that have been entertained concerning spinal cocainization are not justified. From the clinical viewpoint, Tuffier has already stated that the method of producing anesthesia by the subarachnoid injection of cocaine is perfectly safe. We can hardly agree with such dogmatic statements. A substance that acts like a toxin and that produces anatomical changes similar to those produced by an acute infection of the spinal meninges cannot be perfectly safe. General anesthesia by chloroform, ether or nitrous oxide is not perfectly safe. Deaths have occurred from the administration of all these substances, and every patient who inhales any of these for the purpose of producing general anesthesia takes a certain risk, small, it is true; but nevertheless, a risk. And so

with spinal cocainization, the study here reviewed confirms our opinion, previously expressed, that while the danger is reduced to a minimum when minute attention is given to all the details of the administration, let the vigilance be relaxed, and accidents become imminent.

The Search for the Parasite of Cancer.—The problem of the discovery of cancer has occupied so much attention lately, that there has been danger of forgetting the results obtained by accurate observers. It must not be forgotten that this problem, in spite of the work of Gaylord and Schuler, is perhaps not now much nearer elucidation than it has ever been. Parasites of cancer have been discovered so often by men who are apparently convinced of their absolute authenticity, that the modern sceptical medical man will require the strongest evidence and the most thorough confirmation before he is convinced. Indeed it is not impossible that the problem will never be solved. It would seem the easiest thing in the world to determine the parasite of small pox. The lesion is circumscribed and specific, and yet it still escapes us. The thousands and hundreds of thousands of sections, cultures and what not that have been made at the Pasteur Institute for the purpose of detecting the organism of hydrophobia, made with the most elaborate appliances, and by masters of bacteriological technique, have been utter failures, and yet, therapeutically, small pox and hydrophobia are both, to a large extent, under our control.

Newcomb has done well to call our attention to the fact that the discoveries that seem most imminent are usually those that are never made, and he instances, as of course a mathematician would, the tri-section of an angle, the squaring of a circle, and the doubling of a cube, and it may be that these problems are not more difficult than the discovery of the parasites of small pox, hydrophobia, and carcinoma. It behooves us then to turn to clinical experiences in order to ascertain if possible what benefit is to be derived from the methods of treatment already in vogue.

The Treatment of Cancer.—In a recent address before the Medical Association of Halle, Leser (*Münchener medicinische Wochenschrift*, August 13th, No. 33) has given the results of his experience with 529 cases which were subjected to operation or other methods of treatment at his hands in the decennium from 1890 to 1900. Of these, 392 cases were certainly malignant tumors, and of these 392 cases he has been able to determine the outcome in 305. Seventy-eight have survived for varying

periods of from two to eleven years—that is, 19% of all the malignant cases, a remarkably large and most encouraging proportion. Leser calls attention to the fact that apparently the most fatal forms of carcinoma are those of the tongue and the esophagus, and it is interesting to note that 29 of the cases that have survived were of carcinoma involving the gastro-intestinal tract or the rectum. What methods, we are justified in demanding, have produced this very favorable statistical result? Leser believes in two things: early diagnosis, and radical operation; and the latter he performs as soon and as thoroughly as possible. Apparently he does not hesitate to operate upon any portion of the body, resecting carcinomata from the stomach or intestines, or extirpating the rectum with perfect sang froid. In carcinoma of the stomach he believes that our present methods of diagnosis according to the usual methods, are so inadequate and unsatisfactory that, in exceptional cases, an exploratory operation is not only justifiable, it is imperative. This is radical, and yet to our mind it seems good doctrine, until, at least, our friends, the pathologists, have furnished us with a canceroin that is actually curative. In regard to cases apparently too far advanced, Leser is also radical. He believes in operation, if it offers the slightest chance for cure or for ameliorating the condition of the patient, or in the most desperate cases, in the hope that, if nothing else is accomplished, at least the patient will die sooner and more easily. He vigorously condemns the policy of certain so-called frank and honest surgeons who tell their patients that they can do nothing for them and send them away. Even in the last stages of malignant tumors, the patients may be encouraged and relieved of pain, and if they are abandoned by the regular physician they are only too likely to fall into the hands of charlatans and quacks, who are more likely to increase their misery, and are certain to deplete their purses. Taking it all in all, Leser's article is encouraging. We can do something already to cure carcinoma, and it is not unlikely that in the future improvements in diagnostic and surgical technique will enable us to control the majority of all cases. A point that it seems to us has been too greatly neglected, is the possible prevention of carcinomatous infection by the careful sterilization of all discharges from the ulcerative carcinomatous surface. This would include the vomitus of gastric carcinoma, and the fecal evacuations of all forms of carcinoma of the gastro-intestinal tract.

Smallpox in Philadelphia.—There is undoubtedly more smallpox in Philadelphia than is desirable, but there hardly seems occasion as yet to be unduly alarmed over the situation. Last week there were

sixty new cases reported with two deaths. As we have pointed out not infrequently in these columns, smallpox has prevailed in many parts of the United States for several years past in an exceptionally mild form, and it is to be hoped that, if Philadelphia is destined to have an epidemic of the disease, it will not be an exception to this rule. The desirability of wide-spread vaccination, however, is evident, and we have been glad to note that there is quite an extended demand for it among the people.

This should be encouraged by physicians everywhere. The law requiring all school children to be vaccinated or to show satisfactory scars is being universally observed. If there is any one thing proved in preventive medicine it is the efficacy of vaccination. This is no time, with the disease at our doors, to stop to debate the question with the few wrong-headed individuals who hold out against this beneficent practice. Such persons fortunately are rare in this city, and their opposition, which is mostly only verbal, will not materially affect the well-nigh universal custom.

Children as Carriers of Tuberculous Infection.—

A very interesting series of experiments has recently been carried out by Dieudonné, (*Münch. med. Woch.*, 1901,) for the purpose of determining to what extent children crawling on the floor are capable of infecting themselves by conveying tubercle bacilli from the dust to the cavities of the nose and mouth. For this purpose he made a number of experiments by carefully rubbing the hands and the cavities of the nose with small wads of cotton, then soaking these wads in bouillon and making cultures, inoculations and stains from them. In all cases he endeavored to examine children living in the houses with parents known to be suffering from tuberculosis. Altogether he investigated 15 children, and of these two proved to be bearing infectious tubercle bacilli, that is to say, in one case two guinea pigs inoculated with dust from the hand died. The mother of this child of 15 months was suffering from tuberculosis, and her expectoration contained tubercle bacilli. In the other case the bacilli were found both upon the hands and in the nose, and the father of the girl of 18 months had tuberculosis with bacilli in the sputum. The extreme importance of these investigations cannot fail to impress every reader. The danger of allowing children to creep upon the floor in any place where it is possible that tubercle bacilli should exist, is, we believe, a subject for serious consideration. Not only may they infect themselves, but it is quite possible that they could infect other children, or even adults. The very large proportion—2 out of 15; that is, over

13 per cent.—of the small number of children examined, is quite startling. Until we can teach the laity to be more careful than they are, such investigations are only another argument in favor of the segregation of consumptives.

Serumtherapy in Diphtheria.—At the recent meetings of the Medical Societies of the Paris Hospitals, the antitoxin treatment of diphtheria has again been discussed. First Voisin and Guinon described an epidemic of diphtheria in the Salpêtrière Hospital among idiots and epileptics. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, June 13, 1901). Prophylactic injections of antidiphtheritic serum were given to all those exposed to the contagion, 10 c.c. to those over 10 years old, 6 c.c. to the younger children. After that but four cases appeared, all mild in character, without fever or enlarged glands, and with small, thin membranes which quickly disappeared. One severe case developed, however, two weeks later, ending fatally in 24 hours. This shows that the prophylactic action of the antitoxin, while efficacious, is not of very long duration. In the discussion which followed, Variot alone failed to agree with Voisin and Guinon in the good results to be obtained from the use of antidiphtheric serum employed prophylactically. Barbier and Lobligeois discussed the prolonged, recurring and relapsing forms of diphtheria. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, June 20, 1901). In severe epidemics of diphtheria, ordinary doses of antitoxin seem to have but little effect. Either the disease is not benefited, though not necessarily made worse, or temporary relief follows the injection, with a recurrence of symptoms later. Relapses frequently occurred in the recent epidemic at the Trousseau Hospital. Large initial injections of antidiphtheritic serum were given and these were repeated often. Out of 325 cases, membranes persisted over three days after the injection in 50 patients; in a few cases they persisted until the twelfth day. Injections of from 10 to 40 c.c. were given on admission, repeated upon the second or third day. In 15 cases new membranes formed during the week following the disappearance of the first membranes, even though repeated doses of antitoxin had been injected. In false membranes situated upon spots other than the tonsils and pharynx, staphylococci and streptococci were generally found with the diphtheria bacilli. Very large doses of antitoxin were injected when tracheo-bronchitis occurred, or with the signs of grave intoxication, especially before paralysis or bulbar symptoms developed. Yet death followed, even though 105 c.c. of antidiphtheritic serum had

been injected. They reported a large number of cases in full. Méry stated that, in diphtheria secondary to measles, large injections of antitoxin are also necessary to produce any effect. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, June 27, 1901).

The Perilous Adventure of an Old Medical Book.

—The problem of what becomes of all the old books has had a curious light thrown on it by a recent occurrence in Philadelphia. In a large paper mill in this city a great pile of waste paper was being passed into a machine in order to be reduced to pulp. One of the proprietors who happened to be standing by, saw a rather dilapidated old book on the heap, and picking it up observed that it was a Latin work on surgery. Thinking it might be of value, he rescued the old tome and brought it to the editor. It proved to be a copy of the second edition of the Latin translation of the complete works of Ambrose Paré. The title page was unfortunately torn out and the old vellum binding had been torn off, but otherwise the book was in excellent preservation. It was published at Frankfort in 1594, and its full title (which we have verified by comparing the book with the copy in the Library of the College of Physicians) is:—"Opera Chirurgica Ambroisii Paracii * * * A Docto Viro, plerisque locis recognita et latinitate donata, Jacobii Guillemeau, Francofurti, MDXCIII."

The first edition of Paré's collected works was in French, published in 1575 at Paris. There were at least twelve editions issued in the original French up to 1664, besides the editions in Latin, German, Dutch and English. The copy thus rescued from the maw of the paper machine cannot be considered extremely rare, but it is at least too venerable and too valuable a book to be ground up into bits. The query now arises, how did this aged book (more than three centuries old) find its way into a Philadelphia paper mill? Is this another case of imperial Caesar dead and turned to clay? Has Ambroise Paré so fallen from his high estate that his venerable relics are to be converted into a few cent's worth of pulp? Think of it. Three hundred years of dignified Latinity sacrificed to make a piece of modern blank paper!

The Health of the Sultan of Turkey.—A curious psychological study of the Sultan, Abdul-Hamid II, is presented in a recent work by Georges Dorys. The author, who seems to have had unusual opportunities for studying his subject, describes the Padi-shaw as a chronic neurasthenic; one, indeed, who has advanced into a state of monomania; a victim of the delirium of power, suffering from that type of men-

tal perversion which is known by the French as the "Persecuting-persecuted". According to Dorys, the Sultan's mental and nervous state is due entirely to his environment, which is a curious medley of grandeur and slavery, autocracy and superstition, luxury and squalor, imperious sway and grovelling ignorance. The political and social conditions which surround the present Caliph are perhaps unprecedented; while they have some things in them to suggest the imperialism of ancient Rome and the oriental glamour of mediæval Baghdad, they are on the whole a mere relic of barbarism—an anachronism and a sort of vaudeville, kept going not by any internal vitality, but by the mere jealousy of the European powers. When and how soon some stupendous crash may come cannot be foretold—but the mere uncertainty, and the strain of trying to be Sultan, have told sadly on the nerves of Abdul Hamid. He lives in a state of nervous tension in which the fear of assassination is the great motive power of his life and of his policy. He dies a thousand deaths in trying to avoid one. Dorys says that the haunted potentate has even studied the latest of all the sciences—bacteriology—and as a consequence has become a sort of mysophobiæ. In everything he sees a germ, and magnifies its power for evil beyond even the speculation of modern pathology. A new name has even to be invented for the mental disease of the imperial paranoiac, and he is said to suffer from "microbiophobia".

It is worth while to recall that the Sultan's brother and immediate predecessor (who is still living) is insane, and that the Sultan inherits a tendency to phthtisis from both his father and his mother. Considering the unhygienic surroundings and peculiar personal habits which are supposed to exert their influences on every Sultan, it is perhaps remarkable that the house of Osman has continued in direct descent for more than six hundred years.

Medical Bulletins.—We publish elsewhere a clipping from the *British Medical Journal* referring to some criticisms by Sir Dyce Duckworth, contained in a letter to the *London Spectator*, upon the medical bulletins issued by the attendants on President McKinley. Sir Dyce Duckworth shows plainly that it is easy to criticise from a distance, and also that he has little appreciation of the extreme tension of public feeling and anxiety in this country while the President was lying ill. This was not a question merely of taste. Details from the sick chamber are not always pleasant reading, and when published in the daily press in all their baldness they are likely somewhat to offend the sensibilities of some people. In a case such as the President's, however, there was every reason why a full and frank statement of

the symptoms and treatment should be given to the public. To have acted otherwise would have been to expose themselves to well merited criticism, and the physicians and surgeons in the case showed their good judgment in nothing more than when they took the public into their confidence.

Reviews.

Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and Frederick Peterson, M. D., Chief of Clinic, Department of Nervous and Mental Diseases, and Clinical Lecturer on Psychiatry, College of Physicians and Surgeons, New York. Third Edition, Revised and Enlarged. Handsome octavo volume of 870 pages, with 322 illustrations. Philadelphia and London; W. B. Saunders & Co., 1901. Cloth, \$5.00 net.

In our review, in this journal, of the first edition of this work, we called attention to the fact that the book is not the joint work of the two authors, but consists of two separate treatises, the first on nervous diseases by Dr. Church and the second on mental diseases by Dr. Peterson. This plan is, of course, still adopted in this edition, and it has many advantages, as the purchaser thus obtains really two text books within the same covers. We have little to say in addition to the praise which we expressed for the first edition. We regard the work as admirably done both by Dr. Church and by Dr. Peterson. The authors announce in this edition that the book has been thoroughly revised in every particular, that new subject matter has been added, that old subject matter has been re-arranged wherever necessary, that a number of new illustrations have been introduced, and that other changes have been made in order to bring the work fully up to date. As these changes are necessarily scattered all through the text and have not been especially indicated, it is impossible for us to criticize them in detail, but we have no doubt that they are in accord with the general good character of the work, and serve to maintain its high standard. We observe that Dr. Church persists in speaking of a decussation of the seventh nerve, an error which we pointed out in our former review. In his present edition, however, he evidently means the decussation of the neurones which unite the seventh nerve nuclei in the pons with the cortex of the brain. These neurones, however, do not contain any part of the seventh nerve, because the seventh nerve consists properly of the lower order of neurones which have their cell bodies in the nuclei in the pons, and the axis-cylinders of which compose the nerve trunk proper. This trunk proper of the seventh nerve below the nucleus does not decussate. This is a point on which it is desirable to be perfectly clear, because students especially might be confused by not distinguishing between these two orders of neurones. We have found nothing else in the work to especially criticize, but, as we have already said, a great deal to commend. [J. H. L.]

The Diagnostics of Internal Medicine. A clinical treatise upon the recognized principles of medical diagnosis. By Glentworth Reeve Butler, A. M., M. D., Chief of the Second Division, Methodist-Episcopal Hospital; Attending Physician to the Brooklyn Hospital, etc. 1,059 pages, 246 illustrations and charts, 5 colored plates. D. Appleton & Company, New York, 1901.

This work, which deals not only with semiology and symptomatology also considers the diagnosis of individual diseases usually included in the province of the practice of medicine. The special chapters relating to diagnosis are well written, the material being presented in a clear, terse style, well adapted to the requirements of the student. The part devoted to physical diagnosis is clear, and shows the latest knowledge and opinions in relation to the causation of rales and murmurs. The book is profusely illustrated, and here is perhaps the only adverse criticism which we should be compelled to make. In our judgment there is absolutely no necessity for presenting nude female

figures to represent signs and symptoms of disease. In a medical work this, in our opinion, can be done diagrammatically as well, if not better. The artificial lines dividing the chest are better illustrated upon the male than upon the female thorax. The book is well printed; the illustrations are good, and the student will find much of value expressed in easily understood language, which will make his conceptions of the intricate problems of diagnosis plain and more readily remembered. We predict a large sale for the volume. [J. L. S.]

Introduction to the Study of Medicine. By G. H. Roger, Professor in the Faculty of Medicine of Paris. Authorized Translation of M. S. Gabriel, M. D. New York: D. Appleton & Co. 1901.

This work, which the author claims is particularly written for students, may be read by every practitioner of medicine with profit. The material is handled in such an interesting manner that the reader seems to be perusing an interesting scientific work without appreciating at the time that he is learning or relearning many things of importance in his every day work. Professor Roger presupposes that the beginner in medicine is acquainted with many branches correlated to the great study of medicine. This may be true of European students who enter upon the study of medicine. It is, however, only exceptionally true of the American student. Thus, in reading the chapters upon physical agents and chemical agents it is taken for granted that the student already has a knowledge of physics and chemistry. The book is well translated, and printing and paper all that could be desired. [J. L. S.]

A Text-Book of the Practice of Medicine. By Dr. Hermann Eichhorst, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Authorized Translation from the German Edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital; Assistant Physician to the Orthopedic Hospital and Infirmary for Nervous Diseases. In two volumes. With 169 illustrations. W. B. Saunders & Co., Philadelphia and London, 1901.

Eichhorst's Practice of Medicine is a classic wherever the German language is spoken, and it is surprising enough that the work has not been rendered into English before this. The first work published by Eichhorst is a large one in four ponderous volumes. This was condensed into one volume by Eichhorst, of which the work before us is a translation. It is, however, more than a mere translation, for the editor has adapted it to the needs of the American student and has done it well. The printing, paper and illustrations (many new ones are added) are all that could be desired. [J. L. S.]

Transactions of the American Electro-Therapeutic Association. 1899-1900. F. A. Davis Co. Philadelphia. 1901.

This volume contains the proceedings of the last two meetings of the American Electro-Therapeutic Association, at which over forty papers were presented, not one of which was of extraordinary worth. Some electro-therapeutic novelties were reported, such as the electrostatic treatment of rheumatoid arthritis and neurasthenia, by Snow; mercuric cataphoresis for cancer, by Massey, etc., the value of which time only can determine. Among the few papers of interest to the ordinary physician are those upon "Electricity in Respiratory and Cardiac Failure," by A. D. Rockwell, and "The Treatment of Uterine Diseases with Electricity," by Félix La Torre. [M. O.]

An International System of Electro-Therapeutics. Edited by Horatio R. Bigelow, M. D. Second Edition. Revised and brought up to date, with several New Departments embodying the most recent developments of the science. Edited by G. Betton Massey, M. D. Thoroughly illustrated. Royal Octavo. Pages x-1147. Price net, delivered, Extra Cloth, \$6.00; Sheep, \$7.00; Half-russia, \$7.50. Philadelphia: F. A. Davis Company, Publishers.

This large volume contains the manifold uses to which electricity has been applied in the effort to cure disease. Nothing thus far discovered in the domain of electro-

therapeutics, either good or bad, seems to have been omitted by the thirty-seven contributors, many of whom are specialists in electro-therapeutics. Electricity is fully described and its uses are explained, with many details, which will puzzle the general practitioner; while to later developments, such as electricity in the treatment of aneurysm, the cataphoresis of mercury in cancer, and the Röntgen rays, entire new chapters are devoted.

The initial chapter, a historical sketch of the rise of electricity by J. Mount Bleyer, will interest the layman as well as the physician. W. J. Herdman briefly explains the necessity for the special education of the medical man in electro-therapeutics, while electro-physics and electro-physiology are treated in full by A. W. Duff and A. P. Hrubaker. Of interest to the zoologist will be the chapter upon Animal Electricity by Wesley Mills. Dr. Massey's intricate article follows, containing a full description of the services to be obtained from the galvanic current. The faradic current is described by Henry McClure, while Max J. Stern gives a concise and comprehensive review of the Röntgen rays. Electro-Diagnosis, by W. F. Robinson, will be easily understood, while the good accomplished by cataphoresis, a subject of which the ordinary physician generally knows but little, is demonstrated by Frederick Peterson.

The rest of the book is divided into three almost equal parts, giving the uses of electro-therapeutics in gynecology and obstetrics; in diseases of the nervous system, of the abdominal and thoracic viscera, and of childhood; and in surgery. Among those who contribute gynecological or obstetrical articles are Grand and Famarque, A. Tripler, A. H. Golet, J. M. Baldy, F. H. Martin, J. H. Kellogg, A. L. Smith, Cole, Jarman, and Grandin, E. L. H. McGinnis, and G. B. Massey. The nervous system is discussed by C. E. Riggs, W. J. Morton, W. M. Leszynsky, and Morton Prince; the alimentary tract by A. D. Rockwell; intestinal occlusion by Larat; the lungs and heart by N. S. Davis, Jr.; and pediatrics by Mary P. Jacobi. In the section upon Electro-Surgery, L. A. W. Alleman has an article on Ophthalmology; C. E. de M. Sajous on Rhino-Laryngology; D. D. Stewart on Aneurysm; R. Newman on Hypertrophy of the Prostate; J. I. Parsons on Cancer of the Uterus; G. B. Massey on Mercuric Cataphoresis for Cancer; J. Byrne on Electro-thermal Surgery; Henrietta P. Johnson on Facial Blemishes; and P. S. Hayes on Skin Diseases.

The volume is singularly free from typographical errors. The system of lettering each section of the book, and of then giving numbers to the pages of each section, will confuse the man who seeks one article in a hurry. Nor is it clear why Parsons' article on Cancer of the Uterus is placed in the section upon Electro-Surgery, and not in that upon Gynecology and Obstetrics. While a most prejudiced estimate of the value of electro-therapeutics is gleaned from the perusal of this volume, there seems no doubt that it will find a place as a book of reference both for the general practitioner and the specialist. [M. O.]

Medical Bulletins.—Last Saturday's *Spectator*, (*British Medical Journal*, for October 5, 1901), contained a letter from Sir Dyce Duckworth commencing in rather severe terms upon the communications made to the lay press during the late illness of President McKinley by his medical attendants. Sir Dyce Duckworth expresses the opinion that they were furnished with but slender regard to the decency and respect due to the privacy of the patient, and that many related to matters of treatment which were obviously unfit to be read, much less to be discussed, by the general public. He further speaks of the publication of such bulletins as a new departure and bad example afforded by America. We venture to think that Sir Dyce Duckworth is too severe in his condemnation and historically not quite correct. Everyone must allow that not only was President McKinley, as the Chief Magistrate of the United States, a patient of quite an exceptional position, but its tragic circumstances made the illness of especial interest, while there was an intense and not unnatural desire on the part of the public to be kept accurately informed of the progress of the patient. It is reasonable to make allowances for these circumstances and to recognize, that details were justifiable in this case which would ordinarily be withheld. Moreover, is it correct to say that this practice of publishing details

of the illnesses of great persons was unknown a few years ago? We possess a letter written in 1891 by an eminent surgeon (now deceased) to Queen Victoria, a man of long experience and ripe judgment, in which, referring to the subject of medical bulletins, he wrote that such statements have always been published by those "who have been in attendance on members of the Royal Family during serious illness. This custom has been observed longer than anyone living can remember, and its maintenance is not dependent on those by whom these bulletins are signed." We have referred to the *Times* for 1830, about the time of the death of George IV, and find that daily bulletins were published and signed by Sir Henry Hallford and Sir Matthew Tierney, and that after the King's death fuller details of the illness were given in the obituary notice. While we share the objection to signed medical bulletins, and the appearance in the newspapers of details from the sick rooms of citizens of more or less public importance, we think it must be held that rulers of States and members of reigning families constitute exceptions. It is quite possible that Sir Dyce Duckworth had in his mind particular passages which erred in point of taste, but, speaking generally and from recollection of the official bulletins, we do not think that the physicians and surgeons in attendance upon President McKinley published anything that was unworthy of the medical profession.

Correspondence.

MOSQUITOES AND YELLOW FEVER.

By JOHN H. PURNELL, M. D., Vicksburg, Miss.

To the Editor of the *Philadelphia Medical Journal*:

In your issue of August 24th is noted the very able criticism of my article by Assistant Surgeon Bispham. It is gratifying to see that interest is manifested in yellow fever, a subject of such great importance to the people of our country, especially to those of the South Atlantic and Gulf States. In discussions and investigation of yellow fever, its causation, and conveyance, only the desire for truth should actuate our efforts, and no one should welcome the discovery of an error more heartily than he who makes it.

Dr. Bispham's criticism covers my article pretty thoroughly, but not entirely. The paragraph in it touching the primary infection is not alluded to. This seems to me of vital importance. The Army Commission says that the insect is infected solely by stinging an individual suffering with yellow fever, and since yellow fever infection does not belong physiologically to the human economy, then the human supply must have been obtained from some extraneous source, and that independent of the mosquito. In the consideration of the instances of recrudescence the most typical illustration it not alluded to—that of the recurrence of Yellow fever on board of the U. S. S. S. "Plymouth," in 1879. This is one of the greatest moments since absolute data concerning it are obtainable. To those not familiar with it, a brief recital will be of interest. The Surgeon General of the Navy furnished the following account of the case of J. M. Keating, in 1879: "On Nov. 7, 1878, four cases of yellow fever occurred on board the vessel while lying in the harbor of Santa Cruz. These were removed to the hospital on shore, and the ship sailed to Norfolk. Three mild cases occurred during the voyage, and the 'Plymouth' was ordered to Portsmouth, N. H., thence to Boston. At the latter port everything was removed from the ship, and all parts of the interior freely exposed to a temperature which frequently fell below zero, exposure continuing for more than a month. During this time the water in the tanks, bilges, and in vessels placed in the store room, was frozen. One hundred pounds of sulphur were burned below decks, this fumigation continued for two days, and the berths, decks, holds and store rooms were thoroughly whitewashed. On March 15, (1879) the ship sailed from Boston southward; on the 19th during a severe gale, the hatches had to be battened down, and the berth deck became very close and damp. On the 23d

two men showed decided symptoms of yellow fever, and on the recommendation of the Surgeon, the vessel was headed northward. The sick men were isolated, and measures adopted for improving the hygienic condition of the vessel and crew. The Surgeon reported that he believed the infection to be confined to the hull of the ship, especially to the unsound wood about the berth-deck, all the cases but one having occurred within a limited area; and that, while the "Plymouth" is in good sanitary condition for service in temperate climates, should she be sent to a tropical station, probably no precautionary measures whatever would avail to prevent an outbreak of yellow fever."

Many of the data are complained of as being incomplete. That is so, and from the nature of things could not be otherwise. Until a few months ago no one save Dr. Finlay had suggested the mosquito as being connected with yellow fever propagation, and the theory of fomites conveyance prevailed for years.

During the prevalence of an epidemic, especially after it had been well established, physicians devoted their energies to the relief of the conditions rather than to the discovery of the cause. Occasionally, an outbreak of yellow fever followed the introduction of material from an infected center, and the incident was reported as an item of interest and curiosity, rather than as evidence to support a theory which was already accepted, hence explicit data were not chronicled at the time, and therefore are not obtainable. In using such material, I stated that it emanated from medical men who recited the cases as occurring under their observation, and as such should receive consideration.

In criticising the illustrative cases of long retained infection occurring on vessels, Dr. Bispham suggestively attributes the development of cases to the sting of mosquitoes, and supports his position by citing several instances of long lived insects, notably one of Dr. Reed's mosquitoes which lived for 71 days, and several reported by Mr. Le Prince, which lived up to 70 days. Concluding he says: "On this reservation I have also observed some mosquitoes living 60 days after *all breeding places* have been destroyed. This last was particularly suggestive, as the insects were living in the *open* where they could be preyed upon by their numerous enemies."

This statement concerning the longevity of the insect in the open is interesting and instructive, not only in that knowledge is acquired concerning the mosquito's life cycle, but in illustrating how delicately discriminating an investigator's acumen may be perfected. The recognition of individual "stegomyia" as they fly about the reservation, unmolested, save by their natural enemies, for a period of two months is indicative of powers of discernment most wonderfully developed. Dr. Reed's 71 day mosquito had not gained publicity when my paper was completed. Since the fact is known I will modify my statement by saying "the life of the mosquito, under *ordinary* conditions, has not been determined." Professor Geo. E. Beyer, of New Orleans, in a paper read before the "Louisiana State Medical Society," on April 19th, says: "In no instance, however, was I able to lengthen the life of a female beyond a period of 22 days. In all experiments I resorted to all kinds of methods to test the longevity of the insects." And again he says, "How other investigators should have succeeded to keep mosquitoes on 'various substances' for a month, and longer, is inexplicable to me."

In considering the case of long retained infection on vessels, occurring 39, 56, 64 and 68 days after departure from an infected port, it is unreasonable to attribute the development of yellow fever cases to an insect's sting. Entomologists claim that in order to exist, mosquitoes must have water—being deprived of it they can not live more than five or six days. Where water is accessible on ship-board, an opportunity for satiating her sanguinary desire is afforded the female "stegomyia," and since it is presumed the power to infect or not infect at pleasure is not possessed by mosquitoes, it is a most reasonable presumption that cases of fever would occur days before the destination is reached.

Concerning my reference to the great number of cases of fever occurring in 1878, and at Edwards in 1897, Dr. Bispham says: "He ends the paragraph by this sentence, 'Is it reasonable to suppose it was accomplished by the mosquito?'"

That paragraph should have been taken in connection with the one just preceding it, concerning the cases occurring in Edwards which reads: "Is it reasonable to suppose that each case was the result of a sting delivered by a mosquito who had stung a case of yellow fever twelve days previously?"

That is not particularly absurd. Consider the cases of malarial fever, the propagation of which, it is claimed, is dependent upon the sting of the "anopheles" that develops its power to infect seven or eight days after its bite.

Compare the number of cases developing during the same season that yellow fever prevails, with the number occurring of the latter disease, and see if some other agent than the mosquito is not responsible. In a report made to the "British Medical Association," at its last session, it was claimed that "about 70% of mosquitoes fed on malarial persons became infected, and seven out of the eight persons bitten by these mosquitoes had the fever."

Not much greater percentages of infected "stegomyia" have been reported, nor has its power of imparting infection greatly exceeded the "anopheles," while the period of developing the poison is four or five days shorter in the latter than in the former. Why then should the former be charged with cases of infection so very largely in excess to those attributed to the latter?

In order to show that mosquitoes existed in sufficient numbers to cause the epidemics, Dr. Bispham says: "Howard observed that 19,110 mosquitoes were counted in one barrel." This is an error. Dr. Howard observed that 19,110 eggs—larvae, and pupae—no mosquitoes—were counted." How many different kinds or how many would have merged into imagoes was not stated. It is agreed, however, that mosquitoes are sufficiently plentiful for all purposes, but they are *not infected*, and it is necessary for them to wait twelve days after biting a yellow fever case before they become dangerous. Many perils beset the life of a mosquito—besides, inhabitants of mosquito districts devise all kinds of ways and means for protection against the insect; it is therefore safe to assume that only a limited few of the female "stegomyia" succeed, at the termination of their twelve days probation, in imparting their poison.

In the characterization of my statement—"It can scarcely be conceived that the mosquito could harbor the germ for such a time," (from one season to another) "as a lack of information on the subject," Dr. Bispham displays his inability to grasp the full meaning of the statement. Every one knows, who has lived in a mosquito infected country, and who has given the matter any thought, that insects must necessarily hibernate if they are to be perpetuated; and while mosquitoes disappear with the approach of cold weather, they re-appear with the advent of the balmy spring days. In this climate they forsake their winter homes about the middle of April, so stated by Prof. Beyer, of New Orleans.

The two occurrences of a recrudescence of yellow fever related in my paper took place in the summer and fall, in Memphis, July 9th, 1879, and in Edwards, September 1st, 1897. Consider, if you can, a hungry "stegomyia" curbing her appetite from three to five months while ample opportunity for indulging it is constantly afforded. If cases of yellow fever are dependent upon the mosquitoes' bite, where a recrudescence is noted (and we would have recrudescences very much oftener than they have been, if they are so dependent) the first cases would develop two weeks after the advent of the mosquito, for the hungry "stegomyia" searches for blood, and will overcome many obstacles to get it. If infection is derived from fomites, cases would not occur until warm weather is thoroughly established, and not then unless accidentally disturbed.

Note the two sources of infection again: the one, very

active, searches for the victim—the other remains perfectly quiescent until accidentally disturbed. Which is the most reasonable source? In accounting for the absence of yellow fever in Camp "Joe Williams," in 1878 he says: "The reason of all this is that what few mosquitoes might be taken to the camp in the first place can find no suitable place to breed, as very little water is allowed to stand in cans about the ground, on account of the usual trouble in obtaining it, and therefore they are soon killed." In the selections of sites for camps, the water supply is the main object and no place without a good supply would have been selected, and with more than a thousand people congregated together, a few cans would have been discovered by the little insects, and since "one little can" can "raise enough to make it extremely unpleasant for one to approach within a hundred yards of it," two or three little cans could raise enough to spread yellow fever. Breeding places, however, are unnecessary, for a recent observer states: "On this reservation I have also observed some mosquitoes living nearly *sixty days after all breeding places have been destroyed.*"

Continuing, Dr. Bispham says, "Further on he mentions the fact that there are many mosquitoes in and about Memphis, but he does not remember that recent investigations have proven that the *Culex* almost always breeds in artificial collections of water, which are more usually found about houses, and the variety of mosquito inhabiting the country districts is likely to be *Anopheles* or some other not *Culex*." The foregoing argument can only be justified by the acknowledgment of lack of information concerning the wide-spread prevalence of yellow fever in the rural districts in 1878. The conditions which prevailed at Orrwood and Taylor, Miss., 75 miles below Memphis, in 1898, should have suggested to my critic that if the "steptomysia" is solely responsible for yellow fever propagation, there is no place too obscure for them to breed and thrive. In 1878 when the disease was introduced into a rural district, and no isolation precautions taken, its spread was similar to that in cities and towns.

The epidemic at "Orrwood and Taylor" was strictly a rural one. The houses were from three to twelve miles apart, and the origin of nearly every case could be traced to an infected house, or to material that had been exposed.

In commenting on the Edwards epidemic, he says: "In these accounts he does not give a complete enough elimination of all other chances of exposures to the infection. This lack of complete history is very noticeable, etc." The history of that epidemic was complete and was related as it occurred. No attempt has been made to support a theory at the expense of facts. That there was nothing more to relate concerning the outbreak of fever at Edwards, is not the writer's fault, it just occurred that way, and the writer chronicled the happening. That secondary cases should have occurred 11 and 12 days after the first possible exposure, was another fact that "simply happened." In this connection I wish to suggest that for the purpose of fair comparison of secondary cases occurring from suspected fomites, with those produced by mosquito bites, there should be three days deduction made in the fomites cases for the period of incubation. This has not been *done* heretofore except in my article.

In conclusion No. 3, the Commission, did not dogmatically state that 12 days must elapse, but it is inferentially so stated. They say—"An interval of *about 12 days—or more*, after contamination, appears to be necessary before the mosquito is capable of conveying the infection."

Conclusion No. 4 says: The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack." Dr. L. O. Howard in his valuable book on the mosquito, seems to have construed these conclusions as I did, for he says, " * * * and Doctors Reed, Carroll and Agramante have demonstrated that the yellow fever mosquito

will not convey the disease until at least *twelve days* have elapsed since the time when it bit a yellow fever patient."

In commenting on the recurrence of cases of fever which were suggested as originating from fomites, the Doctor asks "Why could not infected mosquitoes remain in the house for that length of time, when they have been observed to live for 70 days? Other cases brought up in the same way can be dismissed with the same query." They can be so dismissed if one is not looking for facts concerning the subject, but while there remains any doubt as to the mosquito's sole responsibility in the premises, the true scientist and sanitarian will weigh each phase of the question well before reaching his conclusions. Continuing the Doctor says:

"Finally he makes the statement: 'Among the many sanitary measures adopted looking to the control of yellow fever epidemics and to the complete eradication of the disease, no exertions were ever directed toward the mosquito extermination.' That is a great mistake, for from time immemorial, sulphur has been used as a disinfectant * * * On investigation it has been found that sulphur destroys mosquitoes, etc." The quotation from my paper is correct, no measures directed to the mosquito extermination were ever adopted before. The comment, however, is quite ludicrous. If a few birds were killed during the Santiago engagement, would the report have gone in to Washington that "The boys went bird hunting this morning?" If a few mosquitoes were killed during sulphur fumigation, it was only an incident in the disinfection. The halls, kitchen and unoccupied rooms as a general thing were not subjected to disinfection, and no oil was ever poured on the breeding places.

In conclusion, Dr. Bispham "takes the liberty to call my attention to the fact that very many epidemics are spread by mild cases which are unsuspected and therefore unprotected." With as much propriety, as far as conveying information is concerned, the Doctor might have said "the sun shines!" If he had been actively engaged in the yellow fever field during the past five years, he would have known that it was the mildness of the disease which has been the cause of the greatest confusion. In some localities it was so mild that the name "Yellowoid" was suggested, that it might be distinguished from the type of fever of Seventy-eight. Look over the epidemics of the past and note the mortality attending the disease. It will be seen that the percentage of deaths ranges from four per cent. in the Brownsville, Texas epidemic (Murray) to 33 1/3% in 1878. No matter how mild the disease is, it is usually accompanied by a mortality sufficiently great to cast a gloom over any community it may visit, and he who discovers its cause and suggests measures for its control, will prove himself as a benefactor indeed. To that end we should all strive, adhering to no single theory, until facts are established susceptible of absolute and uncontrovertible demonstration.

Scoliosis and Rachitis.—In the *Bulletin Medical*, (June 15, 1901, No. 47), Dr. H. Mayet discusses rachitic scoliosis. Out of 152 cases seen at the Hôpital des Enfants Malades, all but 10 were due to rickets, or were called essential, appearing during adolescence. The causes of the other 10 cases were varied and definite. Lannelongue believes that the cause in most cases is rachitis. In the majority of cases the scoliosis developed between the sixth and ninth years. Nowadays the muscle theory, the ligamentous theory, and the osseous or physiological theory have all been abandoned. The cause of scoliosis in adolescents seems to be habitual position. Mayet examined 25 cases, of different ages, and found that in 8 of them the scoliosis developed after a long illness. All showed the signs of previous rickets. Besides, out of 220 rachitic infants, 217 showed scoliosis upon examination. Mayet concludes that rachitis is the underlying cause of essential scoliosis. Rest on the back is the best treatment, the signs of rickets disappearing as the scoliosis grows less marked. Professor Lannelongue has perfected an apparatus, soon to be fully described, for measuring the scoliosis. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Pathological Society of Philadelphia.—At the last meeting of the Pathological Society, held October 10, the following officers were elected for the ensuing year: President, Dr. Charles W. Burr; vice-presidents, Drs. Simon Flexner, Alfred Stengel, and Joseph McFarland; secretary, Dr. J. Dutton Steele; treasurer, Dr. T. S. Westcott; recorder, Dr. David Hlesman, and curator, Dr. W. W. Babcock.

Wills Eye Hospital.—Dr. William F. Norris has resigned his position as attending surgeon at the Wills Eye Hospital after a service of almost thirty years. He will become a consulting surgeon of the institution. Dr. William Zenlmayer has been appointed his successor. Dr. George C. Harlan has also been appointed consulting surgeon, while Dr. Paul J. Pontius was made assistant surgeon to Dr. S. L. Ziegler.

Society Meetings of the Week.—The following societies hold their meetings next week at the College of Physicians, at 8 15 P. M.: Wednesday, October 23, Philadelphia County Medical Society; Thursday, October 24, Pathological Society.

A Future Bequest.—Only upon the death of Mrs. Elkinton will the bequest of \$25,000, \$5000 to the orthopedic dispensaries of the University of Pennsylvania, Jefferson, Orthopedic, Polyclinic, and Pennsylvania Hospitals, each, left by the late Thomas Elkinton, become available.

McKinley Memorial Hospital.—The new hospital for contagious diseases, for which funds have for some time been collected, will be known as the McKinley Memorial Hospital. In order to further increase this fund a Meschlanza will be held in the Academy of Music, November 11th to 16th. There will be a bazaar in the foyer of the Academy, presided over by well known young society women, while the patronesses, who number nearly 1000, will take charge of three monster euchre parties, to be held in the mornings. There is to be a University Night, when the Mask and Wig Club will present scenes from their various productions. Other features of the week will be a children's vaudeville, a children's colonial tea party, opera and drama by society amateurs of this city, and an afternoon with "Hugh Wynne."

The Smallpox in Philadelphia.—During the week ending October 12th, 60 new cases of smallpox have been reported in Philadelphia, a marked increase as compared with 29 and 40 for the two previous weeks. There were, however, only 2 deaths. Cases have even been found in Manayunk and Camden, and there are almost 150 cases in the Municipal Hospital. The disease prevails in nearly every section of the city, in spite of the efforts of the city authorities to check its spread. There are only three wards in the city that have no contagious diseases. They are the Fourteenth, Twelfth and Thirty-fifth wards. The Fourteenth and Twelfth are in the heart of the city. The Thirty-fifth embraces part of Frankford, Wissinoming, Somerton and other northeastern suburbs. The Bureau of Health has deemed it advisable to suspend its rule requiring the removal of all cases of smallpox to the Municipal Hospital. This rule was at first enforced because the outbreak was confined to colored settlements. But the disease now prevails among all classes, and in all sections and where infected persons have the money and facilities for the proper treatment of the disease at their own homes, they are permitted to remain. The smallpox epidemic now existing in London resembles this, in that it was at first circumscribed to one district of the city, that of St. Pancras, but cases are now reported all over London. The Director General of the Canadian Public Health has advised general vaccination throughout Canada, since 30,000 cases of smallpox have been reported in the United States from January to July.

Society Reports.—At the Philadelphia Academy of Surgery meeting held Monday evening, October 7th, Dr. Robert G. Le Conte read a paper entitled, "Gun-Shot Wounds of the Abdomen," reporting a case. The patient, 15 minutes before admission to the hospital, was shot twice with a 32 caliber revolver, one shot taking effect in the thigh, the second in the back. The patient was in a highly excited condition, complaining of cramp-like pains in the abdomen. Shock was moderate, respiration labored. The en-

trance wound was on a level with the crest of the ilium, 2½ inches to the right of the 5th lumbar spine. The abdomen was tympanitic and very tender. The wound was inspected, and a drainage tube inserted. Upon opening the abdomen, it was seen that the bullet had perforated the small intestine and the upper portion of the mesentery, severing one of the large vessels. The wounds were closed, the abdominal cavity being washed out with normal salt solution. It was thought that the bullet had lodged in the anterior abdominal wall. The patient recovered and was exhibited. Dr. Le Conte called attention to the question of interference, as he thinks that the abdomen should be opened in all penetrating gunshot wounds of the abdomen. Shock is invariably associated with hemorrhage and demands immediate interference. The abdomen must be opened to make a thorough examination. When there is a penetrating wound he makes his incision in the median or semilunar line; following the course of the bullet may leave a hernia. He treats the track of the bullet as aseptic until it proves itself otherwise. He considers it important to disinfect thoroughly the skin of the patient before opening the abdomen.

Dr. Richard H. Harte reported a case of **Gun-Shot Wound of the Abdomen** occurring in a young man of 19, who was accidentally shot in the abdomen along the right edge of the rectus muscle, about 1½ inches above the umbilical line. The abdomen was tender and rigid. A probe could not enter far. The abdomen was opened in the line of the wound, when considerable hemorrhage was noted. After a careful cleansing it was found that the bullet had pierced the upper part of the duodenum, which was closed with a single row of interrupted sutures and Lambert sutures. There was a large hematoma in the mesentery which was evacuated. After cleaning the cavity, the wound was closed. An incision was then made in the back exposing the uninjured kidney and another large hematoma which was cleaned out, the wound then being closed. The patient recovered. Dr. Harte advises exploring the abdomen in such cases. No attempt was made to locate the bullet, which should not be disturbed unless it gives rise to symptoms demanding its removal. These papers were discussed by Drs. Rodman and Hearn. Dr. Rodman stated that bullets of slow velocity frequently carry foreign bodies with them, such as fragments of clothing, and should not be treated as aseptic, but as septic wounds. He thinks drainage should practically always be employed and advises prompt operation. Dr. Hearn believes that gun-shot wounds of the abdomen should be operated immediately, and advises the use of drainage. Dr. Geo. G. Ross reported a case of **Intra- and Retro-Peritoneal Hemorrhage and Traumatic Rupture of the Meso-Sigmoid.** Upon opening the abdomen free blood was found in the peritoneal cavity. The abdomen was washed out with normal salt solution. The outer layer of the meso-sigmoid was denuded, the serous coat of the mesentery being sutured with fine silk. Six days later he was readmitted suffering from intestinal obstruction. He died after operation with purulent peritonitis. Dr. Ross also reported a case of **Compound Fracture of the Anterior Fossa of the Skull with Hemorrhage from the Nose, Ear, and External Wound.** The case history was given in full.

The Philadelphia Pediatric Society met on Tuesday evening, October 8, at 8.30 P. M. Dr. J. P. Crozer Griffith made a report for the Milk Commission of the Society. He said that the Society's certified milk was now in general use throughout the city. Dr. Alfred Hand, Jr. then presented a cretinoid boy of three and a quarter years, the fifth child of healthy parents. The child cannot walk, and can only say a few words. He shows good physical development, his expression is somewhat idiotic, the eyes are deep set, there is much dribbling of saliva, the tongue protrudes somewhat, the hands are small and paddle-shaped, and the abdomen is prominent. Thyroid extract was only given for a week, as the parents did not return because the

medicine was too expensive. Dr. Hand says that cretins seem immune to the infectious diseases until placed upon thyroid treatment. Then they seem very susceptible to them, often dying with measles or pertussis. Dr. J. Dutton Steele reported a similar case, and Dr. Maurice Ostheimer mentioned having seen two such cases in the past six months. Dr. Griffith stated that good effects follow the use of thyroid extract in most cases of stunted growth, without reference to athyroidism. Dr. J. H. McKee then read an able and entertaining paper upon the "Training of the Senses," in which he reviewed the growth of the child, the appearance of the first separate sensations, etc., with details and many interesting illustrations. He noted the medical aspect of the sensations through childhood, and advised that children be sent to school later, that they be taught to observe more, and that their early life be spent in the country, taking in impressions. This paper was discussed by Dr. Griffith, who agreed with most of the views held by Dr. McKee.

Vital Statistics of Philadelphia for the week ending October 12, 1901.

Total mortality	404.	
	Cases.	Deaths.
Inflammation of the appendix 1, brain 17, bronchi 2, kidneys 19, liver 4, lungs 28, pericardium 1, peritoneum 7, pleura 1, stomach and bowels 17, spleen 1,.....		98
Marasmus 19, inanition 14, debility 7		40
Tuberculosis of the lungs		51
Apoplexy 16, paralysis 7		23
Heart-disease of 29, dropsy of 1, fat- ty degeneration of 7, neuralgia of 2		39
Uremia 16, Bright's disease 2, dia- betes 1		19
Carcinoma of the face 2, breast 2, stomach 8, uterus 3, liver 3 ..		18
Convulsions 9, convulsions, puerper- al 2		11
Diphtheria	74	15
Brain-disease of 3, softening of 2 ..		5
Typhoid fever	80	10
Old age		10
Scarlet fever	49	1
Smallpox	60	2
Abscess, liver 1, alcoholism 2, asth- ma 1, anemia 1, burns and scalds 1, casualties 9, cholera in- fantum 1, cholera morbus 1, cir- rhosis of the liver 3, croup, mem- branous 3, drowned 1, dropsy, abdominal 1, dysentery 2, epilepsy 1, erysipelas 1, fever, malarial 1, gangrene, foot 1, hanging, ac- cording to law 2, hemor- rhage 1, hernia 1, indigestion 2, jaundice 1, measles 1, obstruction of the bowels 3, rheu- matism 1, sarcoma, femur 1, scler- osis, arterial 1, shock, surgical 1, septicemia 5, suicide 4, tumor, ab- dominal 1, ulceration of the stom- ach 2, unknown coroner case 1, whooping cough 3		62

NEW YORK AND NEW JERSEY.

Rockefeller Institute for Medical Research.—A tentative working plan has been adopted by the officers of the Institute for Medical Research, founded by John D. Rockefeller, by whom it was endowed with \$200,000. It is to expend \$20,000 a year, divided so as to provide for forty scholarships; to make appointments for one year; to have candidates recommended by heads of various laboratories to the Board of Directors; to choose only persons pursuing, or about to pursue, investigations on some important subject in pathology, bacteriology or hygiene. At the time the announcement was made that Mr. Rockefeller had given \$200,000 to found the institute, it was said that the first

thing the institute would do, would be to investigate the milk supply of the city in co-operation with the Board of Health. This task was completed some time ago. It was also that work of a more ambitious nature, involving original research and an effort to throw new light on problems which are as yet unsolved by medical science, will be taken up in the autumn. The Board of Directors, which is assisting and directing these investigators in their work, comprises Dr. William S. Welch, professor of pathology, Johns Hopkins University, president; Dr. T. Mitchell Prudden, professor of pathology, Columbia University, vice-president; Dr. L. Emmett Holt, clinical professor of diseases of children, Columbia University, secretary; Dr. C. A. Herter, professor of pathological chemistry, University and Bellevue Hospital Medical College, treasurer; Dr. Theobald Smith, professor of comparative pathology, Harvard; Dr. Simon Flexner, professor of pathology, University of Pennsylvania; and Dr. H. M. Biggs, director of the laboratories of the Board of Health.—*New York Tribune*.

Columbia University Medical School.—An anonymous gift of \$25,000 is announced by the chancellor of the University of New York for the Medical School. W. F. Havemeyer has paid the bills for the improvements in the Havemeyer Laboratory.

Medical Directory of New York, New Jersey and Connecticut.—From the Medical Directory of New York, New Jersey and Connecticut it is seen that New York State has 10,112 physicians; New Jersey, 1,472, and Connecticut 1060. Municipal and State health laws are given in full for each State, and a directory of the national medical societies, with lists of their officers, is appended. The summer residences of such physicians as have them are given in each instance. The volume contains a total list of 12,644 physicians, with brief professional data appended to each name. Of the physicians in Greater New York, according to this directory, 3,991 are in Manhattan and the Bronx.

Diphtheria in Bloomfield, N. J.—There are already eighteen cases of diphtheria reported in Bloomfield, N. J. The Board of Health has ordered the Brookside School closed, as most of the cases developed among children attending that school.

A New Cure for Consumption.—Dr. Wilfred G. Fralick, visiting surgeon to the Metropolitan Hospital and consulting surgeon to the Brooklyn Memorial Hospital, is at work perfecting a remedy which he believes will cure tuberculosis and other bacterial processes. Until he has satisfied himself that his fluid is perfect, Dr. Fralick does not intend to publish its composition. The solution is injected intravenously, and has already caused great improvement in a number of cases. Though he has only employed this formula for six weeks, he is simply overwhelmed by phthisical patients from all over the world. While all bacteria are destroyed by this means, Dr. Fralick states that the solution will not build up tissues which are already destroyed. He intends to study its limitations, dosage, and exact effect, believing that premature publication of a remedy does more harm than good.

The Medical Society of the State of New York.—The annual meeting of the New York State Medical Society will be held in Hosack Hall, New York Academy of Medicine, 17 West Forty-third street, October 21 to 24, 1901.

The Birth-rate of Greater New York.—The Health Department returns show that in the last quarter reported by the Board, there were 144 births of children of Bohemian parentage, of whom 143 were born in New York county and only one in Brooklyn. In the same period there were 187 births of children of Swedish parents, and of these 103 were in Brooklyn and only 84 in New York county. There were 1465 children born of Austrian parents in New York—Hungarians, Poles or Germans—and of these 1352 were born in New York county and only 112 in Brooklyn. The same disparity in favor of New York county is to be seen in the case of the children of Irish, Italian and Russian parentage. But the number of children born of Scotch parentage, as well as of Swiss, Danish, Norwegian and Finn parentage, is as large in Brooklyn as in New York county, and the children of Canadian parentage nearly as large. Brooklyn retains as a borough its distinction of having the largest number of births of children of American parentage. It is the most truly American of the five boroughs which constitute the present city of New York. Manhattan is the most cosmopolitan.

Virchow Anniversary Dinner in New York.—Over one hundred representative medical men sat down to dinner at Sherry's in New York last Saturday evening to commemorate the eightieth birthday of Dr. Rudolph Virchow. Following the dinner Drs. William Osler, W. H. Welch, Andrew H. Smith and A. Jacobi spoke.

Dr. William Osler, of Baltimore, spoke of Dr. Virchow as a scientist and an anthropologist. He said, that this night, eighty years ago, was a memorable night in that it gave birth to a genius. Both environment and birth were the attendants that accompanied genius and in these respects Virchow had been very fortunate. Coming under the influence of Johannes Müller early in his student days, he found in that teacher new, broad, and stimulating thoughts. Müller had found pathological science still struggling with the vague and mystical conceptions of disease, founded on theories that needed verification, and it was to his credit that he had brought back into the study of medicine the methods of the old Greek physicians of sixteen centuries ago. In the days of Galen, observation, study and analysis had been the tenets of the faith, and it had been Müller who had reintroduced these almost forgotten ideas into the study of pathology. Virchow's long list of investigations on matters archeological indicate that he was not a dilettante student of this science but an accomplished master. His was not the dabbling with skulls and relics but the patient and keen seekings of a skilled and well stored mind. He was an acknowledged authority in this recondite branch of knowledge. In hygiene he and Pettenkofer may claim to be the masters, and Berlin's excellent showing as a healthy city is due to his work and forethought.

Dr. G. M. Gould, of Philadelphia, then read a telegram to Dr. Virchow congratulating him on his birthday and sending greeting from his American friends and admirers.

Dr. William H. Welch spoke of Virchow as a pathologist. "To describe his work in this branch," he said, "one needs a genius as universal as that of Virchow himself. When Virchow was a student, the science of medicine was still struggling with the dogmas of a speculative age, but in the collateral sciences a great renaissance was taking place and Virchow was a worthy addition to that group of men who have made the sciences of chemistry and physics anew. One important factor in the estimation of his greatness and of his development was the fortunate choice of the subjects of his early investigations. The chemistry and morphology of the blood, then inflammation and then a study of connective tissues were the subjects of these early observations, and when their fundamental character is borne in mind, their influence on Virchow's mind and the growth of pathology may well be seen. His studies on emboli and thrombi mark an epoch in the study of pathology and in 1858, with the appearance of his Cellular Pathology, the foundation of modern pathology was laid. Morgagni had first showed the significance of organs, Bichat had directed attentions to tissues, but Virchow had shown the fundamental importance of the cell. His was the perfection of method as opposed to doctrine. Disease was life under changed conditions, and this primary and important conception made a great departure in the study of pathology and of medicine in general."

Dr. Andrew H. Smith then gave a number of charming personal reminiscences of his early student life with Virchow in 1858. He described the methods of conducting autopsies introduced by Virchow. Before his time the study of the dead body was most superficial and for the purpose only of ascertaining the name of the disease that caused death. With Virchow, however, the body was made to speak, and every organ made to give some information bearing on pathological truth. He also spoke of Virchow's efforts to cultivate a simple and straightforward style in his writings, in as much as he had been compelled in his student days to translate much that had been written by his teachers and immediate predecessors. His personal relations were most interesting. Virchow was a very democratic and approachable man, and gave to his students much of his time.

Dr. A. Jacobi then spoke of Virchow as a citizen. A pleasing feature of the dinner was the well devised menu for which Dr. E. L. Dana was largely responsible. It represented a facsimile copy of Virchow's "*Archiv für Pathologische Anatomie*," preserving its characteristic green cover, and contained two portraits of Virchow, at 38 and at 78,

a list of his more important contributions to science—and the menu proper.

The Report of the Milk Commission of the New York County Medical Society, which is treated editorially in this issue, gives the results of over 800 separate bacteriological examinations of milk. Suggestions were made, during 39 visits to dairies, concerning cleanliness, rapid cooling, and packing in ice for shipment, with the result that the bacteria markedly decreased in number. Eight dealers have reached the standard set by the Commission (under 2% acidity and 30,000 germs to the c.c., and over 3.5% fat), and are now selling certified milk in New York.

Isolation Hospital, Newark, N. J.—The Common Council of the city of Newark has contributed \$20,000 for the construction of a new isolation hospital.

MISCELLANY.

Baths in the Public Schools.—From Boston comes the news that the six new public schools now being constructed will contain bath-rooms for the use of the pupils.

The Latest Population Statistics.—The Census Bureau issued a bulletin October 11th showing the population of the United States by sex, general nativity and color, for 1900. Of the total population of the United States, there were 39,059,242 males and 37,244,145 females. The native element numbered 65,843,302, and the foreign born 10,460,085. Of the colored population there was a total of 9,319,585, divided as follows: Colored, 8,840,789; Chinese, 119,050; Japanese, 85,986; and Indians, taxed, 137,242, untaxed, 129,519. There has been practically no change in the proportions of the sexes since 1890. The foreign-born element has increased since 1890 only 12.4 per cent. of its former number, as against 22.5 per cent. in the native-born gain. There has been a slight decrease during the past ten years of persons of colored descent, the proportion now being 11.6 per cent. In 1890 it was 11.9 per cent. The Chinese show a loss, and the Indians have decreased 2.5 per cent. In the United States proper, the largest proportion of foreign-born is found in North Dakota, where this element comprises 35.4 per cent. of the total population; the next largest percentages of foreign-born being found in Rhode Island, with 31.4 per cent.; Massachusetts with 28.9, and Minnesota, Montana, Connecticut and New York, with about 26 per cent. each. The native Indians of Alaska number 29,536, a gain of 16.5 per cent. since 1890.

The Fifth International Congress of Criminal Anthropology, at its meeting in Amsterdam, September 9-14, 1901, passed the following resolutions: "The members of the Fifth International Congress of Anthropology are in favor of the establishment of psycho-physical laboratories for the practical application of physiological psychology to sociological, abnormal, or pathological data, especially such as are found in institutions for the criminal, pauper, and defective classes, in hospitals, schools, and other institutions." This resolution has been passed in America by the American Medical Association, Association of American Editors, American Medico-Physiological Association, Association for the Study and Cure of Inebriety, the State Medical Societies of Connecticut, Indiana, Kansas, Kentucky, Louisiana, Minnesota, North Dakota, New Jersey, Pennsylvania, Texas and Wisconsin, the Mississippi Valley Medical Association, and the Medical Societies of the cities of St. Louis, Chicago, and Syracuse.

The Plague at Rio de Janeiro.—On Sunday, September 29, there were reported five cases and one death of plague at Rio de Janeiro, Brazil. Since then there have been reported about four new cases daily, making almost one hundred cases of bubonic plague in Rio.

Tubercle Bacilli in Cigars.—Dr. Klemperer of Berlin, who has found tubercle bacilli in cigars which had been manufactured by cigar-makers at their homes, advises smokers to use cigar-holders.

Obituary.—Dr. George W. Christian, at Austin, Tex., October 7.—Dr. J. A. W. Hetrick, at Asbury Park, N. J., October 9, aged 56 years.—Dr. John B. Everhart, at West Chester, Pa., October 8, aged 75 years.—Dr. Windsor P. Stoddard, at Manassas, Va., October 13.—Dr. C. L. Gross, at Pen Argyll, Pa., October 9, aged 65 years.—Dr. Landes, at Albemarle county, Va., October 9.—Dr. R. H. Burke, San Jose, Cal., October 3.

The Death of Dr. Moncorvo, the well-known pediatricist, of Rio de Janeiro, is announced.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended October 5th, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
ALASKA:	Dawson	Oct. 1.	6	
DISTRICT OF COLUMBIA:	Washington	Sept. 28-Oct. 5	1	
INDIANA:	Michigan City	Sept. 30-Oct. 7	1	
MASSACHUSETTS:	Boston	Sept. 30-Oct. 5	9	1
	Newton	Sept. 30-Oct. 5	1	
	Detroit	Sept. 30-Oct. 5	1	
MICHIGAN:	Minneapolis	Sept. 30-Oct. 5	1	
MINNESOTA:	Omaha	Sept. 30-Oct. 5	2	
NEBRASKA:	Newark	Sept. 30-Oct. 5	2	
NEW JERSEY:	Elmira	Sept. 30-Oct. 5	1	
NEW YORK:	New York	Sept. 30-Oct. 5	7	2
	Cleveland	Sept. 30-Oct. 5	4	
OHIO:	Eric	Sept. 21-28	2	
PENNSYLVANIA:	Philadelphia	Sept. 30-Oct. 5	40	6
UTAH:	Salt Lake City	Sept. 30-Oct. 5	2	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Sept. 7-14	1	
BELGIUM:	Antwerp	Sept. 14-21	5	1
	Ghent	Sept. 14-21	5	1
BRAZIL:	Pernambuco	Aug. 16-31	73	
	Rio de Janeiro	Aug. 18-Sept. 1	115	
CANADA:	Halifax	Sept. 22-Oct. 5	20	
	Winnepeg	Sept. 14-21	5	1
COLOMBIA:	Colon	Sept. 30	1	
FRANCE:	Paris	Sept. 7-14	2	
GREAT BRITAIN:	Dundee	Sept. 11-28	2	
	London	Sept. 11-21	288	13
INDIA:	Bombay	Sept. 3-10	1	
	Calcutta	Aug. 24-Sept. 7	4	
	Madras	Aug. 21-Sept. 6	8	
MEXICO:	City of Mexico	Sept. 15-22	1	

PLAGUE—Insular.

PHILIPPINE ISLANDS:	Manila	Aug. 10-24	15	
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PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro	Aug. 18-Sept. 1	5	
INDIA:	Bombay	Sept. 3-10	265	
	Calcutta	Aug. 24-Sept. 7	34	
	Karachi	Aug. 25-Sept. 8	35	11

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Aug. 18-Sept. 1	3	
COSTA RICA:	Port Limon	Sept. 1-28	9	
CUBA:	Havana	Sept. 21-28	1	
MEXICO:	Merida	Aug. 31-Sept. 14	5	
	Vera Cruz	Sept. 22-29	2	

CHOLERA.

INDIA:	Bombay	Sept. 3-10	4	
	Calcutta	Aug. 24-Sept. 7	9	
	Madras	Aug. 21-Sept. 6	251	

GREAT BRITAIN.

Smallpox in London.—The epidemic of smallpox in London, which was at first confined to the district of Saint Pancras, is slowly becoming diffused throughout London, from five to six cases being reported a day. A number of these cases are hemorrhagic in character. The spread of the disease is in many cases due to the return of the hop-pickers to London from Sussex. A recent examination of the school children in St. Marylebone showed that more than half of the children were unvaccinated. In spite of the harm done by those opposed to vaccination, who have been spreading anti-vaccination pamphlets through the city, many of the people of London are having their children vaccinated and are being revaccinated themselves.

Plague Suspect at Glasgow.—A Lascar suspected of being a sufferer from the plague was landed at Glasgow October 12th from the British steamer *Baravia* from Bombay. It is rather strange that a new case of plague should be discovered in Glasgow so soon after the report of last year's epidemic, which has just been published by Dr. A. K. Chalmers.

The Annual Medical Service at St. Paul's Cathedral, London, was held Thursday evening, October 17th. Many members of the medical profession attended the service in academical robes.

The West London Post-Graduate College.—The new buildings of the Post-Graduate College at the West London

Hospital were opened October 14th, when Sir William MacCormac delivered an address.

A Donation.—William Waldorf Astor has sent a check for \$50,000 to the Chairman of the National Society for the Prevention of Cruelty to Children, to form the nucleus of a fund for the acquisition of premises adequate for the transaction of this society's business.

Swansea Isolation Hospital.—It is proposed to erect a building containing four wards of twelve beds each and four two-bed wards, accommodating a total of 56 patients, in Swansea, which borough has a population of 94,000 people.

Dublin University.—The resignation is announced of Dr. Purser, King's professor of the Institutes of Medicine in the School of Physic, Trinity College, Dublin, who has filled that position for the past twenty-seven years. His successor will not be appointed until the beginning of the new year.

CONTINENTAL EUROPE.

The French Congress of Gynecology, Obstetrics and Pediatrics will hold its fourth annual meeting in September, 1902, at Rouen. Dr. Richelot has been elected president of the gynecological section, Dr. Guillemet of the obstetrical section, and Dr. Kirmisson of the section upon pediatrics.

Paris.—Dr. Jaccoud, professor of clinical medicine, and Dr. Panas, professor of ophthalmology in the University, have been elected honorary professors.

Physicians in French Politics.—42 members of the French Senate and 53 members of the Chamber of Deputies are physicians, making a total of 95 doctors in the French Parliament.

The Virchow Krankenhaus.—The new hospital, now in process of erection in Berlin, the most modern hospital in Germany, will be called the Virchow Krankenhaus, in honor of the noted pathologist who has recently celebrated his eightieth birthday. He was born on October 13, 1821, at Schivelbein, a small town in Pomerania. He was educated at a Gymnasium, in Berlin, and in 1839 he began his medical studies. He was graduated from the University of Berlin in 1843. The following year he was appointed assistant in pathological anatomy in that institution. In 1846 he was connected with the Charité Hospital, and a year later was appointed regular lecturer at the University. In 1848 he was commissioned by the Prussian Government to visit Upper Silesia to study typhus fever there. In 1849 he became professor of pathological anatomy at Würzburg, which position he held until 1856, when he was called to be Director of the Pathological Institute in Berlin. He was a member of the Prussian Chamber in 1862, and of the German Reichstag from 1880 to 1893.

Nineteen Physicians Quarantined.—About the middle of September the steamer *Senegal* left Marseilles upon a Mediterranean cruise. Among the 174 passengers were 19 physicians, some accompanied by their families. Before reaching Ajaccio, Corsica, their first stop, it was discovered that the second mate had bubonic plague. The steamer returned to Marseilles at once. A sailor was also found suffering from the plague. The passengers were kept in strict quarantine for ten days, while the steamer was rigidly disinfected. The mate died, but the sailor recovered. No other cases developed. Rats upon the steamer were killed and plague bacilli found upon them. The steamer had come from Constantinople. While the tourists complained of the poor food and service during their quarantine, they nevertheless continued upon their journey, leaving for Alexandria early in October.

Foreign Obituary.—Dr. Adolph Winter, professor of pharmacology at Leipzig, formerly librarian of the University, and publisher of *Schmidt's Jahrbucher*, died September 18th, aged 85 years.

Appointments.—Berlin: Dr. Frederick Phehn, lecturer on tropical hygiene in the Oriental Seminary, has been made professor. Halle: Dr. Ernst Ziemke has been appointed professor of medical jurisprudence. Stockholm: Dr. J. E. Johannsen has been appointed professor of physiology. Vienna: Dr. Theodor Escherich, professor of pediatrics at Graz, has been appointed professor of pediatrics at the University of Vienna, replacing the late Dr. Widerhofer. Marburg: Dr. Heinrich Bonhoff has been made professor of hygiene, making two professors of hygiene in Marburg, since Dr. Behring is already one.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

September 28, 1901.

1. Discussion on the Treatment of Lupus Vulgaris and Some Other Diseases of the Skin by Finsen's Light Method and X-rays.
MALCOLM MORRIS, A. B. BLACKER, J. H. SEQUEIRA, W. A. JAMIESON, H. A. G. BROOKE, NORMAN WALKER, G. G. S. FAYLOR, NOIRÉ, SABOURAUD, J. F. HALL-EDWARDS, G. B. BATTEN, J. S. BOLTON, W. H. EVANS and H. RADCLIFFE CROCKER.
2. Discussion on Seborrhea. T. C. FOX, SABOURAUD, W. A. JAMIESON, NORMAN WALKER, J. M. H. MACLEOD, HENRY WALDO, T. D. SAVILL, WM. DUBREUILH, LESLIE ROBERTS, and GEORGE PERNET.
3. The Action of Arsenic on the Skin. H. G. BROOKE.
4. The Action of Arsenic on the Healthy Tissues of the Skin. LESLIE ROBERTS.
5. Epithelioma Supervening on Arsenical Keratosis.
H. RADCLIFFE CROCKER
and GEORGE PERNET.
6. Notes on a Case of Purpura Hemorrhagica Associated with General Tuberculosis. ELTON PRATT.
7. The Treatment of Advanced Lupus. HERBERT SNOW.
8. Multiple Disseminated Lupus following Measles; Death from Tuberculous Meningitis. ARTHUR HALL.
9. Discussion on the Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus.
FRANK MARSH, A. B. KELLY, C. A. PARKER, M. P. MAYO COLLIER, L. H. PEGLER, WATSON WILLIAMS, St. CLAIR THOMPSON, W. MILLIGAN, W. PERMEWAN, SCANES SPICER, J. DONELAN, R. H. WOODS, H. TILLEY, S. D. CLIPPINGDALE, C. E. G. SIMONS, and T. MARK HOVELL.
10. Practical Points in the Treatment of Nasal Suppuration.
JOHN MACKIE.
11. A Discussion on the Local Treatment of Tuberculosis of the Larynx. J. MIDDLEMASS HUNT, H. J. BARON, R. LAKE, A. MCCALL, W. J. HORNE, W. WILLIAMS, St. CLAIR THOMPSON, R. H. WOODS, F. De HAVILLAND HALL, W. PERMEWAN, J. DONELAN, W. MILLIGAN, ADOLPH BRONNER, N. C. HARING, C. A. PARKER, G. WILKIN, and T. MARK HOVELL.
12. The Treatment of Laryngeal Growths in Children.
G. HUNTER MACKENZIE.
13. Note on a Case of Recurrent Papillomata of the Larynx in an Adult Treated Locally by Formalin.
ADOLPH BRONNER.
14. Multiple Papillomata of the Larynx.
N. C. HARING.
15. Notes of Two Cases in which Chronic Hypertrophic Laryngitis Preceded Papillomata.
WILLIAM LAMB.
16. Morecellement of the Tonsils. L. H. PEGLER.
17. A Case of Mastoid Antral and Two Cases of Frontal Sinus Suppuration. HERBERT TILDY.
18. Cases of Aural Disease. G. P. FIELD.
19. Some Details in Eustachian Catheterization.
J. DUNDAS GRANT.
20. Explanation of Appearances in some Cases of Acute Lacunar Tonsillitis which Simulate Excavating Ulcers. J. DUNDAS GRANT.
21. Hypertrophy of the Anterior Lip of the Hiatus Semilunaris. J. DUNDAS GRANT.
22. A Note on the Morbid Conditions Simulating Adenoids.
WYATT WINGRAVE.
23. On the Removal of Tonsils in Adults.
H. LAMBERT LACK.
24. Some Practical Points in Connection with the Technique of Skin Grafting in Mastoid Operations.
WM. MILLIGAN.
25. On So-Called Sclerosis of the Middle Ear, its Causation and Treatment. MAYO COLLIER.
26. Ethyl Chloride as a General Anesthetic in Nasal Surgery. JOHN MACKIE.
27. Difficulties and Insufficiency of the Commonly-accepted Theory of Adenoid Deafness. DAVID McKEOWN.

28. A Simple and Portable Spray Pump for Disinfection.
W. LESLIE MACKENZIE.

1.—In the treatment of lupus by Finsen's light method, if the disease is so situated as to make accurate focussing impossible, the Roentgen rays prove of service. Morris has treated 36 cases of lupus vulgaris, 6 of lupus erythematosus, 14 of rodent ulcer, 2 of alopecia areata, 1 of keloid and 1 of epithelioma by Finsen's method. Of the cases of lupus 8 were cured and in 6 the result was unsuccessful or unsatisfactory. Seven cases of rodent ulcer were cured. In 2 cases of lupus erythematosus the result was satisfactory. The application of the light is followed by hyperemia and redness, followed by the formation of a bleb which, in about a week, breaks and dries into a thick yellow crust. Healing is complete in 10 days or a fortnight. The intensity of the reaction varies in proportion to the intensity of the light; according to the structural peculiarities of the patient's skin; and especially, according to the local conditions produced by the disease. The after-smarting is often considerable, and the inflammatory phenomena constituting the reaction are also more or less painful. The remedial effect of the light rays is directly proportionate to the intensity of the reaction. A coarse, thick skin, a large amount of pigment, deep seated disease, great thickening and infiltration of the tissues, large extent of the area involved, and cases in which mucous membranes are involved and the length of time over which the treatment has to be prolonged are the chief drawbacks of the method. Blacker found that with Finsen's rays reaction occurred in from 4 to 24 hours; with the X-rays in from 4 to 24 days. The first was comparatively slight and easily controlled; the second was sometimes severe, and an ulcer might be produced which would last for months. In the treatment of the pain accompanying ulceration he had found chlorotone and orthoform of service. Sequeira said that from an experience of 15 months work at the London Hospital, where there were 3 lamps continually in use and where nearly 200 patients had been under treatment, he had observed improvements in every case of lupus vulgaris of every degree of severity. He had treated 45 cases of rodent ulcer with the X-rays. The ulcer healed rapidly and huge cavities filled up in a remarkable manner. In the treatment of cancer by the X-rays he had found pain to be relieved and ulceration to be dried up, but in some cases the tumors grew rapidly in spite of the rays. A single case of nodulated leprosy of the skin had shown a marked improvement. In sycosis he had also obtained satisfactory results. Jamieson, from a limited experience, said that he believed that the Finsen light method and the X-rays were but additions to the armamentarium, to be had recourse to in special circumstances only, not indiscriminately. Walker thought one of the most satisfactory features was the success which attended the X-ray method in diseases that were extremely obstinate to other forms of treatment. He has seen good results in cases of lupus and in cases of sycosis. In lupus vulgaris, when the X-rays are applied to a moist surface, the discharge is lessened and assumes a purulent instead of a serous appearance. Normal epithelium develops very rapidly and healing quickly follows. When applied to dry surfaces exfoliation of the epidermis takes place, and the part exhibits a dried and shrunken appearance. Absorption of morbid products takes place, resulting in a smooth, soft and pliant scar. An erythema of uncertain duration always accompanies these changes, and unless this is permitted to disappear between each successive application of the rays, an aggravation of the disease occurs. Taylor referred to a case that illustrates the remarkable effect of the X-rays in stimulating the growth of the epithelium. Noiré and Sabouraud have treated 50 cases of alopecia areata by Finsen's light, but notwithstanding improvement in some cases, the results are not such as to lead them to substitute that method for the other methods of treatment already in vogue. Twenty cases of lupus vulgaris gave the following results: 5, in which the diseased area was of the size of a shilling, were completely cured by 5 exposures of one hour each at 4 days interval. In 12 other patients with extensive lupus, marked improvement was obtained, some portions of the diseased area being cured. As to lupus erythematosus, the results were disappointing. [J. M. S.]

3.—Arsenic eruptions due to the action of the vasomotor centers consist of more or less extensive diffuse erythematous eruptions, scarlatiniform, morbilliform or erythrodermic, in type of very unequal intensity in different parts but

usually preponderating on the trunk and upper limbs, especially in front. Phenomena due to the action of arsenic, on the nerve trunks include the flushing, the cyanosis and the edema so frequently observed on the face and extremities. These symptoms are non-inflammatory and are obviously due to vasomotor paresis. The nutritive group of arsenic eruptions comprise those changes that affect the normal growth of the skin apart from any inflammatory change, such as pigmentation, hyperkeratosis, erythromelalgia and hyperhidrosis. [J. M. S.]

4.—Roberts concludes that arsenic is not a drug possessing curative powers; that it is not necessarily an irritant poison; and that it is not a poison in itself, but that its action is irritated and determined by the tissues themselves. Its effects are essentially of a nutritive order, brought about by the agency of active oxygen. These effects are beneficial to the organism when the oxidation is slow, and injurious when too rapid. The more highly organized the cell, the more unstable its protoplasm, and the more rapid its metabolic processes, the more rapidly does it feel and manifest the action of arsenic. [J. M. S.]

5.—Crocker and Perret report the case of a man, aged 60 years, who was suffering from a small, painful sore, situated on the ulnar border of the right hand, close to the metacarpophalangeal joint of the little finger, and of 6 months duration. The patient had suffered from psoriasis at the age of 20, for which he had had arsenic, but he had not had any treatment for 38 years, and, so far as he knew, he had not taken arsenic since then. On the whole, the psoriasis had got better the last 2 to 3 years. The growth was excised in 1900. Later, there was marked induration on either side of the incision, but the skin was not involved and the growth was removed together with the little and the ring fingers. Histological examination showed the growth to be an epithelioma supervening on arsenical keratosis. [J. M. S.]

6.—Pratt reports a case of purpura hemorrhagica associated with general tuberculosis. [J. M. S.]

7.—In the treatment of advanced lupus Snow advocates scraping away as thoroughly as possible the soft cell growth, and then, as soon as bleeding has ceased, applying lint soaked in iodine liniment to the raw surfaces. The lint is removed on the following morning to prevent vesication. Then an emollient dressing is substituted. Notes of 10 cases are given. [J. M. S.]

8.—Hall reports a case of multiple disseminated lupus following measles; death from tuberculous meningitis. [J. M. S.]

9.—Marsh defines nasal obstruction as the inability to breathe freely and equably at the same time through both nostrils. Obstruction may be due to abnormal conditions of the turbinated bones and includes bone obstruction, soft tissue obstruction, and a combination of these conditions. Where turbinectomy is employed for bony enlargement, hemorrhage is often free, but is controlled by the application of, or tight packing with gauze dipped in solution of adrenalin chloride. Kelly said that one should be chary of treating the noses of medical men who are attending cases of influenza by operation. In several instances he has seen a severe attack of influenza follow cauterization in such a manner as to suggest a relation. Parker concludes (1) that even slight abnormalities occurring in the middle meatus are of more importance than great abnormalities in the inferior meatus, (2) that abnormalities causing obstruction between the middle and superior meatus are productive of harm, and may require treatment in order to restore the air way, (3) that in view of the fact that the inspired air does not pass directly over the inferior turbinate, it is probable that the mucous membrane covering the structure of the middle and upper passages shares the important function of warming and moistening the inspired air, (4) that operative interference should be strictly limited, no more of the parts being removed than is absolutely necessary to restore the natural air way, (5) that the inferior meatus is the natural channel for the drainage of the nose, and that removal of obstructing abnormalities is often necessary to render it efficient for this purpose. Thompson said that operative treatment should be most carefully avoided in cases exposed to influenzal infection; he had seen alarming symptoms undoubtedly caused by such infection. He could not agree that a patient was always better without a useless turbinate; but thought that it was better to have slight nasal obstruction than a freely pervious nose and pharyngitis sicca. Howell

spoke against the reckless removal of turbinates by some specialists, and was glad to find the Section of Laryngology and Otology endorsing this view. The operation is justifiable only when the needful air space is unobtainable by other means. [J. M. S.]

10.—Mackle finds that with very few exceptions, suppurative ethmoid cases are associated with polyp. He believes that we attach too much importance to dental mischief as the cause of cases of suppuration of the antrum and that the specific fevers, and more particularly influenza, are responsible for far more cases than diseased teeth. In the sphenoid cases, as a rule, he has been unable to fix a beginning or to trace a cause. If we have chronic discharge of pus from the nose, which persists after free drainage has been established by the removal of granulations, polyp, or bony obstructions, we must lay open the diseased parts in order to obtain a cure. In doing so, provided we keep in clear view the position of the brain and orbit, and provided, always, that we keep in the path of the pus, there can be only slight danger of accidents. In a long-standing case the hesitating and timid hand is not likely to meet with much success. [J. M. S.]

LANCET.

September 28, 1901.

1. An Address on the Diagnosis of Cancer of the Stomach. JOHN C. HEMMETER.
2. A Clinical Lecture on the Syphilitic Affections of the Stomach. W. SOLTAU FENWICK.
3. The Infectiousness of the Milk of Tuberculous Cows, etc. LYDIA RABINOWITSCH.
4. A Case of Acute Double Pneumonia Treated with Oxygen; Recovery. G. E. RICHMOND.
5. A Résumé of Modern Views on Gastric Digestion. HENRY F. BELLAMY.
6. A Dilated Superficial Abdominal Vein with a Suggestive History. THEO. FISHER.
7. The Prospects of Cure in Cancer. HORACE MANDERS.
8. A Case of Pneumothorax Shown by the Röntgen Rays. ERNEST W. MARTIN.

1.—Hemmeter discusses "the diagnosis of cancer of the stomach." The author states that at the present day we do not understand the nature of carcinoma. No matter how we direct our measures of treatment or at what time they are begun, the individual will eventually suffer from the recurrence of the disease. This occurs in 99% of the cases of operated gastric cancer. An early diagnosis is the only one that is of interest to the surgeon. He considers seriatim the different clinical methods which are employed in the recognition of carcinoma of the stomach. In regard to age, he quotes the statistics of a number of authorities, who have found that gastric cancer occurs in three quarters of the cases between the ages of 40 and 70. A number of instances are on record in which cancer of the stomach occurred at a very early age, and for this reason he cautions the physician not to give undue importance to the question of age. Hemmeter believes that the limited age for carcinoma is gradually receding. In his experience, one half of the cases of gastric cancer presented bloody vomiting, the vomit, as a rule, assumed a characteristic "coffee ground appearance." Rarely are large quantities of blood vomited; nevertheless, in cases of gastric ulcer small hemorrhages may occur, while in gastric cancer large hemorrhages may occur, and he has observed cases of gastric ulcer showing coffee ground vomiting repeatedly. In 75% of the cases of cancer of the stomach he has observed constipation, while in 20% diarrhoea, and only in 5% were the stools regular. Emaciation and cachexia are by no means characteristic symptoms of gastric cancer, they are, nevertheless, important, because they influence the surgeon in his decision for operation. The high degree of emaciation and cachexia may result from a very small cancer, while at other times, a large growth is accompanied by a slight degree of emaciation and cachexia. In respect to the conditions of the gastric functions, he believes that there is sufficient evidence for the conclusion that the presence of hydrochloric acid by no means argues against cancer of the stomach, its absence cannot point against the existence of this condition. The presence or absence of hydrochloric acid, when considered with other symptoms, has some diagnostic signifi-

cance. A decrease in the secretion of rennin and pepsin is of little diagnostic value, as such a change may occur in other diseases. The presence of lactic acid should be regarded as a very important sign and should suggest gastric cancer. This cannot be regarded as an early sign. For clinical purposes he recommends Uffelmann's test for the detection of lactic acid. He highly advocates the use of the microscope for the detection of the Oppler-Boas bacillus, mitotic cells, or parts of the growth, in the stomach contents. The Oppler-Boas bacillus occurs in the stomach in a large percentage. This must be regarded as a late sign of the cases of gastric cancer. He has found curettage of the stomach, with a soft rubber tube, a valuable adjunct in diagnosis. By this method, which is practical, unaccompanied by danger, he has been able to detach some of the cellular elements. By staining these cells, important evidence is secured. The presence of karyokinetic figures should be regarded as an early sign. The determination of a reduction of the absorption power of the stomach, the presence of a large amount of indican in the urine, and the existence of blood changes, cannot be considered as signs possessing very little diagnostic value. He believes that the finding of a tumor is the most reliable evidence in establishing a diagnosis, but unfortunately this is a late manifestation, nor does it occur in all cases, and its existence does not point absolutely to a malignant growth. He thinks that the solution in the treatment of carcinoma of the stomach will not be found in a surgical operation, which at the present day offers most, but at best, only slight chances for recovery.

2.—Fenwick classifies syphilitic affections of the stomach into, (a) those due to the formation of gummata; (b) those due to the production of endarteritis; and (c), those due to the existence of chronic inflammation of its mucous membrane. The diagnosis of syphilitic gastritis, if there is any doubt as to its existence, may be cleared up by a few days' trial of iodide of potassium treatment. Non-syphilitic cases are aggravated by this treatment, while with specific cases the contrary result is obtained.

[F. J. K.]

3.—Rabinowitsch discusses "the infectiousness of the milk of tuberculous cows; the bacteriological diagnosis and the practical value of tuberculin for the extermination of tuberculosis among cattle." The author mentions that about 90% of the cases of tuberculosis in swine have originated from feeding with infected milk. Rabinowitsch found that tubercle bacilli may exist in the milk of animals suffering from latent tuberculosis, the condition being revealed by the tuberculin test. Intraperitoneal injections of milk containing tubercle bacilli into guinea pigs form the most satisfactory way of demonstrating the presence of infectious milk. Even very slightly infectious milk will give rise to tuberculosis by this method of experimentation. Previous observations have convinced the author that the detection of tubercle bacilli by means of microscopical examination is unreliable for the reason that the absence of acid resisting bacilli from the specimens examined cannot be considered convincing, as the number of bacteria may be very small, so that they cannot be demonstrated on every slide examined, and also for the reason that the acid-resisting bacteria have been found in milk, which are difficult to distinguish from tubercle bacilli. Acid-resisting bacteria other than tubercle bacilli have been found in specimens of mixed milk and also in milk taken under aseptic conditions from the individual cows in from 20 to 25% of the cases examined. The author therefore concludes that the only reliable method for demonstrating tubercle bacilli in milk is by animal experiments, namely, intraperitoneal injection into guinea pigs with a mixture of cream and sediment of thoroughly centrifuged milk. From a study of a number of cases the conclusion is arrived at, that the clinical diagnosis of tuberculosis, particularly tuberculosis of the udder, does not enable us to judge whether tubercle bacilli are secreted with the milk of the diseased animal; nevertheless, the presence of tubercle bacilli in the milk of diseased cows, suffering from tuberculous disease of the udder, depends largely on the extent of the disease in these organs. The recognition of bovine tuberculosis, with the view of its extermination, seems impossible without the aid of tuberculin.

[F. J. K.]

4.—Richmond reports a case of acute pneumonia, treated

with oxygen, occurring in a man 23 years of age, with recovery. [F. J. K.]

5.—Bellamy outlines a résumé of the modern views of gastric digestion. He points out that recently it has been shown that ethyl alcohol possesses the property of increasing the gastric secretion of pepsin, being therefore a true "succagogue." Indulin and glycogen possess the property of increasing pepsin without influencing gastric juice secretion, therefore being a true "pepsinogenes." We quote in substance a number of important practical hints: "(1) After a meal consisting of 'indifferent' food-stuffs, such as boiled and washed-out meat or coagulated albumin, 10 cubic centimetres of juice may be secreted by the stomach in one hour; these 10 cubic centimetres will barely digest one cubic centimetre of albumin. (2) After a similar meal to which has been added a juice expelling substance, 50 cubic centimetres of juice are secreted in one hour. A portion of 10 centimetres taken from this juice will digest one cubic centimetre of albumin; thus the whole hour's secretion digests five cubic centimetres instead of one. This is already a great advantage for digestion. (3) After a meal similar to No. 1, to which has been added a pepsinogenic substance, barely 10 cubic centimetres of juice are obtainable in one hour, but these 10 cubic centimetres digest, say, six cubic centimetres of albumin. This is also a great advantage for digestion. (4) Finally after a meal similar to No. 1, to which has been added both a juice-secreting substance and a pepsinogenic, 50 cubic centimetres of it can be collected in one hour, of which each 10 cubic centimetres digest from five to six cubic centimetres of albumin—i. e., in all from 25 to 30 cubic centimetres. Here the advantage is enormous, it being 25 to 30 times stronger than in the first case and from four to five times stronger than in the second and third cases."

[F. J. K.]

6.—Fisher reports a case of hemiplegia occurring in a girl 8 years of age, followed by aphasia and the appearance of a dilated superficial abdominal vein, suggesting thrombosis of the external iliac vein and thrombosis as a cause of the hemiplegia. [F. J. K.]

8.—Martin reports a case of pneumothorax shown by the Roentgen Rays. By this method he cleverly demonstrated the positions of the misplaced organs—heart and lungs, widening of the intercostal spaces and the presence of tubercles. [F. J. K.]

MEDICAL RECORD.

October 12, 1901.

1. Panhysterokolpectomy; a New Prolapsus Operation. GEORGE M. EDEBOHLS.
2. Strangulated Hernia in Infants. CHARLES N. DOWD.
3. A Study in Heredity; In its Relation to Immunity and Selective Activity in Tuberculosis.

HERBERT MAXON KING.

4. Epilepsy; Its Etiology and Treatment. J. L. BOWMAN.

1.—Edebohls remarks that the very multiplicity of operations heretofore proposed for the cure of prolapsus of the uterus and vagina is proof, if such were needed, that no operator of larger and longer experience is entirely and absolutely satisfied with the results of all his prolapsus operations. There is room, in the treatment of complete prolapse of the uterus and vagina, for an operation which, properly and successfully performed, will guarantee a certain and permanent cure of the prolapse. Such an operation is panhysterokolpectomy, the essentials of which consist in complete removal of the uterus and vagina followed by operative obliteration or columnization of the bed of the genital tract. The tubes and ovaries are not disturbed, if healthy; if diseased, they are removed with the uterus and vagina. Obliteration and columnization of the bed of the removed uterus and vagina is effected by means of from seven to nine buried pursing sutures of chromicized catgut placed about two to two and a half centimeters apart, and running parallel to each other. Each suture gathers the raw surfaces from the periphery in circular fashion and draws or purses them together in the median line. It is buried by being pushed upward toward the abdomen, while the next suture is being tied beneath it.

The effect of the completed operation is to build a solid pelvic floor ten to fifteen centimeters in depth from peritoneum to perineum, and to establish broad apposition of the base of the bladder and the anterior surface of the rectum, conditions similar to those obtaining in the male pelvis. The patient is kept in bed for a week after operation. Recurrence of prolapse is impossible after a correctly and successfully performed panhysterokolpectomy. The operation is indicated in the severest cases of total prolapse, and more especially where other operative procedures have been tried and failed. The interference with further marital relations must be explained, and accepted by the patient prior to operation. In the case of a married woman the husband must also be consulted. Four cases have thus far been operated upon by the author of the operation, all with perfectly satisfactory result. [W. A. N. D.]

2.—Charles N. Dowd presents a paper on **strangulated hernia in infants**, the reports of twenty-five operations in such cases in children under one year of age since May, 1898. There was only one death among the twenty-five cases. In addition, the one hundred cases previously tabulated by the author, indicate beyond all question that infants endure this operation very well. The report of a case is given in which the intestine had almost slipped back into the peritoneal cavity, leaving no palpable tumor, although the strangulation persisted. The operation was done on account of the symptoms and history. The child left the hospital on the eighth day. The records indicate that delay in interpreting the symptoms or reducing the hernia by taxis have been the greatest danger, while early operation has been the greatest safeguard. [T. L. C.]

3.—Herbert Maxon King reports a **study in heredity; in its relation to immunity and selective activity in tuberculosis**. He summarizes this paper by stating: (1) That the percentage of consumptives having a tuberculous parentage is actually smaller than that having a non-tuberculous parentage, and much smaller than would be more than accounted for by the additional risk of infection to which the former class is subjected. (2) Tuberculosis in the parents renders to no inconsiderable extent an immunity to the disease in the offspring, an immunity which of course is but relative, and not sufficiently protective, but still demonstrable, as is shown by the increased resistance to the progress of the disease and increased tendency to recover among the class. [T. L. C.]

4.—J. L. Bowman discusses **epilepsy; its etiology and treatment**. Speaking of treatment this writer believes that it can only be carried out in homes for epileptics, and he makes a plea for the extension of these institutions. [T. L. C.]

MEDICAL NEWS.

October 12, 1901. (Vol. LXXIX, No. 15).

1. The Endowment of Medicine. MALCOLM MORRIS.
2. The Influence of the Colorado Climate Upon Pulmonary Hemorrhages. S. G. BONNEY.
3. The Tuberculosis Question. H. ARROWSMITH.
4. The Prevalence and Treatment of Tuberculosis Among the Poor. H. L. FANCHER.
5. The Crowding of Consumptives Into the Municipal General Hospitals. WILLIAM RIDGELY STONE.
6. Tuberculous Otitis Media, Mastoiditis and Meningitis in an Otherwise Apparently Healthy Adult. Brief Report of a Case. JAMES FRANCIS McCAW.
2. S. G. Bonney concludes his article on the influence of the Colorado climate upon pulmonary hemorrhages as follows: (1) That hemorrhage by itself, save with few exceptions, furnishes no criterion upon which to base a choice of climate, the indications for high altitude in uncomplicated and in not too far advanced cases being highly imperative, independent of this single manifestation; (2) That an exceedingly small proportion of recurrences may be expected in Colorado, although not necessarily re-

flecting accurately the degree of ultimate improvement secured; (3) That recurrences are more likely to result, and that quickly, in those cases with hemorrhage immediately preceding arrival, and hence the wisdom of a short delay following the hemorrhage before leaving home and unusual precautions as regard rest upon arrival; (4) That primary hemorrhages are comparatively rare in Colorado and usually take place incident to a rapid progressive destructive change in cases already with hopeless prognosis, or as a natural result of some external assignable cause, which under proper régime could be avoided; (5) That hemorrhage, while less likely to occur in Colorado than at sea-level, is, nevertheless, as a general rule, more severe and associated with greater shock; (6) That the avoidance of hemorrhage, particularly in the early months of Colorado life, demands a most rigid compliance with detailed instructions. [T. M. T.]

3.—H. Arrowsmith says that there are a few routine procedures in the **symptomatic treatment of tuberculosis** which do more harm than good: (1) The use of cod-liver oil. The author says this may sound heretical, but he is convinced of its truth. It acts as an alternative by changing decidedly the oxidation processes of the system. But, unfortunately, its alternative effects are in the wrong direction, decreasing the perfection of the proteid oxidation and depriving the unfortunate patients of the single chance of recovery they might otherwise have retained. The free ingestion of it rapidly decreases the urea in the urine and increases the incomplete or imperfect products of nitrogenous waste. The more perfectly it is emulsified, the more detrimental it becomes, because thus it is more palatable and less likely to produce digestive disturbance and to be therefore refused entrance to the system. The emulsion also favors the absorption of immoderate quantities, thus exhausting the oxygen supply and rendering the suboxidation of the proteid molecule, with all its ill effect, doubly certain. It disturbs the digestion and prevents the utilization of other and more valuable forms of foodstuffs; (2) The indiscriminate use of opium derivatives and cough syrups, which upset the patient's digestion and nutrition and thus work him incalculable harm. The author's personal experience with heroin has been uniformly disappointing; (3) The treatment of the septic fever by the coal-tar antipyretics. [T. M. T.]

4.—In an article on the **prevalence and treatment of tuberculosis among the poor**, H. L. Fancher quotes from Dr. S. A. Knopf the following: "Consumption is an eminently preventable and curable disease. It is curable in nearly all climates. All that is needed for the treatment of consumption is relatively good, pure air, good food and plenty of it, the best hygienic and sanitary conditions, and a willingness on the part of the patient to submit himself to the constant guidance of his physician. Consumption is not merely a medical, but also a social disease." Dr. Knopf also lays great stress on the establishing of sanatoria which will not only be healing institutions, but also schools of hygiene where patients will learn from actual experience how to take care of their expectoration and to protect others from infection and themselves from reinfection, and what to do and what not to do in order to get well and remain well. [T. M. T.]

5.—W. R. Stone does not advise the placing of tubercular patients in general medical wards, for the reason that it is very hard to make these patients understand the seriousness of their disease, and, therefore, they will not use the sputum cups provided for them, but most often expectorate upon the floors of the wards, upon the bed clothes, or into the registers set in the floor. As we know, the sputum quickly dried by the hot air is circulated through the air in the wards and is inhaled by all the other patients and attendants. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

October 12, 1901. (Vol. LXXIV, No. 15).

1. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
2. The Tonsils. ROBERT LEVY.
3. A Case of Peliosis Rheumatica (Schönlein's Disease). FAIRFAX IRWIN.
4. The Growth of New Bone from Periosteum. J. HERMANN BRANTH.
5. Laryngology and Its Place in Medical Education. HENRY L. SWAIN.

6. On the So-Called Gluten and Diabetic Foods of Commerce. H. C. SHERMAN and H. M. RYER.

2.—It. Levy, in his article on the tonsils, states that the structures known as the tonsils consist of the entire ring of lymphatic tissue which runs from the tonsilla pharyngea to the region of the Eustachian orifice, from there to the posterior rim of the velum palati, around the posterior palatal fold to the faucial tonsil, over the base of the tongue to the opposite side, and by the same direction back to the pharyngeal tonsil. Diseases affecting these parts are found at all ages, but it is especially interesting to note that those of the pharyngeal and faucial tonsils are associated in childhood, those of the faucial and lingual tonsils in adult life. The tonsils are subject to acute and chronic inflammation, infectious, to disturbances in the character of their secretions, and to development of hypertrophic and hyperplastic changes. These pathological processes must be considered as due to both local and constitutional causes. The local causes are dependent upon certain variations from the normal in the structure of the tonsils themselves, while the constitutional causes may be due to such systemic vices as rheumatism, lymphatism, or systemic infection from absorption through the tonsillar tissue. [T. M. T.]

4.—J. H. Braith places the ordinary inflammatory diseases of the bone in three classes: (1) Death of bone in its entirety occurs in acute osteomyelitis, or is caused by severe shock, crushing, or by infection. It involves the whole bone, including diaphysis, epiphysis, and medullary substance; (2) Caries means death of particles of spongy or of articular parts. In caries it often happens that the nidus of inflammation becomes encapsulated and the liquid matter absorbed—as, for instance, may take place in caries of the spine, in which inflammatory matter, in encapsulation, is walled off, and the destructive process comes to a stop, which we term a cure; (3) Necrosis means death of a part, a mass of compact tissue. In necrosis there is no end to the lesion until the dead bone-substance is out of the system. Certain inflammatory processes, such as those of syphilis, attack the epiphysis. Necrosis of parts of bone may be due to a disturbance in the vascular system, to a thrombus or an embolus in the Haversian canals or in a system of canaliculi, or to a form of infection as a consequence to some blood crisis. [T. M. T.]

6.—H. C. Sherman describes some of the samples of the so-called gluten and diabetic foods of commerce as follows: (1) Diabetic biscuit, intended for use only in diabetes, said to contain little starch and no sugar and to be harmless and allowable in all cases and curative in their effects. The analysis shows this sample to have practically the composition of ordinary soda crackers, such as sell from seven to ten cents a pound; (2) Gluten wafers, made tender by the addition of sweet butter and alleged to be "very useful in diabetes." Except for the fact that it is somewhat higher in fat, this sample has essentially the composition of dried bread made from the cheaper grades of ordinary flour; (3) Gluten of wheat. The detailed statement on the package recommends it for invalids, but does not especially mention diabetes. The analysis corresponds almost exactly with the average composition of ordinary Graham flour or the lower grades of baking flours; (4) A small hard cracker purporting to be made from the gluten of wheat mixed with water only. The composition of this sample is much like that of the preceding and closely resembles that of ordinary crackers made "with water only." (5) Gluten zwieback, recommended as very useful in diabetes. This contains nearly the same amount of gluten and of carbohydrates as the entire wheat flour; (6) The package in which this was sold was labeled "gluten wafers" without further statement or description. In the amount of gluten they closely resemble the preceding; (7) So-called crude gluten. This is very similar in composition to the sample of the entire wheat flour; (8) Wheat gluten. It is alleged for this gluten that a large portion of the starch has been removed, and it is added that experience shows that it is better adapted to all but exceptional cases than pure gluten, besides being more palatable and less expensive. This sample contained 48 times as much carbohydrate as protein, a proportion quite similar to that shown by the entire wheat flour and one which might readily be obtained by simply grinding selected wheat. Very

little, if any, starch could have been removed in the preparation of this sample, certainly by no means a "large proportion;" (9) Extra gluten biscuit, and said to contain no sugar and but a very small amount of starch—not over 10 per cent. This sample contained at least five times as much starch as should have been present according to the description under which it was sold. There was nearly twice as much protein in proportion to carbohydrate as in ordinary breadstuffs, but it still contained 2.6 times as much carbohydrates as protein; (10) A perfect food for diabetes, dyspepsia, and obesity. This food contains as much starch and nearly as much carbohydrate as the whole wheat flour purchased at the same time and analyzed by the same methods. It is considerably richer in protein, but must certainly be regarded as very far from a satisfactory gluten food; (11) Gluten biscuit, also diabetic gluten biscuit. This sample, the best of those examined, contains twice as much carbohydrate as protein, whereas the British products examined by Fielden contained only about one-tenth as much carbohydrate as protein. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL

October 10, 1901.

1. A Brief Résumé of the Life Work of Ambrose Paré, etc. CHARLES GREENE CUMSTON.
2. Cretinism. CHARLES S. MILLET.
3. Association of Anemia with Chronic Enlargement of the Spleen. ARTHUR H. WENTWORTH.

2.—In the eastern part of France there are as many as 32 cretins per thousand, and 111 cases of goltre per thousand. In the whole of France over 125,000 cretins and idiots are believed to exist. In Switzerland and in Austria the number is fully as great. Less than 100 cases of the sporadic disease are all that have been reported in North America. In the treatment of cretinism thyroid gland is best given in powder, since it dissolves rapidly upon the tongue, and none is lost, even if the patient is unruly. It is best to begin with $\frac{1}{2}$ a grain, 3 times a day, and gradually increase it. Whenever the temperature goes above 100°, or the child becomes very nervous and does not sleep, the remedy must be diminished or stopped for a while. Later, when the nutritive changes are fully re-established, a very moderate dose once or twice a week may be sufficient. Millet reported 2 cases of the disease. [J. M. S.]

- 3.—Will be abstracted when finished.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

October 12, 1901.

1. Some Unusual Features of Appendicitis and their Treatment. ERNEST LaPLACE.
2. The Knot within the Lumen in Intestinal Surgery. With Report of Nineteen Cases. F. GREGORY CONNELL.
3. Modern Aspects of Congenital Osseous Malformations. CARL BECK.
4. Some Suggestions Regarding a Department of School Hygiene. LEIGH K. BAKER.
5. Diagnosis of the Backward Child. A. W. WILMARTH.
6. Speech as a Factor in the Diagnosis and Prognosis of Backwardness in Children. G. HUDSON MAKUEN.
7. A Plea for the Backward Child. C. W. WAHRER.
8. Section of Ophthalmology. J. A. LIPPINCOTT.
9. The Late Implanting of Glass Ball in Orbit, and Epithelial Lip Grafts Transplanted to Orbit. ADELINE E. PORTMAN.

1.—Ernest LaPlace discusses some unusual features of appendicitis and their treatment and urges early operation in this condition. In every fatal case of appendicitis there was a time when operation could have saved the patient. This is true no matter what complications have arisen in the eventual course of the disease. More dependence should be put upon muscle rigidity than upon the location and character of pain. When appendicitis is confined absolutely to the appendix itself, medical measures may be employed, but if these should not at once prove suc-

cessful, operation should be performed. Whenever the disease has extended beyond the appendix and has produced adhesions or possibly an abscess, the case should be operated upon. LaPlace advocates strongly the constant and persistent flushing of the peritoneal cavity in cases of peritonitis. He has found the method of continuous irrigation introduced by himself two years ago, to be most satisfactory in a number of cases of extensive peritonitis. The use of salt solution in this way lessens very much the absorption of septic materials. Precaution should be taken to see that the flow of the fluid is free and continuous; otherwise hydrostatic pressure is produced within the abdominal cavity which interferes with the function of the diaphragm. [J. H. G.]

2.—F. Gregory Connell gives the history of **intestinal suturing**. He details a number of objections to those sutures which leave the knot exposed in the general peritoneal cavity. The ideal location of the knot is within the lumen of the bowel. A method of anastomosis in which no portion of the suture is exposed in the peritoneal cavity and in which the knot lies within the lumen of the bowel is described and excellently illustrated. This suture permits the penetration of all the coats of the intestinal wall. It is claimed for it that it prevents leaking, is unyielding, and prevents adhesions taking place at the site of anastomosis. [J. H. G.]

3.—Beck contributes an article on "**modern aspects of congenital osseous malformations**." The article is illustrated. Some of these reproductions represent X-ray photographs. The cases which are reported and illustrated are the following: Non-osseous supernumerary digit and synostosis of the third and fourth metacarpus; supernumerary phalanx of the left little toe; congenital fracture of the radius and ulna; congenital absence of the radius and ulna; congenital absence of metacarpal and phalanges of the second, third and fourth fingers; congenital scapular asymmetry; congenital absence of one metatarsus and corresponding phalanges; congenital shortening of the right femur; congenital hypertrophy of toes; congenital dislocation of both hips; congenital absence of nasal bones and insufficient development of nasal processes of supra-maxilla. [F. J. K.]

5.—Wilmarth writes on the **diagnosis of the "backward child"**. The author mentions that there is no sharp line separating the "so-called" backward from the normal child, or between the feeble-minded and markedly backward child. He reaches the following conclusions, which we quote in substance:—"Delay in the mental development may be temporary or permanent. In the former case we should speak of the child as merely backward, in the latter, as feeble minded. When this condition is due to a lack of proper training, or to temporary ill health, it may often be entirely overcome by proper treatment. There has been no definite standard established upon which to decide whether a child is backward or not and we have no other guidance than by comparison with supposed normal children of the same age. The qualities on whose absence or faulty development we form our judgment are acuteness of perception, power of attention, strength of memory, accuracy in reasoning and judgment and growth of normal sense. Certain physical conditions are of aid in diagnosis of a backward condition, especially when considered in connection with delayed mental growth. Prominent among these are deformities; defects in or absence of articulate speech, not due to mechanical faults or deafness; defects in co-ordination and awkward gait; defective physical growth and lack of acuteness in different sense organs. There are none of these absolute pathognomonic, with the possible exception of lack of speech due to cerebral defect."

[F. J. K.]

6.—Makuen believes that the diagnosis of backwardness in children is not different and that the character of speech is a factor which aids in the diagnosis and prognosis of this condition. He deduces the following conclusions:

"1. It is not always possible to determine at a glance the cause of backwardness in children. 2. Backwardness in children is not always due to a central lesion, but may be the result of arrested cerebral development due to some abnormality of structure in the peripheral organs of speech. 3. A very common cause of backwardness in children may be some abnormality of structure in the peripheral organs of speech. 4. So closely are the speech centres related to the ideational centers of the brain that any impairment of the one generally results in a corresponding impairment of the other. 5. The best method of arriving at even a proximately correct prognosis in cases of backward children is to apply the speech test, or, in other words, to ascertain by careful study an experiment to what extent the faculty of speech may be improved, and it will be found that in those who are susceptible to training in what may be called the refinements of speech are the one for whom we may promise the best results, and that possibilities for general development will be proportional to the capacity for speech development." [F. J. K.]

7.—Wahrer makes a plea for the backward child. He emphasizes his remarks by stating that he does not mean the defective child, but one whose body and mind are normal and who is not a descendant of degenerate parents. He believes that too frequently we draw a comparison between the so-called backward child and the so-called bright child as our model. He closes his remarks by stating that "I crave a greater sympathy for the backward child." [F. J. K.]

8.—See *Philadelphia Medical Journal*, June 15, 1901, p. 1138.

AMERICAN MEDICINE.

October 12, 1901.

1. Uric Acid Fallacies. FRANK BILLINGS.
2. A Case of Anthrax of the Face; Operation; Recovery; with Exhibition of Patient. W. B. PLATT and H. C. OHLE.
3. The Diagnosis of Primary Laryngeal Tuberculosis. P. S. DONNELLAN.
4. Fibrin of the Blood. ROBERT L. WATKINS.
5. Kidney-Stone, Diagnosis and Treatment. DONALD MACRAE.
6. A Fatal Case of Tetanus, Treated with Antitoxin. LOUIS C. AGER.

1.—Frank Billings discusses **uric acid fallacies**, in which many of the theories concerning uric acid are expounded. He states that some of the fallacies of uric acid are: 1. That uric acid is toxic. 2. That it is a causative factor in any disease except gout. 3. That "uricæmia," meaning uric acid blood, exists. 4. That the chemic reaction of the blood may be altered by the use of medicinal quantities of the alkalies or by the diet. 5. That uratic deposits may be dissolved out by the administration of alkalies. 6. That litmia is a uric acid solvent of unusual potency. 7. That uric acid is an abnormal constituent of the urine. 8. That an excess of uric acid in the urine at one time or a deficiency at another time indicates an abnormal condition in reference to uric acid. 9. That rheumatism is due to uric acid. [T. L. C.]

2.—Platt and Ohle describe a case of anthrax in which operation was followed by recovery. The patient was a male, 16 years of age. The disease started as a vesicle with a brownish eschar surrounded by a brawny induration and was situated upon the right side of the face and neck. The patient worked in a brush factory. Five days after the onset of the trouble the patient had a temperature of 102-103, mental condition was clear, the whole right side of the neck and face was greatly swollen, and the right eye was closed. The swelling was firm and pitted on pressure. Over the site of the angle of the jaw was a raised wreath of vesicles. In the centre of the ring was a black area $\frac{1}{4}$ inch in diameter, below the level of the

vesicles but on a level with the skin. The necrotic portion of skin was thoroughly excised with a Paquelin cautery knife. A dressing of bichloride solution was then applied. An examination of the tissues removed showed the anthrax bacillus. The comparative freedom from pain is called attention to by the authors and contrasted with the severe pain which accompanies carbuncle and other conditions of a like nature. The thorough removal by the cautery is thought to be the best treatment. [J. H. G.]

3.—P. S. Donnellan discusses the diagnosis of primary laryngeal tuberculosis. The patient will complain of dryness and uneasiness about the throat followed later by dysphagia. Impairment of the voice is soon observed varying from slight hoarseness to complete aphonia. The cough is strident or brassy in proportion as the voice-producing structures are affected. Hemorrhages may occur from erosion of the laryngeal capillaries. There is usually slight fever toward evening with slight subnormal temperature toward morning. The disease may be taken for any other of the varieties of chronic laryngitis. The bacteriological and histological examinations are of the highest importance in arriving at a diagnosis of primary laryngeal tuberculosis and the employment of tuberculin is of value. It must not be forgotten that the absence of tubercle bacilli from the sputum, or from scrapings taken from the larynx, is not to be taken as exclusive evidence of the absence of the disease. [T. M. T.]

5.—Donald Macrae reviews the subject of kidney-stone with special reference to its diagnosis and treatment. He refers to the frequent mistakes which have been made in diagnosis. Kelly's waxed ureteral bougie and Harris' segregator have done much to aid diagnosis. The X-ray has been so perfected as to be a most reliable diagnostic measure at the present day in the hands of a competent man. "I believe that the time has arrived when it becomes our duty to subject each and every case of an affection pointing to a pathologic nephro-ureteral condition to the X-ray." [J. H. G.]

6.—Louis C. Ager reports a fatal case of tetanus, treated with antitoxin. The first symptoms appeared five days after the injury, a laceration of the left thigh caused by striking an old piece of sewer pipe. Eighty c.c. of tetanus antitoxin were administered subcutaneously on the sixth or seventh day. In addition, the routine of chloral and bromide treatment was carried out. The patient died at the close of the seventh day after the accident, three days after the first symptoms of tetanus, although the tetanus seizures were at no time very severe. [T. L. C.]

VRATCH.

June 16, 1901. (Vol. XXII, No. 24.)

1. On the Bacteriology of Acute Articular Rheumatism. V. E. PREDTETSHENSKI.
2. A Case of Tubercular Leprosy. V. PH. DEMITSH.
3. Histological Changes in the Post-partum Uterus in Cases of Acute Streptococcic Pyemia Treated With and Without Antistreptococcic Serum.

I. I. KLITIN.

4. Operation in Mechanical Dysmenorrhea. S. A. ALEXANDROFF.

1.—Predtetshenski made a bacteriological study of 5 cases of acute articular rheumatism, employing special media and methods for the cultivation of Achalmé's bacillus and Wasserman's streptococcus, should the latter be present. In neither of the cases was Achalmé's bacillus found. In 3 the cultures remained sterile, while in 2, anaërobic cultures of the blood on the medium devised by Achalmé resulted in a growth. In one a micrococcus was found possessing the following characteristics: the organism occurs in chains of 2, 3 or 4, forming much longer chains in fluid media; it stains well by Gram's method; and is a facultative anaërobe, growing well on ordinary culture media. Bouillon is rendered uniformly turbid; on agar the colonies are delicate and transparent; milk is coagulated; gelatine not liquefied. Morphologically, then, this organism resembles closely Wasserman's

streptococcus. Inoculations into animals produced a disease presenting the clinical picture of acute articular rheumatism in man. 10-15 days after the inoculation painful tumefaction appeared in the joints of the legs, principally the large joints, accompanied by fever, loss of weight and finally terminating in death. Autopsy showed marked inflammatory changes in and about the joints, the latter containing a small amount of a turbid fluid. In one of the guinea pigs a well developed endocarditis was found. The organism was recovered from the blood and joints of the dead animals. It proved non-pathogenic to rabbits, the latter showing only a slight reaction. In the other case the organism found was also a micrococcus very similar morphologically to the preceding, except that it grew more vigorously and formed shorter chains. Animal inoculations gave the following results: In one guinea pig the inoculation was followed by an elevation of temperature and loss of weight. These symptoms soon subsided. In 2 weeks painful swelling of the knee joints appeared, the animal being unable to use its limbs. Sodium salicylate was administered, but the animal died. The autopsy revealed hemorrhages into the tissues surrounding the large joints, pericarditis and endocarditis of the aortic valves. Intravenous injection of 0.8 c.c. of a bouillon culture in a rabbit was followed on the third day by an affection of the joints, becoming progressively worse and resulting in death on the 11th day. Autopsy showed an effusion of a turbid fluid into the joints. Another rabbit died on the 14th day after the inoculation, showing on autopsy marked vegetative endocarditis, but no affection of the joints. The organism was recovered from the lesions. It is noteworthy that the patient from whom this organism was originally obtained had a relapse and the same organism was found the second time. The author does not undertake to decide whether the two organisms are varieties or one and the same, but grown under somewhat different conditions, nor does he claim that the organisms are identical with Wasserman's. He does, however, refuse to accord to Achalmé's bacillus the specificity claimed for it by Achalmé and the Russian bacteriologists, Savtshenko and Melkich. [A. R.]

2.—Demitsh reports two sporadic cases of leprosy. One in a woman of 58, the other in a man 49 years old, with a good family and personal history. The first case is of anesthetic, the second of the tubercular variety. In the latter the lepra bacillus was found in the ulcers and the blood. [A. R.]

3.—Will be abstracted when concluded.

4.—Alexandroff believes that congenital antelexion and the accompanying narrowing of the internal os are manifestations of degeneration. This is evident from the fact that these patients show other degenerative conditions of the genital organs, tubercular disease of the lungs or a predisposition to it, various neuralgias, hysteria and hyperæsthesias. On that account treatment is of little permanent value and should be directed mainly towards the improvement of nutrition. Contrary to the statements made in the text-books, the anterior wall of the internal os is very thin while the posterior is very thick. Sims's operation, in the author's opinion, does not accomplish a radical cure. He devised a modification which consists principally in the removal of a wedge-shaped piece from the thickened posterior wall of the internal os. [A. R.]

June 22. (Vol. XXII, No. 25.)

1. In Memoriam of V. A. Manasein. M. O. SCHAIKEVITCH.
2. On the Causation and Serum Treatment of Malignant Growths. G. M. VLAIEFF.
3. The Histological Changes in the Post-partum Uterus in Cases of Streptococcic Septicæmia Treated with and without Antistreptococcic Serum. I. I. KLITIN.
4. The Therapeutic Action of Blue Electric Light. A. V. MININ.
5. The Casulistics of Hysteria in Man. S. I. SIRKIN-SCHKLOVSKI.

2.—Will be abstracted when concluded.

3.—Klitin determined by a series of experiments on animals, performed at the Institute of Experimental Medicine of St. Petersburg, the histological changes in the uterus in puerperal septicæmia, as compared with the normal uterus. He also studied the effect of serum treatment in modifying these changes. In a previous work on the subject just published in the *Archiv Biologicheskich Nauk*, 1898,

he pointed out that clinical observations show the beneficial effects of antistreptococcic serum in more than 65% of the cases of puerperal septicemia. According to Fehling's statistics, recovery takes place in 60%. The therapeutic action of the serum is in direct proportion to its strength, which should not be below 1 to 7000. The serum acts best in pure streptococcal infection, and its application is indicated principally in the acute forms of the disease. If such are the results obtained at the bedside, the experiments on animals prove more conclusively the value of the serum. The present experiments show (1) that the changes in the uterine horns following the introduction of a virulent streptococcus are the same whether the organism is introduced into the cavity or the blood current. These changes consist in the formation of numerous extensive areas of necrosis in the mucous as well as the muscular layer. The areas of necrosis are filled with streptococci. The blood vessels are considerably dilated, being filled with granular masses and streptococci. The endothelium is swollen and in places absent. The parenchyma of the uterine horns is marked by a rarefaction of the tissue elements quantitatively as well as in their distribution. The reactive infiltration of granulation elements and leukocytes is either but slightly apparent or altogether absent. Such changes take place in the early as well as later puerperal infection. In the latter case involution of the uterus is retarded. (2) When infection takes place through the inoculation of the vaginal mucosa or subcutaneous tissue, the degree and extent of the changes in the uterine horns are in proportion to the lapse of time since delivery. In the earlier infection, the changes are the same as described above, with the exception that they are not so widely disseminated and the endothelium of the blood vessels is not affected. In cases of late infection, the changes are characterized by the formation of islands of hyaline degeneration of the muscular fibres. The cellular elements are more abundant and more closely set; the streptococci are fewer in number. The blood vessels are dilated and contain many of the formative elements of the blood. (3) In cases in which the serum was used, involution takes place with greater regularity and more rapidly, owing to the greater vitality of the tissues. The infiltration of granulation elements and leukocytes is marked. The morbid changes are characterized only by an engorgement of the blood vessels which, however, is not general. The streptococci are fewer and, morphologically and microchemically, present involution forms, having lost their original virulence. These peculiarities in cases of serum-treatment are observed alike in the early and late infection. (4) The serum places the tissue elements in such a condition that the toxic effect of the streptococci is minimized. (5) This accounts for the recovery of the inoculated animals treated with antistreptococcic serum. [A. R.]

4.—Minin achieved remarkable results by the use of electric light in the treatment of superficial wounds, burns and a few cases of skin eruptions. The effect of electricity in these cases depends on the light and not the heat, inasmuch as the best results are obtained with the light at a considerable distance from the body. Blue light constricts the blood vessels and produces marked anesthesia, while white light has the opposite effect. The anesthesia caused by blue light is as marked as that produced by cocaine, and the author employed it successfully in minor surgery. Two cases are cited in which superficial wounds were sewed up under the influence of blue light of 50 candle power, without the patient experiencing the least pain. Contusions due to falls were promptly cured by blue light. In one case, a burn of the first degree yielded to two applications of the blue light from a lamp of 50 candle power, each sitting lasting 10 minutes. In another case of injury to the mouth, throat and esophagus caused by the accidental ingestion of ammonia, several applications of the blue light accomplished a complete cure. The light was directed to the mucous membrane of the mouth and in front of the neck and chest. A case of rheumatic purpura was cured by the application of white light from a 50 candle power lamp followed for a few minutes by blue light from a lamp of 25 candle power. In another case of simple purpura 5 applications of the electric light resulted in a cure, after other remedial agents failed. The treatment also exerted a beneficial effect on the general nutrition of the patient. [A. R.]

5.—Sirkin-Schklovski reports a case of hysterical paralysis and aphasia in a laborer, 18 years old. For 2 days

prior to the attack he was morose and expressed a desire to die. He recovered in a few days. [A. R.]

June 30, 1901 (Vol. XXII, No. 26.)

1. On the Causation and Serum Treatment of Malignant Growths. G. M. VLAEFF.
2. On the Differentiation Between Diphtheria and Pseudo-diphtheria Bacilli. I. A. SCHABAD.
3. Changes of the Body Temperature and Pulse Under the Influence of Various Baths of the Same Temperature, and the Influence of the Material of the Bath Tubs on the Cooling of the Contents.

I. I. MAKAVEEFF.

1.—Vlaeff, working at the Pasteur Institute, found that *biastomycetes* (*saccharomyces hominis*) play an important role in the causation of malignant growths. They are found in malignant tumors of man and animals, can be isolated and cultivated in pure culture and reproduce the disease (cancer, sarcoma, adenoma, etc.) in dogs, rats and rabbits. The toxins of these *biastomycetes*, when injected into animals cause fatty degeneration of the liver, kidneys and heart. By repeated injections of gradually increased doses immunity may be produced, and the serum of immunized animals is capable of curing cancer in the incipient stages, or prolonging the life of the patient when the growth is far advanced. The author employed the serum obtained from immunized geese and donkeys in the treatment of malignant growths in 60 cases and obtained results which seem to establish the curative value of the serum. He is of the opinion that syphilis, rheumatism, decayed teeth, chronic gastro-intestinal catarrh, traumatism, alcoholism, cirrhosis of the liver, malnutrition and antihygienic conditions are predisposing factors in the causation of malignant growths. [A. R.]

2.—Schabad draws the following conclusions from a series of carefully conducted observations on the true and pseudo-diphtheria bacilli: (1) True and pseudo-diphtheria bacilli represent two distinct species. (2) They differ in the growth on nutrient media (principally agar and asetic fluid), in their morphology, reaction of the bouillon culture, staining by Neisser's method and pathogenicity. (3) The most constant differential characteristics are the reaction of the bouillon culture and Neisser's stain. (4) It is necessary to distinguish the pseudo-diphtheria from the non-virulent diphtheria bacilli which, except their loss of virulence, are identical with the true bacilli. (5) The confusion of the non-virulent with the pseudo-diphtheria bacilli is largely accountable for the observations on the production of acid by the latter and their staining with Neisser's stain. (6) The differentiation of the non-virulent diphtheria bacilli is possible in all cases by other characteristics. (7) Spronck's method gives unsatisfactory results with the non-virulent bacilli. An important point brought out by the author is that the acidity of the bouillon should be invariably determined by titration with phenolphthalein as an indicator. Litmus may show an alkalinity when an acidity of several degrees is actually present. It is to the use of litmus as an indicator that he ascribes the failure of some observers to find an increased acidity in all cases of true diphtheria cultures. Behring's latest assertion that one of his diphtheria cultures produces no acidity is explained in the same way. [A. R.]

3.—Will be abstracted when concluded.

PRACTITIONER.

August, 1901.

1. The Influence of X-Rays on the Diagnosis and Treatment of Fractures. H. H. CLUTTON.
2. On the Use of Massage, Early Movement, and Posture in the Treatment of Recent Fractures.

WILLIAM H. BENNETT.

3. The Operative Treatment of Simple Fractures.

C. H. GOLDING-BIRD.

1. Recent Advances in the Diagnosis and Treatment of Fractures of the Upper Extremity. J. E. PLATT.

2.—William H. Bennett discusses the use of massage, early movements, and posture in the treatment of recent fractures. The method has never been advocated to the entire exclusion of the use of splints or of operation in the treatment of recent fractures, but the author believes that it should be used discreetly as an adjunct to the ordinary methods, and modified as circumstances may demand. The method entirely obviates the stiffness, pain and other

disadvantages which so constantly follow the treatment of fractures upon classical lines. Discussing massage, the author states that the amount of movement, if any, which occurs in the proper application of this method is not sufficient to interfere in any way with union, and need not, therefore, stand in the way of the application of common sense principles. The ease with which a difficult fracture can be manipulated after it has been subjected to gentle, smooth rubbing is often a revelation to those who have had no experience in the matter. The object of early passive movement in recent fractures is the very simple one of preventing adhesions, as opposed to the results of the older methods of absolute fixation of the limb. In any cases of fracture, after the fragments have been placed in accurate position, passive movements should be begun at once. The earliest movements can be effected without the removal of the splints, but in every case, as soon as the state of the fracture permits (from the third or fourth day onward) the splints should be loosened for gentle massage, by which the passive movement is not only rendered more easy, but also more effectual. The main points in making passive movements are the following: (1) Steady fixation of the fracture itself should be insured, either by the grasp of the hand or by appropriate splints or apparatus. (2) All movements must be gently but deliberately made, the hand must be firm and unhesitating, although gentle. In this way a sense of certainty and confidence is imparted which generally removes any inclination to resistance on the part of the muscles. It may be wise to practice movements first on the sound limb. In order to give the muscles some idea of what is expected of them. For the completely efficient employment of massage and early movements, the proper position of the affected limb is a matter of much moment. The danger of thrombosis and embolism, feared by some surgeons, does not exist more than in fractures treated by prolonged splinting. The method is not suited to those who lack discretion or who are defective in dexterity. The principal disabilities attaching to the union of fractures in faulty positions, unless the displacement be gross or of the rotary kind, are avoidable by the use of massage and early movements, by which adhesion around the fracture is prevented. [T. L. C.]

3.—C. H. Golding-Bird treats of the operative treatment of simple fractures, both simple and compound. Skiagraphy, notwithstanding the aid which it affords in diagnosis, must not be the sole test of the surgeon's work, nor indolence the standard up to which operative procedures should be carried. The value of massage as an adjunct of treatment is emphasized. He does not recommend open operation for Pott's fracture in the greater number of cases, but where restoration of position, after treatment of splints has not succeeded, and open operation is both safe and the ideal treatment. Some surgeons use the osteo-elast. The technique of the various operations used are discussed. As to fracture of the patella, it has been for many years his custom to operate by transverse methods by wiring and it has been universally successful. The treatment of separation of epiphyses and vicious and distorted union; non-union, and the operation of bone grafting are described; as is also the treatment of compound, or open fractures. [T. L. C.]

4.—J. E. Platt discusses the recent advances in the diagnosis and treatment of fractures of the upper extremity. No marked advance has been made during recent years in the diagnosis and treatment of fractures of the clavicle. The frequency of the incomplete fracture of the clavicle has been pointed out by several authors. If the displacement is considerable, an attempt should be made to remedy it by direct pressure, but care must be taken to avoid making the incomplete fracture complete. The arm should be kept at rest for from 10 to 14 days. The callus-tumor is usually completely absorbed in the course of time, but the process of absorption may take several months. The treatment of fractures by early massage without immobilization has been strongly recommended by Lucas-Championnière. Primary wiring has also been recommended. The author discusses fractures of the scapula and the humerus. In speaking of the treatment of fractures of the humerus, he has discarded passive movement after considerable experience with this method. Fractures of the radius and ulna are also mentioned, as well as many unusual fractures of the upper extremity. [T. L. C.]

UNIVERSITY OF PENNSYLVANIA BULLETIN.

June, 1901.

1. The Topical Treatment of Focal and Jacksonian Epilepsy. J. WILLIAM WHITE.
2. Right-sided Cardiac Hydrothorax. ALFRED STENGEL.
3. Cerebellar Lesions Without Cerebellar Symptoms. WILLIAM G. SPILLER, W. E. ROBERTSON, and W. S. WADSWORTH.
4. A Case of Complete Unilateral Oculomotor Palsy. DAVID RIESMAN.
5. Some Forms of Apparatus Used in the Course of Practical Instruction in Physiology in the University of Pennsylvania. EDWARD T. REICHERT.
6. A Series of Twelve Articles on Medical Men Prominent in the Civil and Military Affairs of Revolutionary Times—IV. FRANCIS R. PACKARD.

1.—See the Philadelphia Medical Journal, Issue of June 15th, 1901.

2.—Alfred Stengel reports a series of 17 cases of right-sided cardiac hydrothorax. Of the 17 cases, 5 were instances of effusion on the right side only. The evidence of effusion in one of the 5 cases being somewhat questionable. Three were cases of left-sided effusion, in two of which the right pleura was found entirely obliterated at autopsy, and in the third there was a suspicion of an aneurysm in the left chest; 9 cases had bilateral effusion at some stage; 2 of these were first right-sided, then bilateral with less extensive effusion on the left side; in the other 7 the effusion was bilateral from the beginning, but the right side was particularly affected. In discussing the causation of this condition, Stengel refers to two autopsies in which there was purely dilatation of the right ventricle, auricle and vena cava, and marked backward pressure upon the root of the right lung and azygos vein was discovered. From these facts it is evident that pressure is the predominating cause of the effusion in the right side. Stengel says that he has reached this opinion independently, but it has been expressed by others. Anatomical relations of the azygos vein to the inferior vena cava and right auricle below and to the bronchus and vessels at the root of the right lung above. Even a moderate dilatation of the auricle and cava must of necessity exercise a considerable pressure on the azygos vein and thus reduce its lumen. On the left side conditions are very different. The higher position of the left auricle prevents pressure of the lower azygos vein, which receives the intercostal veins up to the 6th or 7th interspaces and then empties into the major azygos, after crossing the vertebral column. The upper left azygos vein drains but one or two intercostal spaces, and is so placed as to be little likely to be compressed. The left superior intercostal vein is quite out of reach of compression, and it flows upward, so that even a compression of its lower part could have but little effect. These facts show the readiness with which dropsical effusions of the right chest may be occasioned by dilatation of the right auricle with direct and indirect pressure. The latter by displacement of the root of the right lung of the major azygos vein. Secondary and less extensive effusion in the left chest is explained by the fact that the lower and upper azygos veins of the left side discharge into the major azygos. Obstruction of this vessel would therefore occasion immediate and complete venous stasis in the right chest and secondary stasis in the lower portion of the left chest, and bear out completely the clinical observations. [T. L. C.]

3.—Spiller, Robertson and W. S. Wadsworth discuss the subject of cerebellar lesions without cerebellar symptoms. They report 3 cases, one in which there was a cerebellar tumor; the second in which there was the tumor of the corpora quadrigemina, and the third case was marked congestion of the brain and slight edema. The left cerebellar was quite firm and remarkably reduced in size. The left vertebral artery was smaller than the right, not gaping and having a scar as of an old local arteritis. In none of these cases were symptoms present. [T. L. C.]

4.—Riesman reports a case of complete unilateral oculomotor palsy. The patient was a man of 39 years, who had a specific history. He was placed under appropriate treatment and was in perfect health for six years, then began to suffer from dizziness and a sense of oppression in the head, and some disturbance of vision in the left eye. There was complete ptosis of the left upper eyelid with marked elevation of the left eyebrow by reason of a tonic

contraction of the corresponding frontalis muscle. The left pupil was much dilated, while the right was of medium width. There was no reaction to light or accommodation in the left eye, while the right eye reacted well. At rest the left eyeball deviated slightly outward and could not be carried inward beyond the median line. When the patient attempted to look to the right, an attempt to detect the presence of the retracted levator palpebrae failed. Riesman concludes that the region is situated in the trunk of the nerve, and believes that it is of a nature either of circumscribed gumma or of a gummatous neuritis. [T. L. C.]

5.—Dr. Edward W. Reichert gives an admirable description of some forms of apparatus used in the course of practical instructions in physiology in the University of Pennsylvania. A model laboratory is described, as well as a system of recording apparatus and the system of exciting apparatus. All of the instruments, numbering over 200,000 pieces, were made in the laboratories of the University. A model kymograph is described, as well as a frog table, muscle chamber, moist chamber and the signal and vibrating reed. The system of exciting apparatus which is described includes the inductorium, the hand electrodes, the rheocord and the rheonome. [T. L. C.]

Society Reports.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Fiftieth Annual Meeting Held at Philadelphia, September 24-25, 26th, 1901.

(Continued from Page 599).

The perforation was sutured, the abdomen flushed with sterile salt solution, closed and drained, the whole of the operation occupying but sixteen minutes. The perforation was large enough to admit the tip of the finger, and from it there was discharged food and milk. The patient was in a precarious condition throughout the operation during which camphor was administered hypodermically. Notwithstanding, the patient recovered. The author concludes that this case seems to teach that a case of perforation even with general peritonitis should be operated upon, and quickly, and that general anesthesia can be borne even by a patient in so critical a condition. When the element of fright is in abeyance, local anesthesia can be employed, but not in children. The literature on the subject was quoted and the paper discussed by Dr. Herman B. Allen and Dr. Ella B. Everett, of Philadelphia, who saw the case before surgical measures were needed.

A Case of Ascites Due to Hepatic Cirrhosis, Treated by Transplanting the Omentum between the Peritoneum and Abdominal Wall; Result with Autopsy Eight Months Later and Exhibition of the Abdominal Viscera, Showing Specimen and Horseshoe Kidney by Dr. W. J. Roe, of Philadelphia.

Address in Obstetrics by Dr. David Funk, of Harrisburg. The address was opened with the statement, that never before has the parturient mother been so little surrounded by danger as at the present time. The increase in manipulative skill, the improved mechanical appliances, the immediate repair of the soft parts, the eradication of puerperal sepsis, the clearer conception of the relations between mother and child, and the appreciation of the difference between midwifery and medicine, all surround the lying-in woman with a protecting barrier. The paper dealt with the more serious obstacles that are encountered. The author quoted the high mortality both of mother and child in placenta, due unfortunately to the absence of prophylaxis. The condition is very rare and not much real progress has been made beyond what has been known for many years, namely the early emptying of the uterine con-

tents, which should be followed immediately after the diagnosis has been made. Manual dilatation and version have not done as much as has been promised of them. Symphysiotomy is being supplanted by Cesarean section, the latter entailing a briefer convalescence, a reduction of mortality to a minimum, that of the fetus being practically all. There has been nothing new during the year regarding the prophylaxis of puerperal sepsis, and stress was laid upon the rigid observation of surgical cleanliness. Serumtherapy in the treatment of puerperal sepsis is still in its experimental stage and in the presence of mixed infection is valueless. Ectopic gestation occurs more frequently than has formerly been supposed, and the general practitioner must be watchful for it. It has a fairly uniform symptomatology and the patients generally fail to seek medical advice until the condition has become severe. Especially therefore should the general practitioner be careful in his diagnosis, notably when an ectopic pregnancy and an intrauterine pregnancy co-exists. There is no excuse in confounding colic, dysmenorrhea and ovarian congestion with ectopic gestation. The most likely conditions to be confounded with ectopic gestation, are pyosalpinx and ovarian abscess. The subject of eclampsia was next to be taken up and the author stated that beyond the recognition of toxemia in these cases there was much confusion. The various theories were then discussed. Prophylaxis consists in careful attention to diet, the emunctories and hygiene. The eclamptic state requires the administration of large quantities of liquid. Morphine and chloroform have been highly recommended as well as condemned. In the case of these two drugs, one has been condemned by the advocates of the other, the objection in the case of morphine being that it arrests most of the secretions. Enteroclysis, intravenous injections, and hypodermoclysis and hot baths are to be used. Bromide of sodium, chloral hydrate as well as chloroform and morphine still are valuable adjuncts. Serumtherapy in the treatment of eclampsia is still to be regarded as a problem of the future.

The Ultimate Results of Operations for Cancer of the Uterus by Dr. Charles P. Noble, of Philadelphia. Dr. Noble referred to the marvelous progress that had been made in gynecological surgery which however unfortunately did not embrace cancer of the uterus. He reported the statistics of cures in the various American and foreign clinics and also discussed the removal of the uterus, pelvic glands and parametria. He reported the results of thirty-two cases, twenty-two of the cervix and nine of the corpus.

A Report of a Case of Double Extra-uterine Pregnancy by Dr. F. P. Hall, of Philadelphia, who reported a case of double extrauterine pregnancy, and briefly referred to the frequency of this complication and the necessity of the family doctor to make an opportune diagnosis. Many cases are not diagnosed because the product of conception mummifies or becomes encysted, producing much misery and pain. In a case of pregnancy with sudden abdominal pain, and symptoms of shock and syncope we should expect extrauterine pregnancy with rupture.

Dr. J. V. Shoemaker presented a case of pityriasis versicolor, and gave a comprehensive description of the symptoms and physical science of this parasitic skin disease. He describes the differential diagnosis between chloasma, pityriasis versicolor and vitiligo. He called attention to the etiological factor, the microsporon furfur and the detection of the spores and mycelia. He stated that it is one of the most difficult skin diseases to cure as it penetrates the hair follicles, thus proving refractive to superficial medications. Bichloride of mercury solution will only affect it on the surface. Copper is the best remedy, preferably in the form of the oleate on account of its penetrative ability. Mercury in the form of the oleate is also valuable. It is imperative to keep water from the skin as the parasite thrives on water.

(To be continued.)

Special Article.

THE CASE OF PRESIDENT MCKINLEY.

The following report has received the approval of, and is issued by, the undersigned, the medical staff attending the late President, William McKinley.

P. M. RIXEY.
MATTHEW D. MANN.
HERMAN MYNTER.
ROSWELL PARK.
EUGENE WASDIN.
CHARLES McBURNEY.
CHARLES G. STOCKTON.

October 12, 1901.

SURGICAL HISTORY.

President William McKinley was shot, by Leon F. Czolgosz, in the Temple of Music, at the Pan-American Exposition, Buffalo, N. Y., at about 7 minutes past 4 on the afternoon of Friday, September 6, 1901. Two shots were fired. One bullet struck near the upper part of the sternum, and the other in the left hypochondriac region. The President was immediately conveyed to the Emergency Hospital on the Exposition grounds by the motor ambulance, where he arrived at 4.18. Dr. G. McK. Hall and Mr. Edward C. Mann, medical student, of the house staff, were in charge of the ambulance, Medical Student T. F. Ellis being the driver.

On arriving at the hospital, President McKinley was at once placed upon the table in the operating room and undressed. During the removal of his clothing a bullet fell out and was picked up by Mr. Ellis. Dr. Hall placed a temporary antiseptic dressing over the wounds, and Mr. Mann ordered a nurse to administer 0.01 gm. of morphin and 0.002 gm. of strychnin hypodermically.

Dr. Herman Mynter, who had been telephoned from police headquarters to report immediately at the Exposition Hospital, was the first surgeon to arrive, at 4.45 o'clock. At that time Drs. P. W. Van Peyma and Joseph Fowler, of Buffalo, and Dr. Edward Wallace Lee, of St. Louis, were present. Dr. Mynter brought with him Dr. Eugene Wasdin, of the United States Marine-Hospital Service.

Dr. Mynter inspected the President's wounds, and immediately saw their serious nature. He told the President that it would be necessary to operate, and at once set about making preparations, aided by the house staff and nurses and Dr. Nelson W. Wilson, Sanitary Officer of the Exposition, who at that time assumed charge of the hospital in the absence of Dr. Roswell Park, the Medical Director of the Exposition. The President's pulse on the arrival of Dr. Mynter was 84; he had no particular pain in the abdomen, and no apparent loss of liver dulness. He was evidently slightly under the influence of the morphin.

Dr. Matthew D. Mann arrived at the hospital at 5.10 P. M., having been telephoned for by Mr. John C. Milburn. He was followed, five minutes, later, by Dr. John C. Parmenter.

An examination was at once made, followed by a short consultation between Drs. Mann, Mynter and

Wasdin, which resulted in the decision to operate at once. The necessity for the operation was explained to President McKinley, and he gave his full consent. Immediate operation was decided upon because of the danger of possible continued internal hemorrhage and of the escape of gastric or intestinal contents into the peritoneal cavity, and because the President's pulse was getting weaker. Moreover, the daylight was rapidly failing. Dr. Roswell Park, who, by virtue of his office, had he been present would have performed the operation, was at Niagara Falls, and although a special train had been sent for him, it was uncertain when he would arrive.

Dr. Mann was selected to do the operation, with Dr. Mynter as his associate, by the common consent of the physicians present and at the request of Mr. Milburn, president of the Pan-American Exposition, who stated that he had been requested by President McKinley to select his medical attendants. Dr. Mann selected Drs. Lee and Parmenter as assistants.

At 5.20 Dr. Mann directed the administration of ether to President McKinley, and requested Dr. Wasdin to administer it. Ether was chosen as being, on the whole, the safer anesthetic. While the anesthetic was being given, the surgeons who were to take part in the operation prepared their hands and arms by thoroughly scrubbing with soap and water and immersing them in a solution of bichlorid of mercury.

The operation began at 5.20. Dr. Mann stood upon the right-hand side of the patient, with Dr. Parmenter on his right-hand side. Dr. Mynter stood upon the left-hand side of the patient, and on his right was Dr. Lee. To Drs. Parmenter and Lee were assigned the duties of sponging and the care of the instruments. Dr. P. M. Rixey, U. S. N., President McKinley's family physician, having been detailed by the President to accompany Mrs. McKinley to the Milburn home, did not arrive until 5.30, when he gave very efficient service by guiding the rays of the sun to the seat of the operation by aid of a hand-mirror, and later by arranging an electric light. Dr. Roswell Park arrived just as the operation on the stomach was completed, and gave his aid as consultant. Mr. E. C. Mann had charge of the needles, sutures and ligatures. Mr. Simpson, medical student, was at the instrument tray.

The nurses, under the charge of Miss A. C. Walters, superintendent of the hospital, were Miss M. E. Morris and Miss A. D. Barnes, with hands sterilized; Miss Rose Baron, Miss M. A. Shannon and Miss L. C. Dorchester, assistants, and Miss Katharine Simmons attending the anesthetizer.

Besides those immediately engaged in the operation, there were present Drs. P. W. Van Peyma, Joseph Fowler, D. W. Harrington and Charles G. Stockton, of Buffalo, and Dr. W. D. Storer, of Chicago.

THE OPERATION.

President McKinley took the ether well, and was entirely under its influence in nine minutes after the beginning of anesthetization. The abdomen was carefully shaved and scrubbed with green soap, and then washed with alcohol and ether and the bichlorid solution.

Inspection showed two wounds made by the bullets. The upper one was between the second and third ribs, a little to the right of the sternum. The use of a probe showed that the skin had not been penetrated, but that the bullet had probably struck a button or some object in the clothing which had deflected it. The lower wound made by the other bullet—a 32 calibre—was on a line drawn from the nipple to the umbilicus. It was about half-way between these points, and about 5 cm. to the left of the median line. A probe showed that this wound extended deeply into the abdominal walls, and that the direction was somewhat downward and outward.

An incision was made from the edge of the ribs downward, passing through the bullet wound and nearly parallel with the long axis of the body. A deep layer of fat was opened, and followed by incision of the fascia and muscles to the peritoneum. After cutting through the skin, a piece of cloth, undoubtedly a bit of the President's clothing, was removed from the track of the bullet, a short distance below the skin.

On opening the peritoneum, the finger was introduced and the anterior wall of the stomach palpated. An opening was discovered which would not quite admit the index finger. This opening was located near the greater curvature of the stomach, and about 2 cm. from the attachment of the omentum; its edges were clean-cut and did not appear to be much injured.

The stomach was drawn up into the operation wound, and the perforation very slightly enlarged. The finger was then introduced and the contents of the stomach palpated. This was done to see if the stomach contained food, and also with the hope that possibly the bullet might be in the stomach. The stomach was found to be half full of liquid food, but no evidence of the ball was discovered. In pulling up the stomach, a small amount of liquid contents escaped, together with a good deal of gas. The tissues around the wound were carefully irrigated with hot salt solution and dried with gauze pads. The perforation in the anterior stomach wall was then closed with a double row of silk suture (Czerny-Lembert). The sutures were not interrupted with each stitch, but four stitches were introduced before the ends were tied. The loop was then cut off and the suture continued. About eight stitches were used in each row. The silk used was fine black silk, the needle being a straight, round sewing needle.

In order to examine the posterior wall of the stomach, it was necessary to enlarge the incision, which now reached about 15 cm. in length. The omentum and transverse colon were pulled well out of the abdomen. The omentum was enormously thickened with fat and very rigid. In order to reach the back wall of the stomach, it was necessary to divide about four inches of the gastrocolic omentum, the cut ends being tied with strong black silk in two masses on each side. In this way the stomach could be drawn up in the operation wound, and the bullet wound in its posterior wall reached. This opening was somewhat larger than that in the anterior wall of the stomach, and had frayed and blood-infiltrated edges. Its exact location was im-

possible to determine, but it appeared to be near the larger curvature.

This opening was closed in the same way as the anterior wound, but with great difficulty, as the opening was down at the bottom of a deep pocket. A short curved surgical needle was necessary here. Little or no gastric contents appeared around this opening, but, after it had been closed, the parts were carefully irrigated with hot salt solution.

The operation on the stomach being now finished, Dr. Mann introduced his arm so as to palpate carefully all the deep structures behind the stomach. No trace of the bullet or of the further track of the bullet could be found. As the introduction of the hand in this way seemed to have a bad influence on the President's pulse, prolonged search for further injury done by the bullet or for the bullet itself was desisted from. The folds of the intestine which had been below the stomach were inspected for injury, but none was found. The entire gut was not removed from the abdomen for inspection, as the location of the wound seemed to exclude its injury. To have made a satisfactory search for wounds in the President's back, it would have been necessary to have entirely eviscerated him. As he was already suffering from shock, this was not considered justifiable, and might have caused his death on the operating table.

Before closing the abdominal wound, Dr. Mann asked each of the surgeons present, whether he was entirely satisfied that everything had been done which should be done, and whether he had any further suggestion to make. Each replied that he was satisfied. The question of drainage was also discussed. Dr. Mynter was in favor of a Mikulicz drain being placed down behind the stomach-wall. Dr. Mann, with the concurrence of the other surgeons, decided against this, as being unnecessary.

As the last step in the operation, the tissues around the bullet track in the abdominal wall were trimmed, in order to remove any tissue which might be infected. The abdominal wound was then closed with seven through-and-through silkwormgut sutures, drawn only moderately tight, the superior layer of the fascia of the rectus muscle being joined with buried catgut. The edges of the skin were brought together by fine catgut sutures. Where the bullet had entered there was slight gaping of the tissues, but it was not thought advisable to close this tightly, as it might allow of some drainage. The wound was then washed with hydrogen dioxide and covered with aristol powder and dressed with sterilized gauze and cotton, which were held in place with adhesive straps. Over all was put an abdominal bandage.

The President bore the operation very well. The time from the beginning of the administration of the anesthetic until its discontinuance was exactly an hour and thirty-one minutes; the operation was completed at 6.50 P. M., having lasted, from the time of the first incision, an hour and twenty-one minutes. At the beginning of the operation President McKinley's pulse was 84. At 5.38, 0.002 gm. of strychnin was administered hypodermically. At 5.55 the respiration was 32 and the pulse 84—both good in character. At 6.09 the pulse was 88. At 6.20 it was 102, fair in character; respiration 39. At

6.22, 1.50 gm. of brandy was administered hypodermically. At 6.48 the pulse was 124, the tension good but quick; respiration 36. At 7.01, after the bandage was applied, the pulse was 122 and the respiration 32. At 7.17, 0.004 gm. of morphin was administered hypodermically.

At 7.32 the patient was removed from the hospital in the ambulance. Dr. Rixey asked Drs. Park and Wasdin to go in the ambulance, as his duty called him to go at once to inform Mrs. McKinley of her husband's condition and to prepare a room for his reception. Drs. Mann and Mynter, with friends of the President, followed in carriages immediately after. President McKinley had not then recovered from the anesthetic. He bore the journey to Mr. Milburn's house exceedingly well, but it was found necessary to give him a small hypodermic injection of morphin during the transit, as he was becoming very restless. On arrival at the house of Mr. Milburn, 1168 Delaware Avenue, he was removed from the ambulance on the stretcher, and carried to a room in the northwest corner of the house, where a hospital bed had been prepared for him.

REMARKS ON THE OPERATION.

By DR. MATHEW D. MANN, M. D.,

The difficulties of the operation were very great, owing partly to the want of retractors and to the failing light. The setting sun shone directly into the room, but not into the wound. The windows were low and covered with awnings. After Dr. Rixey aided us with a hand mirror, the light was better. Toward the end of the time a movable electric light with reflector was put in use. The greatest difficulty was the great size of President McKinley's abdomen and the amount of fat present. This necessitated working at the bottom of a deep hole, especially when suturing the posterior wall of the stomach.

The operation was rendered possible and greatly facilitated by a good operating table and the other appliances of a hospital, and by the presence of many trained nurses and assistants. Still, the hospital was only equipped for minor emergency work, and had but a moderate supply of instruments. Unfortunately, when called I was not told what I was wanted for, and went to the Exposition grounds entirely unprepared. Dr. Mynter had his large pocket case, the contents of which were of great use.

As has already been noted, further search for the bullet was rendered inadvisable by the President's condition. The autopsy shows that it could not have been found, and that the injuries inflicted by the bullet after it passed through the stomach, were of such a nature as to render impossible and unnecessary any further surgical procedure. A bullet after it ceases to move does little harm. We were often asked why, after the operation, we did not use the X-ray to find the bullet. There were several reasons for this. In the first place, there were, at no time any signs that the bullet was doing harm. To have used the X-ray simply to have satisfied our curiosity would not have been warrantable, as it would have greatly disturbed and annoyed the patient, and would have subjected him also to

a certain risk. Had there been any signs of abscess formation, then the rays could and would have been used.

My reason for not draining was that there was nothing to drain. There had been no bleeding nor oozing; there was nothing to make any discharge or secretion; the parts were presumably free from infection, and were carefully washed with salt solution. As there was no peritonitis and the abdomen was found post mortem to be sterile, we may safely conclude that no drainage could have been provided which would have accomplished anything. My experience teaches me never to drain unless there is a very decided indication for it, as a drain may do harm as well as good.

In conclusion, I wish to thank all the gentlemen who so kindly and skilfully assisted me. They were all surgeons of large experience in abdominal surgery, and their aid and advice were most valuable. Especially I wish to acknowledge my great obligation to my associate, Dr. Mynter. Not only was he an assistant, but he was much more, and helped me greatly by his skill, and as a consultant, with his good judgment and extensive knowledge of abdominal work. Although called first, he waived his claim, and generously placed the case in my hands, willingly assuming his share of the responsibility.

The anesthetic was most carefully administered by Dr. Wasdin, and the knowledge that he had charge of this very important duty relieved me of any anxiety on that score.

In the eventful week that followed the operation, Dr. Park and Dr. McBurney were towers of strength in helping to decide the many difficult questions which came up.

Dr. Rixey was in constant charge of the sick room, aided later by Dr. Wasdin, who was detailed for this special duty. Both were unremitting in their care, and faithful to the end.

Dr. Stockton helped us in the last three days with the highest skill and best judgment.

Never, I am sure, under like circumstances, was there a more harmonious or better-agreed band of consultants. That our best endeavors failed was, I believe, no fault of ours; but it must be an everlasting and keen regret to each one of us, that we were not allowed the privilege of saving so noble a man, so attractive a patient, and so useful a life.

THE AFTER TREATMENT.

When put to bed the President was in fair condition: Pulse 127; temperature 100.6°; respiration 30. The nurses on duty were Miss K. R. Simmons and Miss A. D. Barnes, from the Emergency Hospital. Soon after his arrival, at 8.25, he was given morphin, 0.016 gm., hypodermically. There was slight nausea. The pulse soon improved. During the evening the patient slept at intervals, vomiting occasionally, but rallied satisfactorily. A slight discoloration of the dressings was noted at 10.45. There was occasional and slight pain. Ninety cc. of urine were voided, and an enema of salt solution given and retained.

SECOND DAY, SATURDAY, SEPTEMBER 7.

After midnight the patient slept a good deal; he was free from pain and quite comfortable.

At 6 a. m., the temperature was 102°; pulse 110; respiration 24.

Gas in large quantities was expelled from the bowels. A saline enema was given as before. Miss Simmons and Miss Barnes were replaced by Miss Maud Mohan and Miss Jane Connolly. Miss E. Hunt, of San Francisco, Cal., Mrs. McKinley's nurse, also rendered assistance, and Miss Grace Mackenzie, of Baltimore, Md., arrived September 9, and was detailed for regular duty. P. A. Eliot, J. Hodgins and Ernest Vollmeyer, of the U. S. A. Hospital Corps, were detailed as orderlies.

During the forenoon, 0.01 gm. of morphin was administered hypodermically.

At 1.15 p. m., a saline enema of 500 cc. was given. As the pulse was rising, 0.06 gm. of fluid extract of digitalis was injected hypodermically.

The President rested quietly until 6.30 p. m., when he complained of intense pain in the pit of the stomach, and was given 0.008 gm. morphin sulfate hypodermically. He was very restless, but after being sponged rested again.

At 6.30 p. m., the pulse was 130; temperature 102.5°; respiration 29.

During the day the digitalis, morphin, and saline enemas were kept up at regular intervals; 4 gm. of somatose was added to the water at 10.30 p. m. At 11.15 p. m. the President passed from the bowels 240 cc. of a greenish colored fluid and some particles of fecal matter.

The total amount of urine for 24 hours was 270 cc.

FIRST URINALYSIS, BY DR. H. G. MATZINGER.

Quantity..... 30 cc.
Color..... dark amber
Reaction..... strongly acid
Urea..... 0.928 gm. per 1 cc. of urine
Albumin..... a trace
Phosphates and Chlorids..... normal
Sugar..... none.
Indican..... very small amount.

Microscopic Examination.—The sediment obtained by centrifuge shows a large amount of large and small epithelial cells with some leukocytes and occasional red cells. There is a comparatively large number of hyaline casts, principally small, with some finely granular ones; also an occasional fibrinous one. The amount of sediment is large for the quantity of urine submitted. There were no crystals in the sediment.

THIRD DAY, SUNDAY, SEPTEMBER 8.

During the early morning the President slept a good deal, but was restless, and at times confused and a little chilly. On the whole, he passed a fairly good night.

He expelled a little gas and brown fluid from the rectum. The digitalis was continued, and at 7.45 a. m., 0.002 gm. of strychnin were given hypodermically. At 8.26 a. m. he was clear and bright, with the pulse strong and of good character.

The wound was dressed at 8.30, and found in a very satisfactory condition. There was no indication of peritonitis. Pulse, 132; temperature, 102.8°; respiration, 24.

The dressing on the wound was changed, because there was some exudation. The bullet track was syringed out with hydrogen dioxide. There was very little foaming, and there were no signs of pus.

At 10.40 a. m., following an enema of epsom salts, glycerin and water, he had a small stool with gas, and another at noon. He was less restless and slept a good deal.

At noon Dr. Charles McBurney joined the medical

staff in consultation having been summoned by Dr. Rixey.

Bulletin 14, 12 m.—The improvement in the President's condition has continued since the last bulletin. Pulse, 128; temperature, 101°; respiration, 27.

During the day he continued to improve; he slept four or five hours and his condition was satisfactory.

At 4.45 p. m., he was given a teaspoonful of water by the mouth; also an enema of sweet oil, soap and water. He passed slightly colored fluid with some little fecal matter and mucus. After this he had a small quantity of water by the mouth, and at 6.20 p. m. a nutritive enema of egg, whisky and water, which was partly retained. Digitalis and strychnin were both given during the evening.

At 9 p. m. the President was resting comfortably. The pulse was 130; temperature, 101.6°; respiration, 30.

Four hundred and twenty cc. of urine were passed during the day.

SECOND URINALYSIS.

Quantity..... 450 cc.
Color..... amber, slightly turbid
Reaction..... strongly acid
Specific gravity..... 1.026
Urea..... 0.938 gm. per 1 cc. of urine
Sugar..... none
Albumin..... mere trace
Indican..... abundant
Sulfates..... increased
Phosphates..... somewhat increased
Chlorids..... somewhat increased

Microscopic Examination.—Microscopic Examination of sediment obtained by centrifuge shows fewer organic elements. Some large and small epithelial cells and some leukocytes. Casts are not so abundant as yesterday and are principally of the small finely granular variety. There is a marked diminution in small renal epithelial cells.

Quite a quantity of large crystals of uric acid and bacteria are present.

FOURTH DAY, MONDAY, SEPTEMBER 9.

The bulletins tell the story of the fourth day.

Bulletin 15, 6 a. m.—The President passed a somewhat restless night, sleeping fairly well. General condition unchanged. Pulse, 120; temperature, 101°; respiration, 28.

Bulletin 18, 9.20 a. m.—The President's condition is becoming more and more satisfactory. Untoward incidents are less likely to occur. Pulse, 122; temperature, 100.8°; respiration, 28.

Bulletin 19, 3 p. m.—The President's condition steadily improves and he is comfortable, without pain or unfavorable symptoms. Bowel and kidney functions normally performed. Pulse, 113; temperature, 101°; respiration, 26.

Bulletin 20, 9.30 p. m.—The President's condition continues favorable. Pulse, 112; temperature, 101°; respiration, 27.

Codeia was substituted for morphin, as the pain was less. Digitalis and strychnin were stopped. Nutritive enemas were given at 3.20 a. m., at 4.30 and 10 p. m. Hot water was taken quite freely by the mouth.

Attempts to get a good movement of the bowels were successful at noon, when he had a large light-brown partly-formed stool. This followed a small dose of calomel and a high enema of oxgall.

On the whole, the President's condition improved steadily during the day. He slept a good deal and was fairly comfortable. There was no pain on pressure over the abdomen.

THIRD URINALYSIS.

Quantity received 540 cc.
 Color amber, slightly turbid
 Specific gravity 1.026
 Albumin a trace
 Indican not so abundant as yesterday
 Urea 0.047 gm. per cc. of urine
 Chlorids and phosphates about normal
 Sulfates still somewhat high
 Sugar none.

Microscopic Examination.—Microscopic Examination of sediment obtained by centrifuge shows a decrease in the amount of organic elements and an increase of amorphous urates, but fewer crystals of uric acid. Casts are fewer and only the small granular and large hyaline varieties. The proportion of casts is greater. There are very few epithelial cells, mostly of renal type. A large number of cylindroids is found.

FIFTH DAY, TUESDAY, SEPTEMBER 10.

Soon after the midnight the President had a high enema of soap and water, which was expelled, together with some fecal matter. He took hot water frequently, and slept a good deal.

Bulletin 21, 5.20 a. m.—The President has passed the most comfortable night since the attempt on his life. Pulse, 118; temperature, 100.4°; respiration, 28.

On awakening he felt very comfortable, and his mind was clear and cheerful. The nutritive enemata were kept up, and water given by the mouth. Had two small stools during the day. The only medicine given was one hypodermic of codeia phosphate, 0.015 gm.

In the evening the dressings were examined, and as there was considerable staining from the discharge, it was thought best to remove four stitches and separate the edges of the wound. A little slough was observed near the bullet track, covering a space nearly an inch wide, the thickness of the flaps. The separation seemed to extend down to the muscle. The surfaces, except those mentioned, looked healthy, but not granulating. It was supposed that the infection of the wound occurred either from the bullet or from the piece of clothing carried into the wound at the time of the shooting. The parts were thoroughly washed with hydrogen dioxid and packed lightly with gauze, held together with adhesive straps.

SIXTH DAY, WEDNESDAY, SEPTEMBER 11.

Bulletin 26, 9 a. m.—The President rested comfortably during the night. Decided benefit has followed the dressing of the wound made last night. His stomach tolerates the beef juice well, and it is taken with great satisfaction. His condition this morning is excellent. Pulse, 116; temperature, 100.2°.

Bulletin 27, 3.30 p. m.—The President continues to gain, and the wound is becoming more healthy. The nourishment taken into the stomach is being gradually increased. Pulse, 120; temperature, 100.2°.

Bulletin 28, 10 p. m.—The President's condition continues favorable. Blood count corroborates clinical evidence of the absence of any blood poisoning. He is able to take more nourishment and relish it. Pulse, 120; temperature, 100.4°.

The blood count made by Dr. Wasdin in the evening was as follows:

Leukocytes 6,752.
 Red cells 3,920,000

A little after midnight, Wednesday morning, the patient was given 4 cc. of beef juice, the first food taken by the stomach. It seemed to be very acceptable. Nutritive enema was given at 2 a. m.; later there was a yellow stool.

From 4 to 8 cc. of beef juice was given every one

to two hours during the day. The rectum was becoming irritable and did not retain the nutritive enemata well.

At 10 a. m. the remaining stitches were removed, the wound separated and dressed. It seemed to be doing well. Most of the sloughing tissue had separated.

The patient slept much during the day, and expressed himself as feeling very comfortable. The only medicine administered was one hypodermic of strychnin.

In the evening he was changed to a fresh bed. Nutritive enemata were continued.

Urine was passed much more freely—750 cc. in 24 hours.

FOURTH URINALYSIS

Quantity 82 cc.
 Color amber, clear
 Specific gravity 1.027
 Reaction strongly acid
 Albumin a trace
 Indican abundant
 Urea 0.04 gm. per 1 cc. of urine.
 E. phosphates and chlorids normal
 Sulfates still a little high

Microscopic Examination.—Microscopic Examination of sediment obtained by centrifuge, shows a marked diminution in amount of organic elements, but a great increase in uric acid crystals.

There are very few epithelial cells—mostly of renal type.

There are fewer casts—small and large hyaline—some finely granular.

Cylindroids are more abundant.

SEVENTH DAY, THURSDAY, SEPTEMBER 12.

The President slept a good deal during the night, and awoke in the morning feeling better. The beef juice was continued and increased, and a little chicken broth added to the dietary. He also had a little whiskey and water.

At 8.30 a. m. he had chicken broth, a very small piece of toast and a small cup of coffee. He did not care for the toast, and ate scarcely any of it.

The wound was dressed and washed with a weak solution of iodine and then with hydrogen dioxid. He was given 30 cc. of castor oil at 9.20 a. m.

The President now seemed at his best and his condition to warrant the favorable prognosis given out. The time for the peritonitis and sepsis had passed. The bowels had moved and gas passed freely, showing that there was no obstruction. The tongue was clear, and the appetite increasing; and he seemed to be able to digest food. There was no pain nor tenderness in the abdomen, and he was able to turn easily and to sleep on his side. The urine was steadily increasing. His spirits were good and his mind clear, while his pulse, though frequent, was strong and of good quality, and the temperature low.

The analysis of the urine gave no uneasiness, as the amount of urea was fair; there was no albumin worth considering, and the casts were rapidly diminishing. There were no more of them than are found in a large percentage of cases following a long operation under ether. The excess of indican was taken to mean merely some intestinal indigestion, and to be of no serious import. The only symptom to cause any uneasiness was the frequency of the pulse. Still, anxiety on this score was relieved by

knowing that the President had naturally a rapid pulse, and that it was easily excited. The open wound was not considered important. It looked healthy, and, although it would take a long time to heal, in itself it was evidently causing no harm, nor was it likely to.

Dr. McBurney left Buffalo for his home in the morning, having arranged to return at once if his presence was desired.

Toward noon it was noticed that the character of the pulse was not quite as good. Infusion of digitalis, 8 cc., was ordered, and strychnin, 0.002 gm.

It was thought probable that there was some intestinal toxemia, as there had been no free movement from the bowel since food had been begun, the oil having failed to act. Gradually the pulse went to 130, and grew weaker.

Dr. Charles G. Stockton was added to the medical staff in consultation. At 7 p. m. the President was given 0.20 gm. of calomel.

Bulletin 32, 8.30 p. m.—The President's condition this evening is not quite so good. His food has not agreed with him, and has been stopped. Excretion has not yet been properly established. The kidneys are acting well. His pulse is not satisfactory, but has improved in the last 2 hours. The wound is doing well. He is resting quietly. Temperature, 100.2°; pulse, 128.

At 9.30 p. m. a second dose of 30 cc. of castor oil was given, followed by a high enema of oxgall. This resulted in a large, dark semifluid stool, which seemed to exhaust him somewhat. Stimulants were given freely. No more beef juice or food was given. The pulse grew rapidly worse, but at midnight there seemed some improvement, as bulletin 33 shows. At 11 p. m. 420 cc. of normal salt solution was given subcutaneously.

Bulletin 33, 12 m.—All unfavorable symptoms in the President's condition have improved since the last bulletin. Pulse, 120; temperature, 100.2°.

FIFTH URINALYSIS.

Quantity 132 cc.
Color light amber, very turbid
Specific gravity 1.025
Reaction acid
Albumin mere trace, if any
Indican less
Urea 0.044 gm. per 1 cc. of urine
Sulfates about normal
E. phosphates much increased
Chlorids normal

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge, shows fewer organic elements than the last examination. There is less uric acid and a large amount of amorphous phosphates. Renal casts, about as in the last examination, with very few cylindroids.

EIGHTH DAY, FRIDAY, SEPTEMBER 13.

At midnight the pulse was fairly good, 132. Strychnin and whisky were given at intervals, and hypodermics of camphorated oil.

Bulletin 34, 2.50 a. m.—The President's condition is very serious, and gives rise to the gravest apprehension. His bowels have moved well, but his heart does not respond properly to stimulation. He is conscious. The skin is warm, and the pulse small, regular, easily compressible. 126; respiration, 30; temperature, 100.

The wound had been dressed regularly in the manner described three times a day. At 9 A. M. the dressing was changed, and a mixture of balsam of Peru and glycerin put in on gauze after the douching.

Stimulants were continued as before, but more

freely. Coffee, 45 cc., and clam broth, 60 cc., were given; also liquid peptonoids.

At 8.30 1.50 gm. of adrenalin was given hypodermically, and repeated at 9.40.

At 10 A. M. nearly two pints of normal salt solution were given under the skin, and a pint containing adrenalin at 6 P. M. Nitroglycerin and camphor were also injected at various times, together with brandy and strychnin.

Stimulants as detailed above were used freely all day.

3.30 P. M. Pulse growing weaker.

5.00 P. M. Oxygen given and continued for some hours.

6.30 P. M. Last bulletin, No. 39:

Bulletin 39, 6.30 p. m.—The President's physicians report that his condition is most serious in spite of vigorous stimulation. The depression continues and is profound. Unless it can be relieved, the end is only a question of time.

At 6.35 P. M., and again at 7.40, morphin was given hypodermically, as he was very restless and seemed to be suffering.

9.00 P. M. Heart sounds very feeble.

The President continued to sink, becoming weaker and weaker.

At 10 P. M. the oxygen was discontinued. The heart sounds were very feeble and consciousness lost.

The President died at 2.15 A. M., September 14.

Drs. E. J. Janeway and W. W. Johnston, who, at the request of Dr. Rixey, had been summoned in consultation, arrived too late, but were present at the autopsy. Dr. McBurney also returned on Friday afternoon.

SIXTH URINALYSIS.

Color amber, turbid, with phosphates
Quantity 252 cc.
Reaction acid
Specific gravity 1.023
Albumin mere trace, if any
Urea 0.017 gm. per 1 cc. urine
Indican a trace
E. phosphates increased
Chlorids normal
Sulfates a little high

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge, before and after clearing, shows no change from yesterday's sample. Casts, hyaline and granular, both large and small, comparatively few. Cylindroids, a few. Crystals, large amount of uric acid, some sodium urate, and in the untreated specimen a large amount of amorphous deposit, principally of phosphates. There are a few epithelial cells, small, granular. Occasional red cells and leukocytes.

REPORT ON THE AUTOPSY.

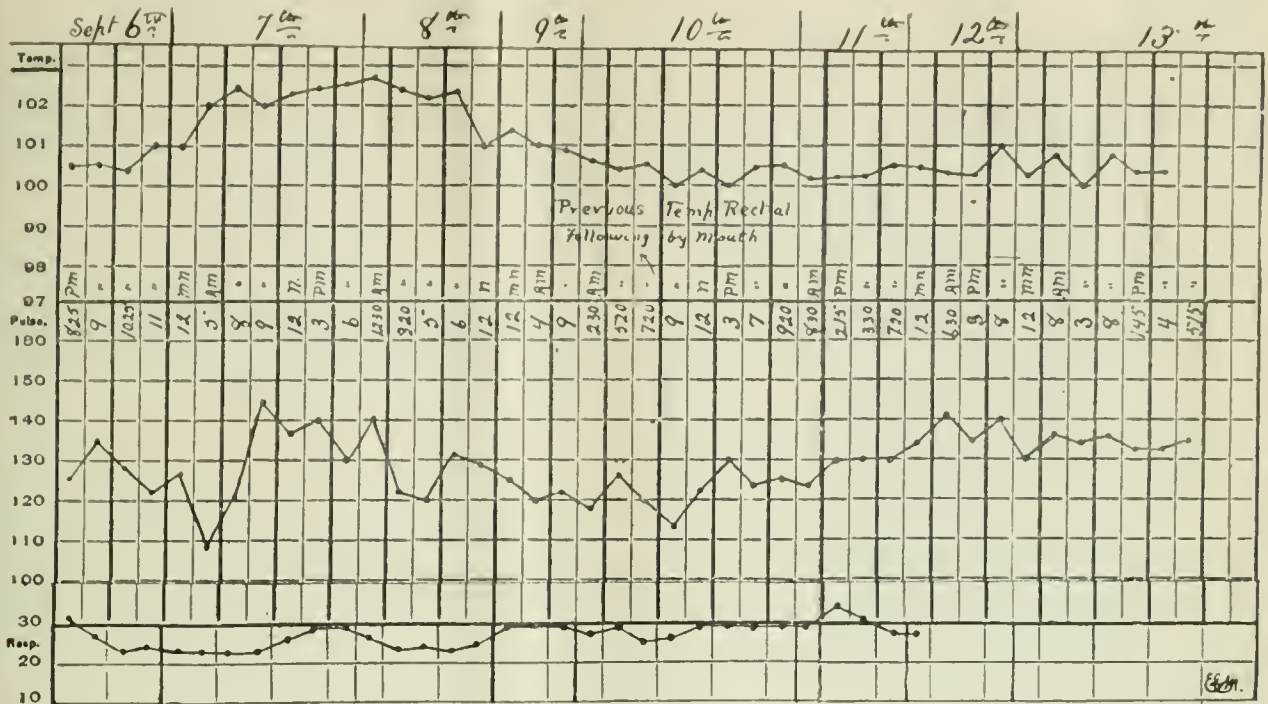
By

HARVEY R. GAYLORD, M. D.,

Pathologist to the New York State Pathological Laboratory.

Ordinary signs of death: ecchymosis in dependent portions of the body. Rigor mortis well marked. Upon the surface of the chest, to the right of the midsternal line, a spot 1 cm. in diameter, dark-red in color, with a slight crust formation covering it, 5.5 cm. from the suprasternal notch; from the right nipple, 10 cm.; from the line of the right nipple, 8.25 cm. Surrounding this spot, at which point there is an evident dissection of the

¹The autopsy was performed by Drs. Gaylord and Matzinger.



continuity of the skin, is a discolored area of oval shape extending upward and to the right. In its greatest length it is 11 cm.; and in its greatest width, 6 cm. It extends upward in the direction of the right shoulder. The skin within this area is discolored, greenish-yellow and mottled.

The surface of the abdomen is covered with a surgical dressing, which extends down to the umbilicus and upward to just below the nipples. The innermost layer of cotton is covered or stained with balsam of Peru and blood. On removing this dressing, a wound, parallel to, and somewhat to the left of the median line, is exposed, inserted in which are 2 layers of gauze, likewise impregnated with balsam of Peru. The wound is 14.5 cm. in length, and is open down to the abdominal muscles. The layer of abdominal fat is 3.75 cm. in thickness. The appearance of the fat is good, a bright yellow in color. No evidence of necrosis or sloughing. In the left margin of the surgical wound, lying 1 cm. to the right of a line drawn from the umbilicus to the left nipple, 15.5 cm. from the nipple and 16.5 cm. from the umbilicus is a partly healed indentation of the skin, and an excavation of the fat immediately beneath it (this is the site of the entry of the bullet), extending down to the peritoneal surface. On making the median incision, starting from the suprasternal notch and extending to a point just below the symphysis, the subcutaneous fat is exposed, which is of bright yellow color and normal appearance except in an area which corresponds superficially to the area of discoloration described as surrounding the wound upon the chest wall. This area marks the site of a hemorrhage into the subcutaneous fat. The remainder of the subcutaneous fat is firm and measures 4.75 cm. in thickness on the abdominal wall. On opening the sheath of the right rectus muscle, it is seen to be of dark-red color. (Culture taken from ecchymotic tissue under the upper bullet hole and from between the folds of the small intestines. Three tubes from each locality on agar and gelatin.)

On opening the abdominal cavity, the parietal surface of the peritoneum is exposed, and is found to be covered with a slight amount of bloody fluid; is perfectly smooth and not injected. The great omentum extends downward to a point midway between the umbilicus and the symphysis. It is thick, firm; its inferior border is discolored by coming in contact with the intestines. Below the umbilicus a few folds of intestines are exposed. These are likewise covered with discolored blood, after the removal of which the peritoneal surface is found to be shiny. On the inner aspect of the abdominal wound the omentum is found to

be slightly adherent to the parietal peritoneum, and can be readily separated with the hand from the edge of the wound. At this point the omentum is somewhat injected. This adhesion to the omentum is found to extend entirely around the abdominal wound. The parietal peritoneum immediately adjacent to the inner aspect of the abdominal wound is ecchymotic.

On removing the subcutaneous fat and muscles from the thoracic wall, the point which marks the dissolution of continuity of the skin upon the surface, is found to lie directly over the margin of the sternum and to the right side between the second and third ribs. There is no evidence of ecchymosis or injury to the tissues or muscles beneath the subcutaneous fat. On making an incision through the subcutaneous fat, directly through the wound upon the chest, a small cavity is exposed about the size of a pea just beneath the skin which is filled with fluid blood. The subcutaneous tissue underlying the area of discoloration on the surface of the chest wall shows hemorrhagic infiltration.

On removing the sternum, the lungs are exposed, and do not extend far forward. A large amount of pericardial fat is exposed. Pleural surface on both sides is smooth. There are no adhesions on either side within the pleural cavities. The diaphragm on the right side extends upward to a point opposite the third rib in the mammary line. No perceptible amount of fluid in either pleural cavity. On opening the pericardial cavity, the surface of the pericardium is found to be smooth and pale. The pericardium contains approximately 6 cc. of straw-colored, slightly turbid fluid. (Some taken for examination.)

On exposing the heart, it is found covered with a well-developed panniculus. The heart measures, from the base to the apex, on the superficial aspect, 10.5 cm. The right ventricle is apparently empty. The heart feels soft and flaccid. On opening the left ventricle, a small amount of dark-red blood is found. The muscle of the left ventricular wall is 1.5 cm. in thickness; dark reddish-brown in color; presents a shiny surface. The average thickness of the pericardial fat is 3.5 mm. (Cultures made from the auricle.) The left auricle contains but a small amount of dark currant-colored blood. The mitral valve admits 3 fingers. The right ventricle, when incised in the anterior line, is found to be extremely soft; the muscular structure is 2 mm. in thickness. The panniculus measures 7 mm. The muscle is dark red in color; very shiny, and the pericardial fat invades the muscular wall at many points.

On opening the right auricle it is found to be filled and

distended by a large currant-colored clot, which extends into the vessels. The tricuspid orifice readily admits 3 fingers. The coronary arteries are patulous and soft; no evidence of thickening.

Lungs are gray color, and contain a moderate amount of coal-dust pigment. Slight amount of frothy fluid escapes from the bronchi; but the pulmonary tissue is crepitant and free from exudate.

On unfolding the folds of intestine, there is no evidence of adhesion until a point just beneath the mesocolon is reached, when, on removing a fold of small intestine, a few spoonfuls of greenish-gray thick fluid flow into the peritoneal cavity.

On the anterior gastric wall is an area to which a fold of the gastrocolic omentum is lightly adherent. On breaking the adhesion there is found a wound about midway between the gastric orifices, 3.5 cm. in length, parallel with the greater curvature of the stomach, 1.5 cm. from the line of omental attachment. This wound is held intact by silk sutures. There is no evidence of adhesion at any other point on the anterior wall. The gastric wall surrounding the wound just mentioned for a distance of 2 cm. to 3 cm. is discolored, dark greenish-gray in appearance, and easily torn. On exposing the posterior wall of the stomach from above, along its greater curvature, the omentum is found to be slightly adherent, a line of silk ligatures along the greater curvature of the stomach marking the site where the omentum had been removed. On throwing the omentum downward, the posterior gastric wall is exposed. On the posterior wall, a distance of 2 cm. from the line of omental attachment, is a wound approximately 2 cm. long, held intact by silk sutures. The gastric wall surrounding this wound is discolored. On the surface of the mesocolon, which is posterior to the gastric wall at this point, is a corresponding area of discoloration, the portion coming directly in contact with the wound in the gastric wall being of dull gray color. The remainder of the surface of the posterior wall of the stomach is smooth and shiny. Beyond the surgical wound in the posterior wall of the stomach is found an opening in the retroperitoneal fat, large enough to admit 2 fingers. This opening communicates with a track which extends downward and backward as far as the finger can reach. The tissues surrounding this track are necrotic. On removing the descending portion of the colon, a large irregular cavity is exposed, the walls of which are covered with gray, slimy material, and in which are found fragments of necrotic tissue. Just at the superior margin of the kidney is located a definite opening which forms the bottom of the track traced from the stomach. On stripping the left kidney from its capsule, it is found that the superior portion of the capsule is continuous with the cavity. The weight of the left kidney is 5 oz. 1 grain. The kidney is readily stripped from its capsule; is dark red; the stellate veins are prominent, and along its greater curvature are numerous dark red depressions. On the superior aspect of the kidney is a protrusion of the cortex, dark red in color, and in this protrusion is a laceration 2 cm. long, extending across the superior border, approximately at right angles to the periphery of the kidney and from before backward. On incising the kidney, the cortex and medulla are not easily distinguishable from one another; both are of rose-red color, the cortex measuring approximately 6 mm. in thickness. The vessels in the pyramids of Ferrein are very prominent. Beneath the protruding portion of the surface, the cortex is dark red in color. This discoloration extends downward in pyramidal form into the medulla. The laceration of the surface marks the apex of the protrusion of the kidney substance. Between the spleen and the superior aspect of the kidney is a necrotic tract which extends down and backward, and ends in a blind pocket. The tract, which included the superior aspect of the kidney, can be traced into the perinephritic fat to a point just above the surface of the muscles of the back.

The necrotic cavity which connects the wound on the posterior wall of the stomach and the opening adjacent to the kidney capsule is walled off by the mesocolon, and is found to involve an area of the pancreas, approximately 15 mm. in diameter and extending about half-through the organ. This organ at its center forms part of the necrotic cavity. Through its body are found numerous minute hemorrhages and areas of gray softening, the size of a pea or smaller. These are less frequent in the head portion of the pancreas.

A careful examination of the track leading down toward the dorsal muscles fails to reveal the presence of any foreign body. After passing into the fat, the direct character of the track ceases; and its direction can be traced no further. The adjoining fat and the muscles of the back were carefully palpated and incised, without disclosing a wound or the presence of a foreign body. The diaphragm was carefully dissected away, and the posterior portion of the thoracic wall likewise carefully examined. All fat and organs which were removed, including the intestines, were likewise examined and palpated, without result.

The great amount of fat in the abdominal cavity, and surrounding the kidney rendered the search extremely difficult.

The right kidney is imbedded in a dense mass of fat; capsule strips freely; it weighs 5 ounces; measures 11.5 cm.; substance is soft; cortex is 6 mm. in thickness; rose-red in color; cut surface slightly dulled. There are a few depressions of the surface, and the stellate veins are prominent.

The liver is dark-red in color; the gallbladder distended. The organ was not removed.

The autopsy continued for a longer period than was anticipated by those who had charge of the President's body, and we were requested to desist seeking for the bullet and terminate the autopsy. As we were satisfied that nothing could be gained by locating the bullet, which had apparently set up no reaction, search for it was discontinued.

Anatomic Diagnosis.—Gunshot wound of both walls of the stomach and the superior aspect of the left kidney; extensive necrosis of the substance of the pancreas; necrosis of the gastric wall in the neighborhood of both wounds; fatty degeneration, infiltration and brown atrophy of the heart muscle; slight cloudy swelling of the epithelium of the kidneys.

A matter of no inconsiderable embarrassment to us arose in the objection to our removing sufficient portions of the tissues for examination. We were able to secure only 2 small fragments of the stomach wall; tissue from around the wound upon the chest wall; a portion of fat from the wall of the necrotic cavity; a small piece of each kidney, that of the left kidney including the portion involved by the original wound; and pieces of heart-muscle from the right and left ventricles. The microscopic examination of these tissues follows:

The piece of retroperitoneal fat, where it forms part of the necrotic cavity, is seen on section to be covered with a thick gray deposit, which has an average thickness of from 4 mm. to 6 mm. Beneath this, and separating it from the fat, is a well-defined area of hemorrhage from 1 mm. to 2 mm. in thickness. The appearance of this piece of tissue is characteristic of the fat tissue surrounding the entire cavity. A section made perpendicular to the surface and stained with hematoxylin-eosin, shows the following characteristics: Under low power there is no evidence of round-celled infiltration between the fat cells, or of fat necroses. The surface of the tissue which, in the microscopic specimen was covered by a layer of grayish material, proves, under low power, to consist of a partly organized fibrinous deposit. At the base of this deposit is evidence of an extensive hemorrhage, marked by deposits of pigment. The surface of the membrane is of rough and irregular appearance, and contains a large number of round cells with deeply stained nuclei. Under high power the organization of the membrane may be traced from the base toward the surface. The portion immediately adjacent to the fat tissue consists of a network of fibrin enclosing large numbers of partly preserved red blood corpuscles. In many areas the red blood corpuscles are broken down and extensive deposits of pigment are found. Extending into the fibrin structure of the membrane are numerous typical fibroblasts and round cells. In some regions pigment is evidently deposited in the bodies of large branching and spindle cells. Here and there, included in the membrane, are the remains of fat cells, and toward the surface of the membrane a large number of round cells scattered through the interstices of the membrane. There are but few polymorphonuclear leucocytes. Here and there in the membrane are fragments of isolated fibrous connective tissue with irregular contours and an appearance suggesting that they are frag-

ments of tissue which have been displaced by violence and included in the fibrin deposit. The fibrin in the superficial layers of the membrane is formed in hyaline clumps. The organization along the base of the deposit is comparatively uniform.

Sections stained with methylen blue, carbol-thionin and Gram's method were carefully examined for the presence of bacteria, with negative results. Even upon the surface of the membrane there are no evidences of bacteria.

The section of the left kidney including the triangular area of hemorrhage described in the macroscopic specimen, reveals the following appearances. (Section hardened in formalin, stained with hematoxylin-eosin.) Examined macroscopically, section represents a portion of a kidney cortex made perpendicular to the surface of the cortex, and including an area of hemorrhage into the substance of the cortex 1 cm. in length, measured from the capsular surface downward, and presenting a width of from 5 mm. to 6 mm. The capsular surface has apparently been torn.

Under low power the margins of the preparation are found to consist of well preserved kidney structure. There is a slight amount of thickening of the interstitial tissue, and occasional groups of tubules are affected by beginning cloudy swelling. The glomeruli are large and present a perfectly normal appearance. As we approach toward the center of the preparation, occasional glomeruli are met with in which the capillary loops are engorged and the adjacent tubules contain red blood-corpuscles. A short distance further, the kidney structure becomes entirely necrotic. Here and there the remains of tubules may be made out, and these are infiltrated with cells. The necrotic area presents a rough, net-like structure. As we approach toward the surface of the kidney, we find that the necrosis becomes more marked. There is the merest suggestion of kidney structure, its place being taken by disintegrated red blood-cells and leukocytes, embedded in a well-defined fibrinous network. There is great distortion of the kidney structure about the periphery of the necrotic area. In this region a considerable amount of pigment is also found in the necrotic tissues.

Under high power, the characteristics of the necrotic tissues may be better observed. The kidney structure is broken up and torn into irregular fragments, infiltrated by red blood corpuscles and leukocytes. In the portion of the necrotic mass beneath the capsule, the kidney structure is practically obliterated and is replaced by a network of fibrin, which includes large numbers of red blood-cells and leukocytes. Scattered through the entire necrotic area are frequent deposits of pigment. In the deeper portions of the necrotic area, the margins of the fibrin deposit are invaded by fibroblasts from the connective tissue of the kidney. The organization in these areas is, however, slight.

Sections stained with methylen-blue and Gram's method and carefully examined under oil immersion, fail to reveal the presence of any organisms. In preparations stained with methylen blue, the deposits of pigment may be readily observed. Section of the same tissue hardened in Hermann's solution and examined for fat, shows the presence of numerous fat droplets within the epithelium of the tubules which are adjacent to the area of necrosis. In the portions of the preparation more widely distant from the area of necrosis, no fat is present.

Section of the right kidney hardened in formalin and stained with hematoxylin-eosin, reveals the presence of areas in which slight parenchymatous degeneration of the epithelium in the uriniferous tubules may be noted. These areas are not extensive, and are confined to single groups of tubules. The interstitial connective tissue of the organ seems to be slightly increased in amount, but there is no well-defined round-celled infiltration. An occasional hyaline glomerulus is to be met with in these cases surrounded by increased connective tissue. The epithelium of the kidney tubules, aside from those in which the parenchymatous degeneration is present, is well preserved. The nuclei are well stained; protoplasm, finely granular.

A fragment of the stomach wall taken from the immediate neighborhood of the anterior wound is in a condition of complete necrosis. The nuclei of the cells are scarcely demonstrable. The epithelial surface is recognized with difficulty. At its base are apparently a few round cells. Examination of the bloodvessels reveals nothing characteristic. There is apparently no evidence of thrombosis.

A section made through the gastric wall at some distance from the wound, reveals the well-preserved muscular structure of the gastric wall, which presents no characteristic alterations. Superficial portions of the epithelium have apparently been affected by postmortem digestion. However, in one portion of the preparation, the epithelium is intact, and shows distinct evidence of marked round-celled infiltration between the glandular structures. The bloodvessels contained blood-corpuscles with the usual number of leukocytes.

The fragments of heart-muscle which were removed from the right and left ventricular walls, were examined in the fresh state, and exhibited a well-defined fatty degeneration of the muscle fibres, and in the case of the right ventricular wall, an extensive infiltration between the muscle fibers, of fat, was apparent. Sections from these fragments of muscle hardened in Hermann's solution, are taken for examination. A fragment of muscle from the right ventricular wall was removed at a point where the fat penetrated deeply into the muscular structure, the ventricular wall at this point showing an average thickness of 2.5 mm. Under low power, the muscle fibers are separated into bundles by masses and rows of deeply stained fat cells. The muscle fibers are seen to contain groups of dark brown granules lying in the long axes of the cells. Under high power, these are resolved into extensive groups of dark brown pigment arranged around the nuclei. The muscle fibers are slender, the cross and longitudinal striation is well-defined. Examination near the margin of the preparation, where the osmic-acid fixation has been successful, all of the muscle fibers are found to contain black spherical bodies, extending diffusely through all the muscle fibres about the entire margin of the preparation. These fine fat droplets are present in sufficient amount to speak of an extensive diffuse fatty degeneration of the muscle fibers. Where the large fat cells have separated the muscle fibers, these are found to be more atrophic than those in the central portions of the larger bundles.

The examination of the section through the healed bullet wound on the chest walls reveals nothing of importance. The dissolution of continuity is filled in by granulation-tissue, and there is evidence of beginning restoration of the epithelium from the margins. Stains for bacteria give negative results.

In Summing up the macroscopic and microscopic findings of the autopsy, the following may be stated: The original injuries to the stomach-wall had been repaired by suture, and this repair seems to have been effective. The stitches were in place, and the openings in the stomach-wall were effectually closed. Firm adhesions were formed both upon the anterior and posterior walls of the stomach, which reinforced these sutures. The necroses surrounding the wounds in the stomach do not seem to be the result of any well-defined cause. It is highly probable that they were practically terminal in their nature, and that the condition developed as a result of lowered vitality. In this connection there is no evidence to indicate that the removal of the omentum from the greater curvature and the close proximity of both of these wounds to this point, had any effect in bringing about the necrosis of the gastric wall, although circulatory disturbances may have been a factor. The fact that the necrotic tissue had not been affected by digestion strongly indicates that the necrosis was developed but shortly before death. The excavation in the fat behind the stomach must be largely attributed to the action of the missile. This may have been the result of unusual rotation of a nearly spent ball, or the result of simple concussion from the ball passing into a mass of soft tissues. Such effects are not unknown. The fact that the ball grazed the superior aspect of the left kidney, shown by the microscopic investigation of that organ, indicates the direction of the missile, which passed in a line from the in-

ferior border of the stomach to the tract in the fat immediately superior to the kidney. There was evidence that the left adrenal gland was injured.

The injury to the pancreas must be attributed to indirect, rather than direct, action of the missile. The fact that the wall of the cavity is lined by fibrin, well advanced in organization, indicates that the injury to the tissues was produced at the time of the shooting. The absence of bacteria from the tissues, indicates that the wound was not infected at the time of the shooting, and that the closure of the posterior gastric wound was effectual. The necrosis of the pancreas seems to us of great importance. The fact that there were no fat necroses in the neighborhood of this organ, indicates that there was no leakage of pancreatic fluid into the surrounding tissues. It is possible that there was a leakage of pancreatic fluid into the cavity behind the stomach, as the contents of this cavity consisted of a thick, grayish fluid, containing fragments of connective tissue. In this case the wall of fibrin would have been sufficient to prevent the pancreatic fluid from coming in contact with the adjacent fat. The extensive necrosis of the pancreas would seem to be an important factor in the cause of death, although it has never been definitely shown how much destruction of this organ is necessary to produce death. There are experiments upon animals upon record, in which the animals seem to have died as a result of not very extensive lesions of this organ. One experiment of this nature reported by Flexner (*Journal of Experimental Medicine*, Vol. II) is of interest. The fact that concussion and slight injuries of the pancreas may be a factor in the development of necrosis, is indicated by the researches of Chiari (*Zeitschrift für Heilkunde*, Vol. XVII, 1896, and *Prager Med. Wochenschr.*, 1900, No. 14), who has observed (although a comparatively rare condition) extensive areas of softening and necrosis of the pancreas, especially of the posterior central portion which lies directly over the bodies of the vertebra, where the organ is most exposed to pressure or the effects of concussion. The wound in the kidney is of slight importance, except as indicating the direction taken by the missile. The changes in the heart, as shown by the macroscopic inspection and the microscopic examination, indicate that the condition of this organ was an important factor. The extensive brown atrophy and diffuse fatty degeneration of the muscle, but especially the extent to which the pericardial fat had invaded the atrophic muscle fibres of the right ventricular wall, sufficiently explain the rapid pulse and lack of response of this organ to stimulation during life.

REPORT ON THE BACTERIOLOGIC EXAMINATION.

By

HERMAN G. MATZINGER, M. D.,

Bacteriologist to the New York State Pathological Laboratory.

It is obvious that the short space of time which has elapsed since the death of the President has hardly been sufficient to prepare a complete and thorough bacteriologic report. This report contains all the observations which have been made up to this time:

On September 11, during the life of the President, cultures were made by Dr. Wasdin from the base of the ab-

dominal wound and from dressings removed at the same time. These were submitted to me for examination, and showed the presence of the ordinary pus organisms: staphylococcus pyogenes aureus and s. cereus albus with a gas-forming bacillus which, in pure anaerobic culture on glucose gelatin, forms small, pearly, translucent colonies, with no liquefaction. In litmus milk it produces acid, but no coagulation. Morphologically, it is apparently a capsulated, short bacillus, which takes stains poorly, and which does not stain by Gram's method. Inoculated into the ear vein of a rabbit, which was killed immediately afterward, it produced, after 24 hours in the body of the rabbit, a marked accumulation of gas in the organs, and again grew out in pure culture. As yet the organism is not fully identified.

None of these cultures showed streptococci. A bacterium which appears to be one of the proteus group was, however, isolated, which does not stain by Gram, and appears in varying forms, sometimes small oval, and again quite rod-shaped and in short chains. Sometimes it is surrounded with a slimy covering, which remains clear like a capsule when the organism is stained. On slanting agar, it produces a whitish, slimy growth, which gradually runs to the bottom of the slant and produces an odor of decomposition. On gelatin, it grows very slowly with slight and slow indication of liquefaction. In litmus milk, it produces acid and rapid coagulation.

At the time of the autopsy, September 14, inoculations were made by myself. From the base of the wound, there was again obtained a number of pus organisms, principally a white staphylococcus and the bacterium described above, but no streptococci. Cultures made from the peritoneal surface of the intestines were entirely negative. Cultures made from the under surface of the omentum near the colon, were entirely negative, both with and without oxygen. Cultures from the blood of the right auricle were likewise negative. A very careful and extensive search for microorganism in the contents of the necrotic cavity, behind the stomach, reveals nothing but a short stumpy bacterium, which, as far as the work has been carried at present, appears to belong to the proteus group, and is very like proteus hominis capsulatus, described by Bordoni and Uffreduzzi.

Morphologically, it is not uniform, and sometimes appears almost encapsulated, being surrounded by material that does not stain; is quite refractory to Gram, and produces an odor of decomposition as it grows. It does not liquefy gelatin rapidly and grows slowly, as a glistening white elevated surface growth which slowly sinks; but on agar in the thermostat it grows very rapidly, as a moist, grayish-white, translucent mass. Colonies on gelatin plates have a clean circumference, are granular and quite refractive. In litmus milk it produces acid and rapid coagulation. Animal experiments are still incomplete and cannot be published at this time.

It must be stated that there is occasion for suspecting that this may be a contamination, either from the outer wound or elsewhere, because, quite unavoidably, the technique of obtaining the material and cultures from the necrotic cavity was not absolutely correct.

Cultures made from the small area of broken-down tissue under the chest wound at the time of the autopsy, grew what appears to be staphylococcus epidermidis albus, described by Dr. Welch.

The slimy, gray, necrotic material from the cavity above the transverse mesocolon behind the stomach, was carefully examined microscopically, with the result that very few micro-organisms were found in the fresh state, and no recognizable tissue elements of any kind, no leukocytes nor pus-corpuscles, but an abundance of crystals which appeared more like fatty acid than fat crystals. It contained no free hydrochloric acid, and was alkaline in reaction. Experiments as to its digestive power were negative. About 2 cc. of this material were injected into the space behind the stomach of a dog (still living), with no results except an elevated temperature for 3 or 4 days. Other animal experiments are also still incomplete.

It might be well to state here that the bacteriologic examination of the chambers and barrel of the weapon used, as well as the empty shells and cartridges, ordered by the District Attorney, was entirely negative, except that from a loaded cartridge

there was grown an ordinary staphylococcus and a mould. The chemical examination of the balance of the loaded cartridges, made by Dr. Hill, chemist, was also negative.

The absence of known pathogenic bacteria, particularly in the necrotic cavity, warrants the conclusion that bacterial infection was not a factor in the production of the conditions found at autopsy.

A SYMPOSIUM ON THE CZOLGOSZ CASE.

THE TRIAL OF CZOLGOSZ.

By GEORGE S. GRAHAM, ESQ.

Former District Attorney of Philadelphia.

To the Editor of *The Philadelphia Medical Journal*:

I have read with interest your two editorials in the issue of your paper of October 5th; one on the Czolgosz trial, and the other on Erskine's defence of Hadfield. Erskine is deserving of all your praise. Likewise, if the fact be true that the counsel for Czolgosz believed him to be insane, and so expressed themselves, and could have produced evidence tending to show insanity, then your criticism of them is equally just and your temperate comment fully justified.

I have not, myself, seen any published statement of the belief of the prisoner's counsel in his insanity. From the high standing and character of those gentlemen I would prefer to believe they had not made such statements, without indubitable proof to sustain such a belief.

In every criminal trial the presumption of sanity, like that of innocence, stands until the presumption is overcome by evidence. In the trial of Czolgosz there was not a scintilla of evidence upon which to base an argument supporting a theory of insanity. Upon the evidence adduced the verdict of guilty was eminently proper and thoroughly just. So that from the trial itself there was no ground for expressing such a belief as that referred to.

Drs. Allan McLane Hamilton, Carlos T. MacDonald and others who, as alienists, examined the prisoner with the view of ascertaining his mental condition, pronounced him sane. Unless therefore the counsel for the prisoner had or knew of alienists who had come to a contrary opinion, there was no medical testimony on which to base such a view.

If the counsel had medical testimony tending to prove sanity, and did not submit it to the jury, then they were unfaithful to the court, the prisoner and their own oaths as sworn officers of the court. I am sure that this cannot be true, and would infer from the course of the trial that they were powerless to procure such evidence. Under these circumstances they would have no right to present their individual belief of insanity (if they held such a belief) to the jury, and their conduct of the case would be free from criticism for not doing so. The statement of their belief would be inadmissible as evidence, and when unsupported by testimony would be improper as part of the address to the jury. Counsel have no right to address a jury upon views or matters not presented in the evidence or fairly deducible therefrom.

Erskine had a client whose cause had some merit;

whose wounds received in his country's service pleaded for him; and, also, *had evidence* tending to prove insanity. His eloquent plea on that ground was appropriate and based on proof. There was neither merit nor evidence to sustain such an appeal in the Czolgosz case.

The expression of an individual opinion by counsel after the trial, relative to a belief in the prisoner's insanity, is a question which addresses itself to the forum of the individual's conscience and is not debatable as an incident of the trial, and stands outside the pale of medical jurisprudence. The propriety and good taste of such an expression of belief, is alone for the individual. He has the undoubted right to utter it, or leave it unsaid. If the report of the statement by counsel be true, I agree with you that they "have rather spoiled a fine situation by speaking as they did out of court."

(Note by the Editor:—The statement, after the trial, by the counsel for the assassin that they believed him to be insane, was published by several newspapers. We have never seen its authenticity denied, nor have we seen a denial by the eminent counsel that they entertained this opinion. We shall be only too happy to correct the statement, if it is spurious).

THE CRIME OF CZOLGOSZ, THE ASSASSIN.

By JOHN B. CHAPIN, M. D., of Philadelphia.

Superintendent of Pennsylvania Hospital for Insane.

To the Editor of the *Philadelphia Medical Journal*:

1. The shock and depression that affected not only our own country but the people of all lands, on the occasion of the murderous assault upon President McKinley, are still vividly recalled. Following this event there has succeeded a profound sense of injury and unforgiveness of the adherents of the pernicious dogmas that are believed to have led up to this national calamity. While the issues of life seemed in the balance there was profound thankfulness that in the momentous emergency the surgeons who were summoned courageously assumed grave responsibilities and performed every known service in the present state of science. It is a satisfaction and a subject of congratulation that the greatest surgical authorities of the world, as well as the people at large, were in daily touch with the condition of the distinguished sufferer and have approved of the management of the case. The conferences of the surgeons appear to have been harmonious. They showed a sense of the solemn responsibilities resting upon them. They demonstrated as well the wonderful possibilities as the limitations of modern surgical science and knowledge, and when all has been well done there is little room and less need for indecorous, unseemly, pessimistic criticism.

2. The death of the President, the arrest of the assassin, his trial, conviction and sentence, which followed with commendable but orderly promptness, are notable events which might not warrant a notice in a medical journal but for some of the lessons and precedents that were made. In the practice of law, and in court proceedings, there seems at times such a fetish reverence for precedents that the main issue is clouded and even lost to sight. For a time there was an apprehension such would be the

outcome of the trial of the assassin. Here was the case of a man committing a homicide under most aggravating circumstances. The Chief Magistrate of our nation was shot and killed by an assassin while in the discharge of a most gracious public function, by a man unknown to him or to the locality, who in subsequent conversation avowed himself to be an anarchist. He alleged that the act was committed from a sense of "duty," that he had no personal grievance, but he was opposed to the Government of which the President was the head. His motive was the destruction of the Government by removing the President. He stated the crime was not the outcome of a conspiracy, that no one had designated him to be an instrument, and that he alone carried the plan into execution, an opportunity for doing which he had looked for several days. He stated also that he had been influenced by reading and listening to lectures or harangues to perform his murderous act.

This is the first assassination in our country that is to be traced to avowed ideas and organizations for the purpose of destroying the Government by killing his officers, because they stand for tyranny and the financial distress of the poor. This fact together with the enormity of the crime would in our country at once suggest that insanity would and ought to be interposed as a defence. It is a common hypothesis, and too frequently put forward, that an awful tragedy must be the act of a diseased mind. In this case, however, the trial reports published in newspapers state that a new precedent has been created which may be studied in the interests of justice and protection against criminals. It is reported that with the concurrence of the Bar Association of Buffalo, and on invitation of District Attorney Penney, Drs. Hurd, of Buffalo, and Carlos F. MacDonald, of New York, and several physicians of Buffalo, made an examination and reported the assassin to be sane. This opinion of competent experts eliminated a plea of insanity from the whole proceedings, leaving the guilt or innocence as the only issue to be tried, and no defence was offered, as there was none to present. The allegation alone that the act was performed from a sense of "duty" unaccompanied by other symptoms was not in itself a delusion in a medical or legal sense to excuse a criminal act any more than other erroneous beliefs or opinions on similar grounds. The delusions of the insane are the outcome, and imply the existence of a diseased mind, and result wholly from that condition, otherwise any criminal might plead that he committed crime from a sense of duty. Erroneous, mistaken notions do not come within the category of symptoms of insanity. To admit them for a moment would broaden the field of inquiry indefinitely. Neither could the plea of "irresistible impulse" avail, for the assassin took much time to deliberate. It is true that impulses to criminal acts are not resisted when they might and ought to be, and this fact is often the very essence of criminal intent. As the experts did not have an opportunity to present in court the reasons for their conclusions, we may look for some public expression of their own views hereafter. Neither in the portraits of the assassin do we note any marked sign of "degeneration," and the cranial

development appears to be normal. There only remains room for psychological speculation and theorizing. The management and medico-legal proceeding in this case are commended as suggestive that a new precedent and departure in insanity trials have been made.

It is quite a common experience that only an imperfect, insufficient history can be obtained of obscure, unsettled persons in the social scale in which Czolgosz moved, but if the statement which has been published comprises the whole case, supplemented by what the experts acquired by personal examination, their conclusions were absolutely correct, and the verdict was the only result to be reached.

3. The problem of the disposition to be made of professional Government wreckers by assassination is a more serious one. It may be difficult to frame a legal definition of the crime of entertaining anarchistic doctrines, but the danger that may come from publishing, proclaiming and encouraging violent measures intended to overthrow the Government by the commission of murder is quite another matter. Organized society must first protect itself at all hazards, and by extraordinary measures. No one questions the use of extraordinary measures to preserve the public health against danger from contagious disease. Society and self-protection sanction even the destruction of well-recognized pest centres, suspected persons and cases are carefully guarded until all danger is passed. The professional anarchist and his doctrines and other ranters are far more dangerous and pernicious moral pests, because the culture field is more abundant and diffused in the undesirable emigration that has already gained an entrance into the country. If it be made legal to deport the dangerous professional anarchist who has applied for entrance into our ports, it may be made legal on trial to isolate and deport those already here until their ferocious natures are subdued by education, the diffusion of knowledge and the inculcation of loftier moral principles. If perchance collected on some island, they might dwell together in love like the Arcadian farmers of Longfellow. They might there perchance enjoy the compulsory opportunity of self-support. As there would be no government probable, human life might be safer, as there would be no king, or president, or ruler to assassinate. Under any circumstances the whole subject may be properly relegated where responsibility and power are vested.

THE OPINION OF AN EXPERT WHO EXAMINED CZOLGOSZ.

By JAMES W. PUTNAM, M. D., of Buffalo, N. Y.

To the Editor of the *Philadelphia Medical Journal*:

The trial of Czolgosz is over and the jury has returned a verdict of guilty in the first degree. To those familiar with the crime and the assassin, no other verdict was expected. The trial was unusual in this respect that no possible defence was found. The prisoner was represented by able counsel chosen for the purpose by the Erie County Bar Association. They engaged, by the advice of the Bar Association, the services of Dr. C. F. McDonald, former President of the New York State Lunacy

Commission, and Dr. Arthur W. Hurd, President of the Buffalo State Hospital for the Insane. The people engaged the services of Dr. Joseph Fowler, Police Surgeon, Dr. Floyd S. Crego and Dr. James W. Putnam as experts. These five physicians examined Czolgosz at different times, separately and together, and he talked with them, giving his early history and life.

Briefly stated, Czolgosz is a young man 28 years old. Former history of good health, steady habits, not given to drink and a moderate smoker. He has been educated in the Public Schools, being in attendance at a school until he was 15 years old. He has worked in a wire works, been a blacksmith's helper and worked on a farm; altogether his life has been an industrious one. He states that his work was fully up to the average of his fellow workmen, that he never lost a day from ill health, and that his average earning capacity was from \$1.50 to \$1.75 per day. He had saved about \$400 in the last six years. He voted when he was 21 years old. At that time, having read anarchistic papers and attended meetings of anarchists, he became converted to their principles. He left the Roman Catholic Church in which he had been brought up and gave his reason for doing so, "I did not believe any longer in the things the priests told me." He said he did not believe in government, nor in law, nor in lawyers, nor in God, nor in marriage. He believed that every man should take care of himself and have no rulers. He said this was not his idea but was the idea he heard in the anarchist meetings. He said he killed the President because it was his duty. He said, "I am glad I done it." When he was offered counsel he refused it, stating he knew he was guilty, that he had no chance, and that he did not believe in law or lawyers. When arraigned in court he entered the plea of guilty, which, of course, was not allowed. During the trial he sat quietly and listened to the testimony. The case of the people was presented, being simply the testimony of eye-witnesses of the crime, the medical testimony of the surgeons who attended the President and the testimony of the post-mortem examiner. The question of the prisoner's mental condition was not touched upon by any witness. The witnesses summoned to examine the prisoner for the defence did not appear upon the witness stand, therefore the experts summoned by the people did not present any testimony. The prisoner at no time even shammed insanity. He did not, it is true, discuss the crime with his attorneys, but he did discuss it with others. His digestion and his sleep were normal. He was true to his fellow anarchists in that he refused to incriminate any of them, referring only to Emma Goldman and her lectures.

In conversation and appearance he is more intelligent than the average Polish laborer. Physically he presents the following conditions: Pulse 82; temperature 98½°; tongue, clean; skin, clear; patellar reflexes, normal; pupillary reflexes, normal; heart, normal.

THE CZOLGOSZ TRIAL: A UNIQUE EVENT.

By CHARLES K. MILLS, M. D., of Philadelphia.
Professor of Medical Jurisprudence in the University of Pennsylvania.

The trial of Czolgosz for the murder of President McKinley is a unique event in medico-legal history. The student of jurisprudence as well as the average citizen finds much to commend in the manner in which the assassin was brought to trial, a little more than two weeks after the fatal shot was fired. In less than two weeks after the death of the President he was convicted and sentenced. Great harm is done by the postponement of trials for crimes of violence, by the long drawing out of such trials, and by delays in the execution of sentence. In this case justice has moved with a celerity with which the most impatient cannot find fault.

As regards the prosecution, and especially the absence of rhetorical display and the economy of time in the presentation of the case, nothing can be said except in praise.

The only plea that could be made was that of insanity, and in order to meet this issue, if it should arise, competent physicians, including several well-known alienists, were chosen before the trial by the District Attorney and the Bar Association of the county in which the crime was committed to examine into the mental condition of Czolgosz. These physicians after separate examinations unanimously reported that he was sane, and there is no reason in anything which has appeared in connection with the case to doubt the justice of their finding. The dearth of facts, historical or special, regarding the mental condition of the murderer, is a marked feature up to the present in the published annals of the case. The crime was deliberately planned, was carried out with determination, and was said by the murderer to have been committed because of certain opinions which he held. Both previous to the trial and when he was arraigned by the court he pleaded guilty and expressed himself as prepared to receive any punishment that was meted out to him. This is about all that is known of the man and the deed, and in the light of this knowledge that justice was done no right-thinking man can doubt.

A word perhaps might be said as to the manner in which the defence of Czolgosz was conducted. This case is one of historic interest, and hereafter will pass into the literature of medical jurisprudence. Not improbably it will be referred to as a precedent in future trials.

It would seem to the unprejudiced and unimpassioned that an effort might have been made to present to the jury some evidence regarding his mental state. Instead of this his defense merely made a statement to the jury that the accused had been examined by experts and pronounced sane. This is not the usual method, and whether it is the best method will be determined not by the fact that it has met public approval, but by the verdict of time and of future events.

The address of the senior counsel for Czolgosz was of unusual character. It dealt largely with a discussion of the dignity of the law. It was in the main a defence of the defenders, who needed no defence. Only praise is to be given to those who in the face of probable misrepresentation or even of

denunciation take up a line of conduct which is enjoined upon them by duty.

In the light of the facts which are known and of the evidence presented at the trial, Czolgosz was justly convicted, and punishment should follow speedily. Not a single bit of evidence as to his insanity has been produced even in our prolific public prints, but his defence should have been as thorough as it would have been if the crime he committed had not been one which all the world execrated.

CHAS. K. MILLS.

SOME REMARKABLE FEATURES.

By WHARTON SINKLER, M. D.,

of Philadelphia.

Physician to the Orthopedic Hospital and Infirmary for Nervous Diseases.

To the Editor of the *Philadelphia Medical Journal*:

To one who has observed the course of the trial of Czolgosz for the horrible crime which he committed, several remarkable and unusual features present themselves. The contrast between this trial and that of the assassin, Guiteau, is marked, and very favorable to the method in which the District Attorney of Buffalo conducted his case. As will be remembered, Garfield was shot on July 2, 1881, and died on September 19th. Guiteau was not arraigned until November 14th of the same year. He secured counsel, who made a determined and persistent effort to save their client from the gallows. They obtained the services of at least two alienists as experts, who testified with marked vigor that the defendant was insane; they brought out his previous life and actions, and adduced much evidence to prove that he was a paranoiac. The trial lasted almost eleven weeks, and ended with the conviction of Guiteau. He was not executed until June 30th, almost a year after the assassination. Notwithstanding the amount of evidence brought forward as to the mental unsoundness of Guiteau, there never was any doubt as to the verdict which would be brought in by the jury, and the whole country heartily approved of the execution of the criminal.

In the case of Czolgosz, the defendant entered a plea of guilty. He refused to make any attempt to secure counsel, and even when two able lawyers were appointed by the Court, he apparently declined to give them any assistance in the preparation of his defence; he refused to give them any information as to his past life, or to say anything which would be in extenuation or defence of his detestable crime. His counsel seemed to have made no attempt to produce evidence as to his possible insanity, nor did they effectively cross-examine the witnesses who testified that he was sane. They merely accepted the opinion, which was secured by the prosecution, that the defendant was of sound mind and responsible for his action, and the defence which they made was merely a technical one. The trial was brought swiftly to a close in two days, when Czolgosz was sentenced to suffer the extreme penalty of the law some time during the week ending October 28th, or in less than two months from the death of his victim.

There is no doubt that the trial was conducted with the utmost dignity and impartiality, and that

the verdict was a righteous and just one. At the same time one cannot help feeling regret that the counsel for Czolgosz did not make an attempt to bring out some evidence as to the man's mental condition and his previous life. It is certain that no testimony adduced by the defence would have made any change in the verdict, and it would probably have emphasized even more positively the prisoner's entire responsibility for his act. Had the counsel for the defence gone into the question of Czolgosz's possible insanity, either by producing experts or by cross-examination of the State's witnesses, the case would have been of some interest and value to medical jurisprudence. A point greatly to be commended is, that the experts who were called by the prosecution were selected by the Bar Association, presumably in conference with the District Attorney. This method of securing experts is in the right direction, and seems the best way of proceeding in similar cases. It does away as far as possible with the personal attitude of the expert towards the side which has employed him, and from which he expects to receive his remuneration.

NOT A CASE IN PSYCHIATRY.

By F. X. DERCUM, M. D., of Philadelphia.

Professor of Nervous Diseases in Jefferson Medical College

To the Editor of the *Philadelphia Medical Journal*:

Dear Doctor:—In my opinion, the Czolgosz case presents no points for medico-legal discussion. It is difficult to comprehend how so revolting, so senseless and so useless a crime could be committed by a person of normal mental make-up—difficult to understand how a young man born and educated in this country could commit such a crime and still be mentally sound. This thought doubtless filled the minds of the counsel for the prisoner, for they caused the prisoner to be examined as to his mental condition by competent medical experts, but the fact that these experts were not placed upon the witness stand, permits of no other inference than that their examination furnished no data upon which a theory of insanity could be based. Under these circumstances the case of Czolgosz does not belong to the field of psychiatry, but to that of the psychology of crime.

On the Question of Immunity.—The mechanism of Adaption of the *Bacillus Pyocyaneus* to Sodium Salicylate.—A. Studensky (*Bolnitchnaya Gazeta Botkina*, Vol. XII, No. 9) succeeded by cultivating the bacillus pyocyaneus in bouillon containing gradually increased amounts of sodium salicylate in obtaining an organism which grew well in a medium containing 3.5% of salicylate of soda, whereas the original culture was promptly killed by 2.3% of the salt. To ascertain that no decomposition of the salt takes place he made a quantitative determination of the sodium salicylate in the culture with the result that 3.9% were found, the increase being due to the evaporation of the medium. Acting on the supposition that the organism develops a substance which neutralises the antiseptic properties of the salicylate of soda, he filtered the culture through porcelain and inoculated the filtrate with the original non-injured organism. The latter developed feebly but perceptibly. But when a portion of this filtrate was heated for 15 minutes at 90-96 deg. C. a flocculent precipitate formed and the filtrate regained its full germicidal strength. This work, which is still in progress, has been undertaken independently of the investigation of Danysz of the Pasteur Institute. [A. R.]

Original Articles.

ON THE COORDINATION OF RESPIRATORY
MOVEMENTS.*

By DR. R. du BOIS REYMOND.

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The nervous mechanism of the respiratory organs, though diligently studied again and again, still offers a number of unsolved problems. Taking a general view of the subject and the work done, as represented in scientific literature by innumerable papers, one may say, that out of all the problems offered, only two have mainly absorbed the attention of investigators. One of these is the origin or the primary cause of the nervous impulse corresponding to each act of breathing, the other the regulatory mechanism, by which the periodical action of the respiratory organs is controlled and adapted to varying conditions. These two questions alone form the subject of by far the greater number of all the papers on the physiology of respiration, and the universally accepted results concerning them are the basis for the observations contained in the present communication.

The origin of nervous excitation in respiratory function, if it be not assumed to be purely automatical, must be of a reflex nature. Reflexes acting on the respiratory centres being proved to exist, the hypothesis of automatical actions becomes superfluous. The reflexes in question may continually be brought under two heads: Under the first come the mainsprings of respiratory function; want of oxygen and excess of carbonic oxide in the blood. To these may be added every influence exercised on the respiratory centres by substances contained in the blood, for instance the hypothetical products of muscular excretion, which are supposed to cause the increase of respiration inherent on muscular effort, even in experiments precluding connection by nervous channels. Overheating of the blood, which acts like excess of carbonic oxide, may also be classed here. In all these cases the activity of the nervous centres is called forth by a change in the quality of the blood, therefore this class of reflex-excitations can fittingly be described by the term "stimulation by the blood." The second kind of reflex action on the respiratory centres is purely nervous, it comprises the inspiratory and expiratory effects of the vagus nerve described by Hering and Brewer, and all similar reflexes. This class is therefore to be designated as the "Stimulation by the Vagus."

These two classes of reflexes being held to supply the periodical excitation required for the normal innervation of respiration, the question as to the origin of the respiratory stimuli may be considered as satisfactorily answered. Next to this question the problem of regulation of the rhythm has mainly been studied. Considering the whole respiratory apparatus as a unit, such as could be excited to movement in its whole extent by any single stimu-

lus, this stimulus given, the regulation of rhythm would in fact be the next important point in the function of respiration. But far from being such a unit, respiratory mechanism on the contrary is a specimen of complex coordinated machinery. Respiratory movement is brought about by a considerable number of different muscles distributed in regions widely apart and acting together in separate more or less clearly defined groups. Thus the intercostals, several accessory thorax muscles, the diaphragm, the muscles of the larynx and palate, the muscles of the alae nasi, act together to produce a normal act of breathing. To these, according to Sandmann, ought to be added the unstriped muscles of the bronchi. In the face of so complicated an arrangement the next question to consider evidently should be not the regulation of rhythm, but the coordination of movement. It seems that this question, though it has to a certain degree occupied physiologists, has not hitherto received the attention due to its importance.

The coordination of respiratory movement, like every other coordination must be due to coordinate action of the groups of motor cells corresponding to the different muscles. This coordination can be explained in two ways. The one is, that each of the motor cell groups responds to the occurring stimuli independently and without any relation to the action of the other groups, but that the excitability in each separate group is prearranged in such a manner as to produce that ratio of responses, the totaleffect of which we call a coordinated movement. This explanation postulates so complicated and delicate modifications of excitability, that it can hardly be seriously advanced. It is mentioned here merely to complete the series of possible suppositions. The other explanation is, that in the same way as the separate motor cells of each group are combined in the groups corresponding to the separate muscles or parts of muscles, these groups in their turn combine to groups of a higher order, corresponding each to a whole group of muscles, and that these groups are again subordinate to groups of a still higher order, so that at last the whole number of motor cells is controlled by one single group, representing a unity in the sense above mentioned, a true motor centre, a "*noeud vital*". Although this view of the matter has been objected to, it is so well borne up by the analogy of other coordinated movements, and, moreover, appears at first sight so simple and natural, that it may be said to have been generally adopted. But it is only on superficial examination that this explanation seems so easy and simple. On second thought it will be seen, that automatism, after having been done away with in the matter of primary stimulus, crops out afresh in the shape of a wonderful faculty with which the nervous centre would have to be endowed, viz., the faculty to supply each of the subordinate cell groups with exactly the required amount of nervous impulse at exactly the required time, so as to respond by a coordinated movement to a single stimulus. There is not much difference between a centre which acts automatically and one that on reflex excitation distributes at times of its own accord a number of

* A further account of the matter will be published in "Engelmann's Archiv für Physiologie."

different mechanisms so as to make them work for a common object in most perfect coordination. Compared with these difficulties even the hypothesis of separate centres with adjusted excitability mentioned before appears improbable no longer. But both theories fail when stress is laid on the power of the nervous mechanism to adapt itself to all kinds of complicated needs, such as for instance one sided breathing in cases of disease or accidental or experimental lesion. And both theories, as they have hitherto stood, fail likewise to explain an observation to which attention is to be called by the present paper, and which will be shown to open up a new line in the study of coordination of respiratory movements.

In the course of certain experiments on excitation of the larynx from the medulla,* it was noticed, that when the animal ceased to breathe, either from overdoses of ether, or from injuries to the medulla, and artificial respiration by manual compression of the thorax was resorted to, the glottis showed regular accessory movements synchronous with the artificial respiration. These movements were not due to the direct mechanical influence of the manipulation, for they were absent in dead animals. Neither were they caused mechanically or by reflex, by the passage of the air through the glottis, for they occurred without alteration when a canula was placed in the trachea so that the air could not pass through the larynx. Moreover, as was known beforehand, when a canula was introduced in an upward direction and air artificially blown or sucked through the glottis, no reflex action of the kind was found to take place. These direct influences being excluded, the movements observed would appear to be produced by excitation of central motor cells, and probably by the same groups of cells that generally perform the normal respiratory function. Thus this observation would be a proof of the excitation of one separate respiratory centre. Now there are, as shown above, only two classes of reflexes known to affect the respiratory centres. It ought then, to be either "excitation by the blood" or "excitation by the vagus" that produces the movements in question. As regards the first supposition, it would be quite possible that the artificial respiration, supplying the circulation with air, was in each of its phases accompanied by a change of the quality of the blood sufficient to evoke a response of the larynx motor cells. Now "excitation by the blood" can readily be excluded from the conditions of the experiment, by producing apnea in the animal. If there is so great an excess of oxygen and so small an amount of carbonic oxide present in the blood, that the respiratory movements of the thorax and diaphragm cease, we may be sure, that the blood stimuli are also abolished in relation to the larynx. On trying, therefore, the experiment on an animal previously brought into a state of profound apnea, rhythmical pressure on the thorax as in artificial respiration was found to be accompanied by accessory respiratory movements of the glottis as before. On the lines drawn above

the only supposition left is then, that excitation of the larynx motor cells occurs by the vagus. The rhythmical compression and relaxation of the thorax of course compresses and dilates the lungs, so it is again quite possible, that the sensitive fibers of the vagus in the lungs are by the artificial respiration excited sufficiently to wake a response of the larynx motor cells. Now again, this excitation by the vagus can be readily excluded from the conditions of the experiment. If, during apnea, the thorax be opened, so that the lungs collapse and remain unaffected by passive movements of the thorax, surely rhythmical excitation by the vagus can be assumed no longer. On repeating the experiment under these conditions, every compression of the thorax was still found to be accompanied by respiratory movements of the glottis. Moreover it could be clearly shown that to each compression of the thorax corresponds an adductive, or closing (expiratory), to each relaxation an abductive, or opening (inspiratory) movement of the glottis.

All known sources of excitation of the respiratory centres having been excluded by the conditions of the experiment, viz., complete apnea and complete pneumothorax (or in several cases section of the vagus below the origin of the recurrent nerve), the phenomenon must be due to a hitherto unknown kind of reflex. In this new reflex the passive movements of the thorax act as a stimulus which gives rise to an afferent impulse exciting the motor centre of the larynx. For sensory organs originating this impulse we must evidently look to the sensory organs of the thorax articulations, tendons and muscles. The afferent channel must evidently follow the path of the intercostal nerves and reach the reflex centre by way of the spinal cord. Section of the spinal cord below the medulla arrests the respiratory movements of the larynx even though artificial respiration be continued. Thus it appears that the respiratory movements of the larynx are dependent at least in part upon the excitation of the muscular sense or posture-perceptive sense of the thorax. The coordination of respiration is in this case shown to be exactly analogous to the coordination of different muscles in the motion of the limbs. Very likely the other separate parts of the respiratory mechanism are linked together by similar reflexes. Experiments on the coordination of the diaphragm and the larynx have already shown, that in this case there exists a connection by means of the vagus excitation. Peripheral stimulation of the severed phrenic nerve calls forth movements of the glottis, which cease after section of the vagus below the recurrent nerve. Continued research will probably bring to light additional data of the same kind.

By these results the difficulty of explaining the coordination and adaptation of the respiratory movements is considerably diminished, especially because "excitation by posture perception" presents itself as an agency extremely well adapted to bring about the exact adjustment of nervous discharge required for proper coordination.

The experiments referred to moreover explain in a very satisfactory way the reviving influence of artificial respiration on the respiratory centres. Hitherto this would have been considered wholly due to

*These experiments and those hereafter described were executed in the Physiological Laboratory of the *Thierärztliche Hochschule* of Berlin, in collaboration with the *Laryngologist*, Dr. T. Vratzke, of Berlin.

the supply of oxygen and diminution of carbonic oxide in the blood inherent on ventilation of the lungs, but the above experiments prove that artificial respiration at the same time acts as a direct stimulus at least on the larynx motor centre, and probably on other respiratory centres as well. In this connection it may be of interest to note the negative fact, that rhythmical drawing out of the tongue, in the cat and the dog was quite without effect on the movement of the larynx, even in such cases in which spontaneous accessory movements of the tongue in active respiration were well marked.

A CASE OF TRANSPLANTATION OF THE URETER FOR THE CURE OF URETERO-VAGINAL FISTULA*

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History. Mrs. J. B., 34 years of age, married, came to me at the Montreal Dispensary on the 1st of July, 1901, giving the following history. She began to menstruate at 14, was always regular and flow was painless. She was married at 31, and had one child at 32 while living in Vancouver, B. C., the labor being very difficult and requiring the use of forceps. So much force was employed that the vagina was terribly lacerated, and ever since then, two years and seven months ago, there has been a constant flow of urine by the vagina which burned and excoriated it and the vulva, so much that she has been in constant pain, as well as misery from being always wet, and in spite of scrupulous cleanliness, always smelling of urine. About 18 months ago patient went to London, Eng., to be treated, and entered St. Bartholomew's Hospital, where she remained for three months, and where a thorough examination of the urine was made and the quantity coming from each ureter and from the bladder and fistula respectively, was measured carefully. While there she was anesthetized three times, once to make a diagnosis, and twice for vaginal plastic operations with a view to close up the fistula, neither of which, was, however, successful. These plastic operations explain why the vagina had assumed such a conical shape, and why the tissues were so brittle that my stitches would not hold in them. The English surgeons, she said, had spoken of ureteral transplantation, but she was so exhausted and discouraged that she would not remain in the hospital any longer than three months. She came back to Canada a year ago and continued to suffer until she was advised to come to the Montreal Dispensary. On attempting to examine her there, it was found impossible to do so without an anesthetic, owing to the extreme sensitiveness of both vulva and vagina, both of which were covered with excoriations and ulcers. Steps were at once taken to render the urine less irritating and as soon as a bed was vacant she was admitted to the Western General Hospital. With regard to her family history there was nothing of interest, except that her mother died from difficult childbirth, showing that a small pelvis is inherited.

Diagnosis. Before deciding upon any operation it was essential to make an accurate diagnosis. The urine was running away from the vagina; but where was it coming from? The bladder or ureter? And if the latter, which ureter? As the patient was extremely sensitive she was anesthetized, and the bladder having been emptied with a catheter, it was then filled with sterilized milk, while the vaginal vault was carefully dried; only a small part of a drop of milk was seen to come from the apex of the

funnell forming the vaginal vault on the patient's right. An effort was then made to pass a probe into this tiny opening and thence into the bladder, but at first this could not be done. Finally, however, the probe passed into the right ureter, a distance of six centimeters. While the probe was in the ureter a ureteral sound was passed into the bladder and seemed to enter a short distance into the ureter because a little jet of urine came from it, while the bladder had methyl blue solution in it. But it was impossible to make the two metallic instruments touch each other, although a great deal of trouble was taken to do so, thus showing there was a stricture of the ureter below the fistulous opening into it. This also proved that it was really a uretero-vaginal and not merely a vesico-vaginal fistula. As the quantity of urine coming from the fistula was less than the total quantity secreted by the kidney on that side I came to the conclusion that there was some obstruction to the flow into the bladder as well as difficulty in the escape of the urine from the fistula; in other words: 1st, that there was no vesico-ureteral fistula, 2d that part of the urine passed by the natural valvular opening into the bladder, which valve prevented milk or methyl blue solution from passing from the bladder into the ureter; and 3d that the fistula was not merely a vesico-vaginal one. The quantity passing by the fistula was ascertained in the following manner: The catheter was passed into the bladder every two hours and the quantity measured. Then the patient was made to sit on a chamber for two hours on several occasions and the quantity which dribbled away was carefully ascertained. While the two quantities together measured sixteen drams every two hours the quantity which dribbled away in that time was only five drams, while the quantity drawn from the bladder was about eleven drams. After the examination the fistula closed up completely, and for five days she was perfectly dry for the first time in eighteen months. The explanation of this temporary improvement was that the manipulation with the probe had set up a local inflammation with swelling of the lining of the fistula so that its calibre was closed. In a few days, however, the wetting of the bed clothes began again, and I decided to operate for its closure. Being loath to resort to the serious operation of transplantation of the ureter until I had first given her the chances, however small, of having it cured by a vaginal plastic operation, the latter was undertaken with the promise to the patient that if it failed, as it had done twice in London, I would almost surely cure her by opening the abdomen and transplanting the ureter. Bovee, in his excellent paper, says: In but few of the uretero-vaginal fistulae can cure be procured by vaginal plastic surgery. The danger of relapse from heavy strain, from cicatricial contraction, is too great to permit this plan to be adopted in any but the most favorable cases.

Vaginal Operation. The fistulous tract was dissected with sharp curved scissors and tenaculum and three silk-worm gut sutures were passed around it with great difficulty, owing to the mass of cicatricial tissue in the vagina reducing this canal very much in size and making it conical with the point of the cone exactly at the fistula. Much to my regret this only stopped the flow for a few days after which it was worse than ever. One more attempt was made, this time by removing a strip of vagina all around a distance of one centimeter and then bringing the raw surfaces together. This was exceedingly difficult but was finally accomplished. But the tissues were so friable that the stitches cut through and the patient was still worse. The poor woman was by this time very much discouraged, and worn out physically, so that I felt fully justified in doing the more radical operation, and at the same time was more sure of effecting a cure, and to this the patient readily consented.

Transplantation of Ureter. On the 17th of August, 1901, assisted by Dr. England, and Dr. Gillespie, the following operation was undertaken. The abdomen was incised in the middle line from the pubes to the umbilicus down to but not through the peritoneum. The latter was then easily pushed off the abdominal wall on the right side and not only the bladder but also the large vessels of the pelvis were exposed to view, my intention being to find the ureter and to cut it off close to the fistula and to transplant it into the bladder higher up, without opening the peritoneal cavity at all. Although I nearly succeeded in doing so, and would have no difficulty in doing so should I ever have a similar case, yet

*Read at the Meeting of the Canada Medical Association at Winnipeg, Aug., 1901, and published synchronously with The Dominion Medical Monthly.

on this occasion several circumstances threw me off the track and I was eventually obliged to follow the same plan as I had seen Sanger follow in a similar case in Leipzig when I was there three years ago, namely to open the peritoneum running over the large vessels at the brim of the pelvis and to feel for the artery, see the vein and pick up the third tube which was the ureter. One of the circumstances above referred to was the vomiting which started violently the moment the anesthetiser ceased to pour on the anesthetic, and this he stopped doing because she was so weak; and another was the distention of the stomach and colon with gas, although the bowels had been well moved and the small intestines were collapsed. The third circumstance was the retroversion of the uterus, owing to which I found two round tubes dipping down into the pelvis, one being the ovarian vein, and the other the round ligament. I mention these little difficulties so as to help any of my hearers who may have to perform this operation. Had it not been for the vomiting and the distention of the large bowel, the intestines would have been easily pushed into the upper abdomen as the patient was in the highest Trendelenburg posture, without which, indeed the operation for me would have been well nigh impossible. Another cause of the difficulty in finding the ureter was in not first passing the probe into it from the vagina before the operation, for when I asked one of my assistants to do this during the operation he was unable to find it. When at last I was reluctantly compelled to open the peritoneal cavity I had only to make a little slit in the peritoneum lining the wall of the pelvis, in the line of where I knew the ureter should be, when I quickly came upon it and picked it up. About one inch of the lower end of it was imbedded in cicatricial tissue and of course this much of it had to be sacrificed; a silk ligature was passed around it while my assistant pulled it taut and tightly tied and cut it off. The ureter was then severed a little above the ligature and covered with a gauze sponge as urine at once came from it. As most of the deaths or failures to unite have been due to the septic condition of the urine I had taken the precaution to administer urotropine for a week before so that I was not afraid of a drop or two escaping; and as stricture of the ureter is another cause of failure I did not wish to bruise it with a forceps. We all thought it much thicker than we had ever seen it before, perhaps the obstruction at the site of the injury had caused it to hypertrophy as it is a muscular tube capable of peristalsis. The end of the ureter was split open to a distance of a third of an inch so as to avoid subsequent strictures after it was transplanted, an accident which has marred the success of more than one case where this was not done. A slit was then made obliquely into the right upper corner of the bladder and the ureter stitched into it, the mucous membrane of the ureter to the mucous membrane of the bladder with very fine chromicised catgut, and the fibrous coat of the ureter to the muscular wall of the bladder with six fine black silk stitches. In doing this Van Hook's method was employed, which will be described later on. The bladder was then distended with a pint of weak methyl blue solution and to my delight not a drop leaked through the point of transplantation. The two inch cut in the peritoneum was closed with fine catgut, as was also the opening in the parietal peritoneum. In case that the transplanted ureter should fail to adhere, a drainage tube was passed down from the end of the incision in the abdomen to a little below the opening in the bladder, and a piece of iodoform gauze down to the lowest point between the peritoneum and the pelvic fascia. The abdomen was closed with silk worm gut and the patient went off the table in fair condition. Apart from the vomiting which lasted three days, she has made an excellent recovery. The catheter-a-demeure was left in for five days, by which time I believed that the ureter was firmly attached in its new place. It is now ten or eleven days since the operation and the patient can hold her water for eight hours and is rapidly regaining her health and strength.

Remarks.—This case is of interest for several reasons: First—It is as far as I am aware the first time that the operation has been done in Canada and my Canadian brethren will, I am sure, share my pleasure in seeing it result successfully. It had been done successfully ten times in Europe and the

United States up to May, 1899, including the one I saw Sanger do in Leipzig. The first successful experiments on animals were performed by Paoli and Busachi in 1888. The end of the ureter was split before suturing it into the bladder.

Novaro (*Centralblatt f. Chirurg.*, 1893, vol. XXVII, p. 596), following their method, performed the first operation on man. He made an incision in the end of the ureter 1 cm. in length. Although there was some leakage for a few days there was a successful result. Penrose (*University Med. Mag.*, April, 1894), Krug (*Journal Obstetrics and Gynecology*, N. Y., 1894, p. 469), and Baldy (*Amer. Journal Obstetrics*, 1896, Vol. XXXIII, p. 362), performed similar operations, employing the idea suggested by Van Hook in his anastomosis operations, namely, introducing two traction sutures each with a needle at both ends, which is passed through the wall of the ureter from within out, forming a loop on its inner side. Both sides are now carried through the bladder wall from within out coming out on one side of the incision. A similar suture is placed on the other side and the ureter drawn into the bladder opening by traction on the stitch and fixed there by tying. The only difference in my case was that I did not pass three silk stitches through the bladder mucosa, which I think a weak point in Van Hook's otherwise excellent method. In Baldy's case the proximal end of the ureter was too short to go to the bladder without too much tension on the sutures, so he brought the bladder over to that side of the pelvis by two stout catgut sutures. Kelly (*Johns Hopkins Bulletin*, Feb., 1895) gained one inch in his case by dissecting the bladder from the horizontal rami of the pubis and dropping it back into the pelvis.

Boldt (*Amer. Journal Obstetrics*, 1896, Vol. XXXIII, p. 844) passed a ureteral catheter into the fistula before the operation, which I forgot to do until after I had begun, and thus found the ureter more easily; after cutting the ureter off he left the catheter in the proximal end and passed it into the bladder through the opening and out through the urethra, thus running less risk of leakage if his union had failed.

Fullerton (*Kelly's Operative Gynecology*, Vol. 1, p. 463) severed a double ureter on right side. As soon as detected she closed the distal end and introduced both proximal ends into the same opening in the bladder, with good result.

Baum, Witzel, Vert and Kelly have performed extraperitoneal implantation into the bladder and although they were all obliged, as I was, to open the peritoneum for a few minutes to find the ureter, I believe that with a little more experience we could complete the operation extraperitoneally, thereby reducing the small death rate, Kelly having lost but one case on the seventh day from sepsis.

Second—My case is interesting, because the injury to the ureter was caused by delivery of a child. In the majority of cases it has resulted from difficult operations, mostly vaginal hysterectomies.

Fergman found that in sixty-five cases of ureteral fistula, twenty-five were due to parturition, in sixteen of which the forceps were employed. In twelve, vaginal hysterectomy was the cause; two

by stone in the ureter, and ulceration; three by abdominal section; one had a traumatic origin; two from pelvic abscess; one from a pessary; one from tubercular necrosis of the ureter as in Krame's case.

Third—It shows the value of urotropine in making the urine aseptic; my patient had a temperature of 103° a week before the operation, which may have been due to infection of the ureter, but if this was so, the urotropine apparently remedied it, for there was no temperature whatever after the operation.

• Fourth—Owing to the extensive bruising at the time of the confinement and also owing to the four plastic operations, the vagina was reduced to a very small cone of cicatricial tissue, so that repair by this means was out of the question. In a large and capacious vagina I believe that the ureter could be found and repaired by splitting open the vagina and exposing the base of the bladder as in my method of repairing severe vesico-vaginal fistulae. In no case should we implant the ureter into the bowel nor tie the ureter so as to cause hydronephrosis. Nephrectomy even as a last resort is hardly justifiable in view of the possibility of there being only one kidney and of the splendid results of transplantation of the ureter.

SOME OF THE OCULAR AFFECTIONS OF CHILDHOOD ASSOCIATED WITH IMPAIRMENT OF GENERAL NUTRITION.*

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It is not my design in this paper to treat of the more frequently occurring forms of ocular inflammation, as for example, blepharitis ciliaris, styes, phlyctenular conjunctivitis, ulcers of the cornea and affections of the lachrymal apparatus, etc., etc., occurring in strumous or rickety children. These forms of disease are very frequent and too well known to make their discussion before this society either interesting or valuable.

There is, however, a group of ocular affections, fortunately not so frequent, which like the group already mentioned, are certainly associated with, and probably in a large measure dependent upon malnutrition. While in the forms of disease already enumerated the manifestations are so pronounced that they cannot be overlooked and are therefore not likely to be neglected, in those to be studied, neither the local affection nor the general impairment of health are necessarily so obvious as to drive the parents to seek professional advice.

Moreover, the very striking forms of disease already mentioned and characterized by great photophobia and lachrymation, by phlyctenular ulcers of the cornea and bulbar conjunctiva; by impaired alimentation and bowel disturbance usually occur in early childhood; whereas the conditions I wish to describe come on later and are essentially a disease of adolescence, although probably not necessarily dependent upon the peculiar conditions of vitality which often obtain at that time of life, but are rather to be regarded as a part of the general ensemble of symptoms which, in the female, are

associated with a faulty establishment of the menstrual function, and in both boy and girl with irritability of temper and a wide group of ill-defined nervous symptoms. These more or less vague and subtle symptoms of disease are frequently ascribed to errors of discipline, to rebellion upon the part of the child against parental authority, in a word, to bad temper, a mistake which often leads, both at home and in the schoolroom, to some form of punishment, when instead the advice of a physician should be sought. The history of two cases will suffice as illustrations of these remarks and incidentally as pictures of the conditions I have met in a large number of children. It may be asked that since the ocular symptoms are but a part of the general malady, why present these cases from the standpoint of the ophthalmologist? For two reasons: In the first place, the general conditions had not been recognized. In the second place, the ophthalmoscopic study of the fundus oculi, the character of the field of vision, etc., were the means by which attention was first called to the serious impairment of the general health.

CASE 1.—S., aged 10, was brought to me in 1897 suffering with headache, inability to read characters on the black-board at school, blurring page, dread of strong light and attacks of red eyes. No complaints were made by the parents or his physician of any general derangement of health, indeed, in appearance the child was a model of the sturdy, healthy school boy. A careful study of the ocular conditions revealed only the presence of a high degree of hypermetropic astigmatism and the attending congestion of the fundus oculi from accommodative strain. The refraction error was corrected by glasses and the symptoms promptly disappeared. Two years later, now at twelve years of age, the boy was brought to the office again with a return of the severe headache and petit chorea. The pains were paroxysmal, were often induced by near work with the eyes, by exposure to sunlight and were aggravated, indeed often produced by the noise and contention of his brothers and sisters at home. During the consultation his mother sent him from the room and then related that the boy was completely changed in disposition. Instead of the reasonable, cheerful, affectionate and obedient child he had always been, he was now subject to moroseness, to sudden fits of the most ungovernable temper, during which he would strike his mother with any weapon at hand, would, if not restrained, do violence to his younger brothers and sisters. So serious had the matter become that he was a terror to the household, and his mother did not dare to leave home without taking him with her. He had lost interest in his school work, where he was regarded with aversion by both teacher and children. A painstaking study of the eyes revealed a change from far sighted to near sighted astigmatism, accounted for only by stretching of the eyeballs. The ophthalmoscope revealed a notable change in the fundus. The veins of the retina were full and dark, and there were faint greyish lines along the borders of both arteries and veins. The optic discs were too capillary, the borders of the nerve partially concealed by the hazy retinal fibers, while the entire eyeground was a cinnabar red, flummy in appearance, and there were granular changes in the macular region of both eyes, and between the macula and nerve. Elsewhere in the fundus there were beginning absorption areas. The breath was offensive, he had developed hypertrophied tonsils and a boggy condition of the tissues over the inferior turbinates. The urine was high colored, highly acid in reaction and had a sp.gr. of 10.28; no sugar was detected at any time, but there was intermittent albuminuria and frequent deposits of red crystals after standing. The changed refraction conditions were once more carefully corrected under atropia, and the boy was then returned to the family physician with the suggestion that he be taken from school, the opinion being given that while his headache might be due in part to the ocular conditions which have been described, the local pathological state was probably intimately

* Read before the Pennsylvania State Medical Society, Sept. 1901.

associated with the general impairment of health and faulty metabolism. His diet was carefully regulated, he was sent to the seashore, where he spent his days in the open air, his eyes being protected with smoked glasses. The bowels were kept free. Iodide of iron and arsenic alternating with syrup of hydriodic acid and bichlorid of mercury were administered internally. Improvement in all conditions rapidly followed, so that in three months the boy returned to school quite his former self. The conditions of the fundus oculi disappeared gradually, leaving only the absorption scars. It is probable that had it been possible to study the mesodermic tissues elsewhere than in the eye-ground under equally favoring conditions, corresponding pathological states would have been discovered. Several months previously this boy had had an attack of scarlatina followed by whooping cough, and later conditions which seem to have been obscure, but were called meningitis by the attending physician. Special attention is directed to the change of refraction in the eyes, which was of such a nature as to be explained only by the actual distention or enlargement of the eyeballs.

CASE 2—M. E., aged 11. A thin girl, tall for her age, was brought to me for weak eyes and headache. The lips were bright red and thick, the lower one falling in a listless way from the upper. The complexion was sallow, she had acne of the forehead. The hair was abundant, straight, dry, and yellowish white. Her movements were listless, she was apathetic in manner. When asked to sit down she sunk sideways into the chair, her hands fell into her lap for support, the shoulders fell forward and she sat a picture of listless apathy. The nostrils were stuffed by boggy turbinates, and to avoid labored breathing through the nose, she kept the mouth partly open. The blue eyes were partly concealed by long, almost white eyelashes and heavy drooping lids. They were unduly sensitive to strong light; the caruncles were swollen and both bulbar and tarsal conjunctiva were injected and the retrolarsal folds were thickened. Vision was reduced to 6/XII. She did not get on well at school and always returned with headache and increased redness of the eyes. She was irritable with her brothers and sisters, bad tempered and subject to alternating moods of exhilaration and depression. Her sleep was disturbed, her appetite precarious. The ophthalmoscope revealed hypermetropic astigmatism in low degree, but both optic nerves were swollen, the margins being obscured. The arteries were probably of normal size, but were inclosed in grey borders. The veins were large and dark. The entire fundus was fluffy, showing areas of pigment absorption in many places, especially marked between the nerve and macula, and in the right eye granular changes in the macula and faint yellowish spots surrounding it. The field of vision for form was concentrically contracted and about equally so in both eyes, the color fields were reversed as in hysteria, the urine had a high sp.gr. with abundance of urates and at times small quantities of albumen at repeated examinations on several successive days. She was under a colleague's care for the nasopharyngeal conditions.

She was taken from school, sent to the country, her diet and general regimen carefully supervised and tonics and alteratives administered. The general conditions slowly improved, the hysterical reversal of the color fields disappeared and the field for form increased, but at no time became normal. This child has been under observation and treatment to the present time, subject to frequent sudden relapses, followed by slow improvement. At twelve years of age, faulty, painful and irregular menstruation supervened, leading to more or less acute exacerbations of the ocular conditions at each period. The hypermetropic astigmatism has given place to myopic astigmatism. The local conditions are of interest because of their obvious association with faulty metabolism.

Remarks:—It will be observed that each of the related cases are characterized by the same group of interesting and important conditions. First—There was present in each impaired general vitality associated with many evidences of faulty metabolism. These conditions were manifested not only by the abnormalities in the urine, but by a group of interesting general and ocular symptoms. Headache, general malaise, precarious appetite, variable

temper. Second—Accompanying these general symptoms was the asthenopia, that is to say, fronto-occipital headache, undue sensitiveness to light, inability to use the eyes with comfort, impaired acuity of vision, injected lid borders and conjunctiva, chronic irritative changes in the fundus oculi passing into pathological change in the retina and choroid, causing impaired nutrition of the globe and a distention of its coats as shown by the increasing refraction. It is of importance to note, however, that in both cases there was at the beginning congenital hypermetropic astigmatism. It is of interest, therefore, to inquire whether, in the absence of this congenital anomaly of vision, and given the existing faulty metabolism, the pathological ocular conditions would have occurred. My own belief is that they would not. On the other hand, I believe that, given the congenital abnormalities in the eyes, the pathological states which caused the distention of the balls, would have been less liable to occur in the absence of the impaired metabolism. Another inquiry, however, must present itself to the ophthalmic surgeon, viz., as to what extent the eye strain at school, with its accompanying headache and other reflex nervous symptoms, may have influenced the general health of these patients. I need not in this presence stop to speak of the potent influence of reflex disturbance over nutrition. It may not be amiss, however, to bring to your attention the unfortunate situation of a growing child subject to the confinement of the school room and the many trials and anxieties incident to school life, when we add to these untoward influences the suffering from hot and painful eyes and fronto-occipital headache consequent upon the eyestrain in overcoming some ocular anomaly. The symptoms more or less constantly present are aggravated by every attempt at reading. Such a child, after attempting in the evening family circle to prepare the lessons for the morrow, will go to bed, fagged, with burning eyes and tired aching head, and is necessarily consigned to a restless, dreamful night, instead of the repose so natural to healthy childhood. That these local conditions, together with the circumstantial environments of its school and home life may lead to impairment of the general health needs no demonstration.

Congenital Smallpox.—Henri Roger reports 11 infants, born while their mothers had smallpox, all of whom had true smallpox at birth. One infant was born the day after his mother contracted the disease. In six cases, labor occurred before the eruption appeared upon the mothers. At birth these children looked healthy, and smallpox was only suspected. But the temperature was subnormal constantly. Three of these infants died before any symptoms of smallpox had appeared, having shown low temperature and jaundice only. In another case erythema appeared just before death. In three cases the eruption became pustular as in adults. At the autopsies, degeneration of the liver and kidneys, with hemorrhages, was found in all cases. One case only recovered, whose mother had been vaccinated when seven months pregnant. Death occurs in the low temperature stage, or the eruption appears with fever, and death occurs later. The eruption generally is papular and discrete, and but few pustules are ever seen. Syncope is the cause of death usually. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, 1901, No. 12). [M. O.]

ADDRESS IN OBSTETRICS.*

By DAVID S. FUNK, M. D.,
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Mr. President and members of the Medical Society of Pennsylvania.

There can be no question that the dawn of the new century finds the expectant mother surrounded with much less of real peril than ever before in the history of medicine. The almost total banishment of puerperal sepsis from the maternity ward and the lying-in chamber; a more perfect knowledge of the anatomical relations existing between mother and child; increased manipulative skill in the management of mal-positions and mal-presentations with reference to these relations; a further perfection of mechanical appliances and a complete mastery in their use; the immediate repair of injury to the soft parts; a keen appreciation of the conditions underlying the state of pregnancy from its inception to its completion; the recognized value of prompt surgical interference in complications hitherto deemed unsurgical in their character; a clearer conception on the part of the profession at large as to what constitutes meddlesome midwifery; have each and all been instrumental in placing the science and art of obstetrics fully abreast with the most advanced thought in other departments of medicine. If other evidence were wanting than that afforded by recent standard authorities on this subject, a glance at the work done and the character of the contributions which have appeared in our representative medical journals at regular intervals throughout the year should be sufficiently convincing. Scarcely a subject but has been dwelt upon with more or less elaboration and detail. From the vomiting of pregnancy and the puerperal state to cesarean section and symphyseotomy, many of these articles bespeak most careful observation and patient and conscientious work in their preparation. At this time, however, it shall be the purpose of the writer to present very briefly the present status of several of the more serious obstetrical complications and operative procedures.

Placenta Previa.—From the standpoint of the general practitioner it is more than likely that placenta previa, with its maternal mortality of 25 to 40 per cent. and its fetal mortality of 50 to 80 per cent., will continue to remain for some time to come one of the most disquieting and alarming of obstetrical complications; and this for two reasons: First, because there can be no prophylaxis; second, because of the appalling rapidity with which it frequently destroys life. That it is not a frequent complication is evidenced by the fact that there was not a single case of placenta previa in the first 1,600 cases in the New York Emergency Hospital. It must be conceded, however, that the actual occurrence of this complication is somewhat more frequent than this record would indicate, and from statistics at hand it would appear that one case in every 800 or 1,000 cases would be more nearly correct. In keeping with these statistics the writer may be pardoned a personal allusion when he says,

that in an experience of over twenty years as a general practitioner, he has yet to meet with his first case of placenta previa in his own practice. The inference is, therefore, that it is not possible for the average general practitioner, aside from hospital practice, to develop any special skill in the management of these cases, from the element of experience. This can scarcely be said of any other complication in labor. It becomes at once apparent, therefore, how it happens that the personal equation of the attendant assumes so important a roll in the ultimate outcome of these cases. Lusk evidently had this thought in mind, when he said that "a self-poised, cool, resolute man, with clear ideas of anatomical conditions to be dealt with, would, if summoned in time, deprive even placenta previa of much of its terrors." While it is undoubtedly true that the management of placenta previa in the hands of experts has shown a steadily decreasing maternal mortality, it must be admitted that not much real progress has been made in the last three hundred years; for then as now the conditions attending it were clearly recognized, and the treatment in vogue, the early emptying of the uterus. As to when and how this shall be done are still debatable questions. Debatable for the reason that, even in the best surroundings and in the most skilful hands, the results, when the lives of both mother and child are taken into account, are not entirely satisfactory. In the hands of the general practitioner they must of necessity be far less so. Under these circumstances the maternal mortality becomes much greater under any of the former classical methods of procedure; the infant mortality being as high as 80 per cent. As to the time for emptying the uterus, it is insisted upon that it shall be done just as soon as the diagnosis shall have been made. This does not, of course, contemplate any consideration for the life of the child. It is this fact especially which has prompted observers, in this field to elaborate some method of procedure which would be attended with less risk to the child without further endangering the life of the mother. The popular method, both in this country and in England, viz., manual dilatation with version, it is claimed does not always meet this indication, and in its stead cesarean section is proposed as an operation of election, in cases, first, of complete previa; second, cases of previa in primipara when signs of fetal or maternal exhaustion are evident; third, when the condition of rigid os is present; fourth, when there is a history of previous operative delivery; fifth, in transverse positions and cases of prolapsed cord, when the cord is not easily returned.

The objections most recently urged against manual dilatation with version, exclusive of the high infant mortality, are, first, that it is frequently very difficult to do and does not arrest hemorrhage; second, the fetus is always shocked from loss of blood from the placenta and from manipulation of the cord; third, the aftercoming head must frequently be perforated.

Symphyseotomy.—Symphyseotomy, as an operation of election, while still very popular in France with a few operators, would appear to be gradually displaced by Cesarean section in this country in

* Read at the meeting of the Pennsylvania State Medical Society, Philadelphia, Sept. 1901.

those cases in which the disproportion between the child and pelvic outlet is of such character as to render a high forceps operation impossible or dangerous.

The ground is taken that the mortality of Cesarean section is less than 5 per cent. in uninfected cases and in the hands of competent operators, while the most enthusiastic advocates of symphyseotomy show a corrected mortality of six and seven-tenths per cent. In addition to this the advocates of cesarean section call attention to the comparatively brief convalescence after this measure as compared with symphyseotomy. Patients can walk after three weeks in cases of cesarean section, whereas in symphyseotomy four times as long a period is required. Fetal mortality in Cesarean section is almost nil, while in symphyseotomy it is anywhere from 9.5 to 13 per cent. Furthermore, it is urged that it is frequently impossible to determine sufficiently accurately the size of the fetal head and that even after doing a symphyseotomy it occasionally becomes necessary to do an embryotomy before delivery can be effected. The great danger to the urethra is also emphasized when there is too great a separation of the symphysis. Those who favor symphyseotomy in this country would seem to argue along two lines only: First, the operation can be performed when the condition of the patient would preclude the possibility of a more radical operation; second, symphyseotomy can be successfully done at the patient's own home and by her own attendant, the only instruments required being an obstetrical forceps and an ordinary tenotomy knife. A directly opposite view is taken by those who favor Cesarean section. These insist that neither of these operations should be attempted by anyone, who has not had considerable experience in major surgical procedures.

The weight of evidence would appear to be in favor of Cesarean section as an operation of election, and that before any prolonged attempt has been made to deliver with instruments, with the possible result of serious injury to both mother and child; but when this has occurred and there exists the possibility of infection, symphyseotomy would seem to afford the better prognosis. In the matter of the performance of the operation of symphyseotomy, the subcutaneous method is preferred, the symphysis to be brought firmly together and held in apposition by silver wire sutures. The danger from infection and the necrosis from this source is held to be extremely small when done under strictly aseptic conditions.

Puerperal Septicemia.—In the matter of prophylaxis there has appeared nothing new within the year. The well established principles governing complete asepsis are still rigidly insisted upon. The surgical cleanliness of the attendant's hands, arms and instruments and of the patient's external genitalia are matters of first importance. The antepartum and post-partum douche, as a matter of routine in normal labor, has been demonstrated to be an ineffective, unscientific and sometimes a dangerous procedure. In cases of manual delivery of the placenta or any other complication requiring the introduction of the hand within the uterine cavity,

douching of the vagina with a weak, hot bichloride solution, followed by an intrauterine douche of hot normal saline solution, is advocated by some excellent authorities, as a routine prophylactic measure. In France, and more especially in Paris, hypodermic injections of anti-streptococcic and anti-staphylococcic serum are regularly used as a matter of routine in prophylaxis, in those cases in which the membranes are ruptured when the patient enters the hospital. In this connection it must be observed that prophylaxis in private practice is evidently not as efficient as that in the hospital. It is readily recalled that prior to the introduction of antiseptic methods, the death rate from puerperal septicemia in hospital practice was truly appalling. Now it is almost nil, while that in private practice is yet quite appreciable. This will admit, of course, of but one explanation—a lack of detail and thoroughness in methods and means of securing asepsis on the part of the general practitioner in some instances and of its total disregard on the part of the ignorant and untrained midwife in all instances.

The observation of the writer would lead him to infer that the average general practitioner is sometimes prone to do hurriedly and superficially that which should be done thoroughly and deliberately in matters pertaining to asepsis. As to the uneducated midwife, it is truly unfortunate that so many unsuspecting women, especially in our larger centres of population, should be subjected to the contaminating touch of these carriers of infection; but existing social conditions would seem to indicate that it is nearly impossible to eliminate this element of danger, and that in all probability it will continue to flourish for some time to come.

Treatment.—All treatment has for its object the immediate destruction of micro-organisms of an infectious character already present within the vagina and uterine cavity, and the arrest of their further development on any of these surfaces. To this end a variety of measures are in vogue, in none of which, however, does repeated curetting or intrauterine douching with powerful germicidal agents have any longer a place. Some observers insist that it is unscientific to institute any form of treatment until a bacteriological examination of the vaginal discharge shall have been made, and contend that the time consumed (twenty-four hours) is more than offset by the information gained. Others again, whose results are invariably just as good, take an entirely different view and are of the opinion that the time consumed in making the culture would be much more profitably spent in combating the disease. These would treat every case as one of true septicemia, and if sapremia only, a cure is promptly effected. Disinfection of the vagina, exploration of the uterine cavity for remnants of placenta and decidua, and their prompt removal when present, douching of the intrauterine cavity with normal saline solution at a temperature of 110 degrees or 112 degrees, or with boric acid solution, or one-quarter per cent. formalin solution, packing with iodoform gauze, the introduction of iodoform pencils, the introduction of two large-sized catheters within the uterine cavity and left *in situ*, through which to

irrigate and drain, or a combination of some of these measures would seem to be the line of treatment to be followed at present. These measures failing, the opening of Douglas's cul de sac and drainage with iodoform gauze according to Pryor, of New York, is advocated. If the invasion of staphylococci or streptococci becomes systemic, recent contributors are agreed that hysterectomy can promise but scant relief, and in the minds of some is a questionable procedure in any case.

It has been observed that in some cases of true septicemia the intravenous injection of normal salt solution has a most pronounced and beneficial effect. Serum therapy, while extensively used in France, has been demonstrated to be entirely valueless in mixed infection and may be said to be still in the experimental stage.

Ectopic Gestation.—The consensus of opinion, as gleaned from the published statements of numerous observers throughout the year, would unquestionably indicate that ectopic gestation is a complication of much more frequent occurrence than was formerly supposed. And when, in addition to this, it is equally true that in the vast majority of instances, these patients first come under the observation of the general practitioner, it is at once apparent how essential it is that he draw the line sharply between a passing functional disturbance and a condition of such magnitude as may ultimately, and frequently quite suddenly, destroy the life of his patient. As one writer tersely puts it, "the general practitioner must be on the lookout for it," otherwise he will most likely overlook it at a stage when prompt surgical intervention would be in itself practically devoid of danger and would cure his patient, while a little later it would not only be extremely hazardous, but sometimes absolutely useless as well. The responsibility of the general practitioner becomes all the more pronounced in view of the fact that it is conceded that in the majority of instances ectopic gestation is attended with a fairly uniform symptomatology. It is to be observed, however, that while this is doubtless true in the main, it frequently happens that the patient herself has no suspicion that there is anything seriously wrong beyond the fact that she may be normally pregnant; and therefore fails to seek advice until suddenly some alarming symptom, as excruciating pain or excessive bleeding, arises. And, again, even when the symptoms are of a character which prompt her to obtain medical advice, the differential diagnosis between ectopic gestation and some other pelvic disorders is attended with the greatest difficulty, and, as above stated, unless the physician be on the lookout for this, he may, even after a physical examination, be led into the false position of a diagnosis of normal pregnancy. This is more particularly likely to occur in those cases in which a normal pregnancy is coexistent with an ectopic gestation. From the standpoint of the general practitioner, it is not necessarily essential that a positive diagnosis be made in many of these cases, nor, indeed, can there be, but from the character of the literature already available, it would seem that the time is fully past that would excuse him in

mistaking the symptomatology of this condition for colic, dysmenorrhea or ovarian congestion.

Diagnosis.—In this connection the points especially emphasized, are a previous history of sterility, a sudden cessation of a previously regular menstrual history, irregular but not excessive uterine bleeding, sharp colicky pains occurring at rather frequent but irregular intervals, and in not a few instances nausea and vomiting such as occur in normal pregnancy; with every such history it is insisted upon that a bimanual examination should at once be made, an anesthetic being used when necessary. The points here emphasized by every observer are the presence of a slightly enlarged uterus, a soft cervix, and the presence of a tender, more or less globular mass to the right or left of the uterus well up in the pelvic cavity. A pyo-salpinx or a tubo-ovarian abscess are the two pathological conditions with which ectopic gestation is most likely to be confounded.

Puerperal Eclampsia.—It is entirely safe to say that no purely obstetrical subject has been accorded more attention during the year than the symptom-complex, known as eclampsia. As to its etiology, writers are agreed upon a single point only, viz., toxemia. Beyond this there would appear to be considerable difference of opinion. If we are to be guided by the judgment of some, we should infer that the specific cause of eclampsia has been unquestionably isolated, and that any further search in this direction would only be a waste of time and energy. To such belong those who declare positively and unequivocally that urea or one of its synthetic compounds is the one great and primal cause of eclampsia. These observers declare that the teaching that the uremic state is always associated with casts and albumen is not only all wrong but positively dangerous as well. They assert that even in the presence of edema and headache, if no albumen be found, it frequently happens that the attendant pronounces his patient safe and free from peril. They contend, furthermore, that the toxemia of pregnancy, the pre-eclamptic state and eclampsia, are always associated with kidney inadequacy in so far as the absolute diminution of excreted solid elements is concerned; and that conversely, a return to the normal of the solid elements, especially urea or its congener nitrogen, is almost always curative of the toxemia of pregnancy, the pre-eclamptic state and eclampsia; and moreover that a due regard on the part of the medical attendant for the amount of urea excreted will be attended in almost every case with what would otherwise be the true eclamptic state. The reasoning of these observers would appear logical, convincing and conclusive, and yet, immediately in the wake of such reasoning, we are reminded by other investigators, within the last two months, that the urea theory of eclampsia has been entirely exploded, and that beyond the fact that eclampsia is consequent upon a toxin in the circulation as the outcome of the state of pregnancy, nothing is or can be definitely known, at this stage of investigation, and they contend that in all probability the liver, skin and intestinal canal in many instances play an important part in the production of the toxin. To the

personal knowledge of the writer, but a solitary observer has felt sufficiently sure of his ground to announce that the cause of eclampsia is clearly demonstrable on the post mortem table; and is equally positive as to the source of the toxin and considers it to be threefold; first, the placenta; second, the fetus; third, the alimentary canal. He maintains with others that the pre-eclamptic stage is caused by the presence of toxins in the circulation; the essential lesion of which consists of minute capillary thrombi with hemorrhagic infections, surrounded by tissue necrosis. This lesion is demonstrated to be of the same character in the brain, liver, kidneys, lungs and spleen, and that the toxins produce the coagulation of the blood and the thrombi, and when this occurs, eclampsia supervenes. While this view of the pathology of eclampsia may be fairly constant, it might be just as logical to conclude that the lesion described was consequent upon the eclampsia rather than that the eclampsia was consequent upon the lesion. Beside from the toxemia it is generally conceded that loss of sleep, depressing mental emotion, an irritable uterus and an excitable nervous system may be either individually, or collectively, contributing factors in the production of eclampsia. The contagiousness of eclampsia has been mentioned by one authority only, who considers it a self-limiting infectious disease—contagion being air-borne and affecting women in the puerperium only. In the matter of prophylaxis, we find much more unanimity of opinion, and the high ground is taken that eclampsia is largely a preventable complication, even more so than puerperal sepsis; and that prophylaxis presupposes the intelligent supervision of the patient from the earlier months of pregnancy, with a special reference to sanitation, food, etc.

Treatment.—The pre-eclamptic state, as evidenced by scanty urine, dizziness, headache and epigastric pain, is to be met by milk diet, cathartics and diuretics and the ingestion of large quantities of fluids. In the matter of treatment of the attack, venesection is less extensively practiced than formerly and is esteemed of especial value in the plethoric cases only. The same may be said of veratrum viride, which has been so greatly extolled by those who were disposed to regard it almost in the light of a specific. Morphia and chloroform are both highly commended and, singularly enough, each is condemned in the most outspoken way by the advocates of the other: chloroform, because of its interference with the already greatly embarrassed respiration; morphia, because it paralyzes all the emunctories, except possibly the skin. Notwithstanding these objections to these agents, it must be conceded that in each of them we have a most valuable and powerful weapon for the control of the convulsion. Hypodermoclysis, enteroclysis and direct intravenous infusion are uniformly commended and advised, and can be used in conjunction with any of the other therapeutic measures, and, when time is afforded, should be used in every case of eclampsia. If the patient be at the term a full hot bath is esteemed serviceable in favoring uterine dilatation and as sedative to the greatly excited nervous state. Rapid dilatation, even by

incision, according to Dührson, has still some advocates but would appear to be rarely practiced, and is being displaced by Cesarean section, as affording more real safety to both mother and child in cases in which emptying the uterus becomes immediately imperative. Sodium bromide and chloral hydrate in large doses per rectum, in conjunction with morphia and chloroform, are still in favor and are extensively used at home and abroad. Serum therapy of eclampsia is regarded as a problem of the future.

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The Treatment of Epithelioma with Arsenic in Ethyl Alcohol.—S. Czerny (*Gazeta lekarska*, April 21, 1901; *Vratch*, Vol. XXII, No. 19) recommended in 1897 the application of alcoholic solution of arsenic to cancers of superficial parts of the body, such as the nose, lips, ear, tongue, breasts, etc. Since then he employed this method in a large number of cases with excellent results. The solution is made up by adding 1 grm. of powdered arsenic to 100 c.c. of 50% alcohol. The applications are made daily. After the first application the patient experiences a slight pain which may be relieved by a 10% solution of cocaine or orthoform. On the following day a dry scab forms which gradually extends and finally drops off. The affected tissue is turned black by arsenic while the healthy structures are covered by a yellowish crust, thus offering means of differentiation. Small ulcers may be entirely cured in 2 to 4 weeks [A. R.]

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The Official Report of President McKinley's Case.

—The final report by the medical staff attending the late President leaves no hiatus. A study of the brief but very clear notes on all the details of the case from the beginning to the end gives a perfect retrospect, and no one can find grounds upon which to base ex post facto objections. A clinical retrospect may often furnish most convincing evidence of errors in judgment in the conduct of a case, but with the surgeons' and pathologists' reports before us we are unable to see how the President could have been more scientifically treated.

From the moment he was taken in charge by the ambulance surgeon until the fatal termination one week later the best surgical judgment was shown. That the sanguine anticipations of the attending staff were not justified is now self-evident, but in view of the favorable clinical notes, with the one exception of the pulse rate, which continued until the hour of the sudden change for the worse, a favorable prognosis was justified. No time was lost in beginning the operation. The assassin's bullet was fired at 4.07 in the afternoon. At 4.18 the distinguished patient was placed upon the operating table and undressed. The President's wounds were inspected by Dr. Mynter at 4.45 who at once recognized the urgent necessity for operation, and upon the arrival of Dr. Mann, who was chosen to do the operation, the administration of the anesthetic was begun. The operation was commenced at 5.29 and the seats of injury in the stomach walls were expeditiously located. With the exception of the deficient illumination and the difficulties incident to the lack of abdominal retractors, the operation was conducted without complications and with the greatest celerity and precision. The only point which furnished ground for possible criticism was the closure of the wound without drainage. Without question the great majority of surgeons are in full accord with the course pursued by Dr. Mann, for, as stated by him at the time of the operation, and concurred in by his associates with one exception, drainage appeared to be unnecessary. Again, the results of the autopsy

would appear to justify this decision, for notwithstanding there were a few spoonfuls of greenish, gray, thick fluid beneath the mesocolon, the most efficient drain would probably not have reached this spot. In the final criticism of the operation we, therefore, are in entire concurrence with the great majority of European and American surgeons in giving to Dr. Mann and his associates unquestioned credit for the skilful way in which the operation was conducted. This endorsement is fully justified by the autopsy notes, for they reveal nothing which in any way casts reflection upon the surgical treatment of the case.

As to the conduct of the autopsy, criticism might be offered were it not that the pathologists were forced to curtail a fully detailed examination. The failure to locate the bullet was of little moment, but a careful microscopic examination of all organs and involved tissues might have thrown light upon some of the questions which now must remain dark. The notes bearing upon the macroscopic changes in the pancreas appear to be of vital importance. While our knowledge of surgical diseases and injuries to the pancreas is very deficient, we nevertheless know that in certain acute infections there are symptoms of great depression characterized by rapidity of the pulse and rapidly increasing lethal symptoms. The slight traumatism of the kidney was of little importance in the case. It would appear possible that the impaired condition of the kidneys, as demonstrated by the urinary examination and pathological report, taken in conjunction with a greatly weakened heart, rendered the President especially vulnerable to a terminal toxemia. Such toxemias are usually of bacterial origin, but as the bacteriological report fails to demonstrate any serious infection we are forced to fall back upon the theory that the toxic products incident to the necrosis of the pancreas and surrounding tissues through their absorption, may have been sufficient to have contributed to the fatal termination.

This, however, is a matter of speculation, for we have no well defined basis for this theory. That the final symptoms were not due to the usual complications of abdominal section is certain. It is to

be hoped that carefully conducted experiments bearing upon the surgical lesions of the pancreas will be carried out.

Gastric Wounds and Septic Gangrene.—An esteemed contributor has suggested in an interesting letter that, if the contused and locally shocked tissue immediately surrounding the gastric wounds had been cut out before the sutures were applied, the President might have recovered, even though gangrene of the tissues back of the stomach subsequently occurred; because the latter condition might have been relieved by a later operation and drainage.

The answer by abdominal operators to this query would be, that in wounds of the stomach and intestines the edges are never applied to each other, as in the wounds of the skin, but are turned inwards towards the cavity of the viscus by some form of suture like that of Lembert. This method causes the external or serous surfaces to come together, gives rapid adhesions, and inverts the damaged tissue, at the margin of the wound, into the stomach or bowel, where it does no damage.

An additional reply, however, may be found in the official report of the President's case, published last Saturday in this journal. This says: "The original injuries to the stomach-wall had been repaired by suture, and this repair seems to have been effective. The stitches were in place, and the openings in the stomach-wall were effectively closed." The gangrene surrounding the wounds is seemingly attributed to lowered vitality. The report also shows that death did not come from these comparatively small gangrenous spots in the gastric wall, but from the larger areas of gangrene behind the stomach and about the pancreas and upper end of the kidney.

In the editorial on "Traumatic Surgery of the Upper Abdomen," published two weeks ago, a statement was made that the President's death was probably due to septic gangrene, due to the missile. This was written without any accurate knowledge of the results of the autopsy. The official report, now given to the public, says that a conclusion is warranted that bacterial infection was *not* a factor in the production of the conditions found at the autopsy.

This statement deserves great respect, because of its eminent authorship and its truly scientific wording. Does it not seem possible, nevertheless, that the gangrene *did* occur as a result of bacterial contamination from gastric contents liberated by the bullet or from the bullet itself? The necrotic part of the posterior wall of the stomach lay in contact with the surface of the meso-colon; the portion of meso-colon "coming directly in contact with the wound in the gastric wall being of a dull gray color."

This looks like secondary infection by contact. Beyond the wound in the back of the stomach was a gangrenous track evidently indicating the course of the bullet. It is stated that here "very few micro-organisms were found in the fresh state." This seems to mean that the tissues and fluids were not entirely sterile. In the necrotic cavity a short, stumpy bacterium was found which, it is true, may have been due to a suggested technical imperfection in making the cultures.

These points would probably lead the ordinary clinical observer to attribute the death of the patient to septic gangrene. He would, however, not fail to realize that the necrosis might have arisen from injury to deep blood vessels, caused by the undiscovered bullet, and to imperfect blood supply in the stomach walls, due to the necessary operative detachment of the omentum. He would also lay proper stress on the fact that defective tissue resistance in a patient with unsound kidneys and a fatty heart renders disastrous results more likely from a moderately virulent micro-organism or a moderate disturbance of circulation.

The Report of the Autopsy in the President's Case.—In our issue of October 19, 1901, there appeared the report of the case of President McKinley contributed by his attending physicians. This report was awaited with great interest by the profession, and indicates what has been remarked a number of times, that much of the criticism and comment made upon the conduct of the case might have been deferred with much better taste until the facts were laid before the profession as has now been done. The condition of the President's heart, as shown by both the macroscopic and the microscopic examination, indicates clearly, as was pointed out in our previous editorials dealing with this possibility, that the condition of this organ had a most important bearing upon the fatal outcome. The report of Dr. Gaylord mentions particularly the extensive brown atrophy and the diffuse fatty degeneration of the muscle, and calls attention to the extent to which the pericardial fat had invaded the atrophic muscle fibres of the wall of the right ventricle. Dr. Gaylord remarks that this pathological condition explains, in part at least, the rapid pulse and the lack of response of this organ to the stimulants which were administered. The necrotic condition of the pancreas was a factor of uncertain power in the possible fatal termination. We are not in possession of sufficient facts to decide the precise amount of necrosis of this organ which is necessary to induce death.

On the superior aspect of the left kidney there was found a protrusion of the cortex, dark red in color,

and in this protrusion there was a laceration 2 cm. long, extending across the superior border, approximately at right angle with the periphery of the kidney, and from before backward. Dr. Gaylord gives it as his opinion that the wound of the kidney was of slight importance, save that it indicated the direction taken by the bullet.

The Bacteriological Report.—Dr. Matzinger, who conducted the bacteriological examination, succeeded in isolating from a culture, taken from the base of the abdominal wound, and from dressings received at the same time, ordinary pyogenic organisms and a gas-forming bacillus which as yet has not been fully identified. Until this identification is complete, speculation upon its possible pathogenic character appears useless.

The Cause of President McKinley's Death.—We have never altogether shared the opinion of those who professed to see an unsolved mystery in President McKinley's death, and since we have read Dr. Gaylord's report of the autopsy we are still less inclined to see any ground for mystification in that sad event. In our judgment the immediate cause of death was a degenerated heart muscle. The clinical progress of the case pointed to that condition, and the autopsy confirms it. We have pointed out from the first in these columns that the President suffered from the effect of shock—shock caused not only by the assault but especially by the operation. This was inevitable. It would have been so in the hands of any surgeon. The patient, as shown in the report, went on the operating table with a pulse of 84 and left it with a pulse of 124. His pulse never really rallied after the operation; it never, according to the bulletins, regained anything like a satisfactory tone. This was evidently because there was back of it a heart muscle which was undergoing fatty and granular degeneration. This is by no means the first case in abdominal surgery, in which such a heart has baffled the best skill.

The devitalization of wounded tissue under such circumstances is not a cause for wonder. Such tissue requires the best sort of blood supply for its repair: it cannot secure it from a debilitated and deteriorated heart muscle. Surgeons are more particular to ascertain the state of the kidneys than they are of the heart, and even in the case of the heart, the absence of a valvular lesion is supposed to be a guarantee of safety. This dictum is erroneous. The most serious affection of the heart in advancing years is a sclerosis of the coronary arteries and a degeneration of the muscle. These President McKinley evidently had.

The Case of the Assassin.—It is probable that before this number of the journal reaches all its

readers, the assassin of President McKinley will have paid the penalty for his foul crime. The case of Czolgosz is of distinct historic interest, and has a medico-legal importance perhaps greater than may at first sight appear to close contemporary observers. As the case recedes into the past the trial may assume unexpected proportions as a precedent in medical jurisprudence. Whether this will be for good or for evil, remains for the future to discover.

In recognition of the unique importance of the case we have taken pains to present, in these pages, some of the most authoritative opinions that are to be obtained in this country. Mr. Graham, the former District Attorney of Philadelphia, had, while in office, an extensive experience with criminal cases in which the defence of insanity was offered. He always conducted such cases for the Commonwealth with an earnestness of conviction and a force of eloquence that won the approval of the general public and the recognition even of those whom he opposed and who opposed him. His opinion, which we published last week, was of special interest from the fact that it referred to the one particular point on which there has been some tendency to criticize the conduct of the trial. This was the omission to submit any evidence whatever as to the prisoner's mental state. It has seemed to some critics that the record of the case would have been more complete, if the experts who examined the prisoner had been put upon the stand and submitted to cross-examination, even though their testimony had been entirely favorable to the prisoner's sanity. Mr. Graham shows, however, that the law presumes the sanity, just as it presumes the innocence, of the accused until the contrary is shown, and consequently that the burden of proof is on the defence, in the one instance, just as it is on the prosecution, in the other.

This is evidently one of those technical questions on which opinion is somewhat colored by the point of view. From the legal standpoint it is incontestable that Mr. Graham is correct, and from this standpoint the case at present is largely being judged. From the medical standpoint, the tendency of opinion seems to be that an exception to this rule might have been beneficial because of the magnitude and significance of the case. Of the prisoner's absolute sanity there has never been any apparent ground for doubt. As Dr. Dercum happily expressed it, the case belongs not to the psychiatry but to the psychology of crime. The papers which we publish this week, by Dr. Spitzka and Dr. Mills, are largely historical in scope and interest.

Honoring Virchow and Ourselves.—The Virchow dinner, held last week in New York was an affair far more significant than appears upon the surface.

Three things in this world secure the plaudits of the multitude: power and its companion, patronage; the ability to amuse, and an altruistic search for truth without hope for other reward than the recognition of having at least added a trifle to the slender but treasured common stock. What power Virchow possesses has come to him long after his work as a discoverer had been carried to such a point of perfection, that the mechanics of discovery (if we may so term the noisy workers who are capable, perhaps, of carrying an idea to a higher state of development than its originator, but utterly incapable of originating it themselves) were busily engaged in cutting sections, inventing stains and suggesting additions to, and modifications of cellular pathology in every medical centre of the world. What ability to amuse and interest us he has, is only that inherent to every sturdy and independent character; for neither society nor government has been able to make him recall or modify a single belief in either politics or science. What he has done for knowledge is that which only one can do who is gifted with the power to perceive order and design where others see only a hopelessly entangled maze. Without greed or self-seeking, anxious only for truth, eager to spread it as far afield as possible, Virchow has lived beyond the allotted span of life, true to himself, and as surely as night doth follow day, never false to his fellows. And hence it is that in another half of the world, as well as in his own, men have assembled to do honor to him, who all in all has been a man. Alas! we sadly need his like again.

Still More Plague.—The *Occidental Medical Times*, in a recent editorial, which we quote elsewhere, announces that the situation in San Francisco is "full of peril." Although the State Board of Health of California "has strenuously denied that there has been any plague in California, seven more cases have occurred;" this has been since August 31. The rainy season is on, and several thousand Chinamen are returning from the grain fields, orchards and canneries; hence the danger. The *Occidental Medical Times* declares in good round English that the State Board "stultifies itself by its false declarations."

It is satisfactory, if hard language must be used in this connection, to have the *Occidental Medical Times* use it. We remember to have drawn down on our devoted head last spring the maledictions of this good contemporary for having failed properly to distinguish who did the lying about the plague in California. By the aid of our friends (and possibly of some of our enemies) in that State, we have been enabled to fasten our contumely upon the State Board of Health. But as the Board is a political body, it will probably not care any more for our

contumely than it does for the plague. In the meantime it is just possible that the plague (which a delegation of San Francisco citizens came to Washington last spring to ignore) will keep right on. We are glad to note, however, that Dr. Ryfkogel and some other reliable men are at work on the subject.

Transplantation of the Ureters.—The interesting paper by Dr. A. Lapthorn Smith, of Montreal, on "Ureteral Transplantation," which appeared in last week's issue of this journal, touches upon one of the more recent advances made in abdominal and pelvic surgery. This operation is a rare one. In all surgical literature there are but ten such cases reported. Of these Dr. Smith's patient is the only one reported from Canada, while Penrose, Baldy and Fullerton have each performed the operation once in this city, following the method first suggested by Van Hook.

Kelly, of Baltimore, and Krug and Boldt, of New York, are the only other operators on this side of the water, who have been called upon to perform ureteral transplantation. This gives to American surgeons a total of seven out of the entire number (ten) of patients who have been operated upon, an excellent showing, and one that adds another star to the splendid record of American surgery.

The *Interstate Medical Journal*, of St. Louis, comes to us in its October number in improved form. Dr. O. F. Ball, the managing editor, has associated with him a staff of thirteen assistants, who are well qualified for bringing and keeping this publication well up to the required standard of first class medical journalism. We congratulate the journal and its subscribers.

Current Comment.

VIRCHOW.

While engaged in scientific researches, which in universality, novelty and reforming power, are surpassed or equalled by none that are immortalized in the history of medicine, Virchow never ceased to feel that he did not only belong to theoretical and practical science, but to his people; and moreover, while his theoretical work has always a practical bearing and result, so his political and social views have a practical tendency.

He was born one of the people, and remained a friend of the people. He need not turn politician, he was and is politician born. We in this our country are in frequent danger of forgetting that at one time at least, the most intelligent, wise and pure men of this nation were our foremost politicians. Without the controlling sympathy of the very best, the Constitution of the United States would not have seen the light. We have since descended sometimes, aye many times, to the fear that only a second-rate intellect and a third-rate morality make a successful and zealous politician, losing sight of the fact that Aristotle already defined man as a "political being" and insisted upon the labor of all in the interest of all.

Virchow's example should teach, particularly young

medical men, that thorough science and good citizenship do not exclude each other. Indeed there is nobody so removed from the midst of his fellows, so absorbed in abstract studies, that has no interests in common with the rest of mankind. To prove your sympathy, what you have to spend in time, in activity, in money, should be given to the cause of the people, in the town and in the country, and particularly in critical periods of our history, like that of to-day.—*Dr. A. Jacobi's address on Virchow.*

MORE PLAGUE.

Although the State Board of Health of California has strenuously denied that there has been any plague in California, seven more cases have occurred. Recently the State Board has ordered the local Board to raise its quarantine, which the latter has positively refused to do, thus, we hope, bringing the question of plague to a settlement in the courts. We believe, however, that the State Board will not force the issue.

As no measures of inspection, disinfection, or quarantine, except the tentative ones of the local Board, are being taken, our city and state are at the mercy of a possible epidemic. The local Board is and has always been severely handicapped by its financial condition, and the State Board yet stultifies itself by its false declarations. There is but one remedy, and we hope that will never come, though circumstances are propitious. The rainy season is on, and several thousand Chinamen are returning from the grain fields, orchards, and canneries. If history repeats itself, our position is full of peril. These eight cases, occurring early in the rainy season and having been found when determined efforts are being made to conceal them, and when no inspection is being carried on, and after the place has been cleaned and disinfected by the State Board under the supervision of the Marine Hospital service, does not render the situation in any degree inspiring.—*Occidental Medical Times.*

THE CASE WELL STATED.

We know that whenever a bullet passes through the living body it leaves a track of contusion, more or less well marked, according to the size or velocity of the projectile and the nature of the tissue which it traverses. If the patient survives the immediate injury, and recovery is a physiological possibility, the contused tissue undergoes one of two processes: If the bruise is not too severe and the patient's circulation is active, the tissue recovers. If not, it undergoes putrefaction or necrobiosis. Naturally, what in one patient with a good heart action and active vital processes would be a practically harmless contusion, in another with a weak and thin-walled organ would be exactly the opposite.

It is therefore not unreasonable to suppose that the necrosis tissue in the case of the President represented originally the contused tissue into which the enfeebled heart was unable to force the blood current so as to overcome the stagnation. This condition of affairs, associated with the feeble heart, again would explain the rapid pulse which was such a marked and ominous feature of the case, and which so sadly and effectually set at naught the optimistic predictions of some of the medical attendants.

The Medical Record.

WE ASTONISHED THE WORLD.

The Philadelphia Medical Journal, in an able review of the late President's case, incidentally states the effects of tobacco in language that is simply appalling to the lay mind. It says:

.. "The effect of tobacco is to cause nervous overaction, which will in time lead to a hypertrophic condition of the heart, owing to the extra work it throws on the organ. This hypertrophy in time naturally underwent changes of fatty infiltration and degeneration, and consequently dilatation. These may be accounted for by the increased obesity of the distinguished patient and the condition of arteriosclerosis, to be expected in a man of his years, and affecting to some extent the coronary arteries.

The effect of the long-continued general anesthesia is not to be overlooked. It has been shown quite conclusively that blood inspissation, a condition of anhydremia, is

present after etherization. The hemoglobin is reduced and a general hemolysis of varying degree occurs."

The average reader may not be able to mentally digest all this, but in a general way he will gather from it that tobacco is not a nerve food. Incidentally he will learn that doctors have a language of their own, well suited to express without explaining the "mysteries of medicine."

New York World.

INTERNATIONAL PREVENTION OF TUBERCULOSIS.

In an article in which he discusses the various means employed in European countries to check the spread of tubercle, Dr. S. Bernheim pleads strongly for an international prophylaxis. He points out that although tubercle differs in some points from cholera, yellow fever, and plague, it is nevertheless as important to combat it in the same international manner. Its bacillus is full of vitality, and is often carried across frontiers, and from country to country, in railway trains and ships. No isolated effort by any one nation can, therefore, hope to be successful. Bernheim recommends that the prophylaxis of tuberculosis be made the subject of international sanitary legislation, which could be fixed at some conference in the same way as the measures taken against cholera and the plague were decided upon. He specially refers to the good effects obtained by the tuberculin test in cases of bovine tuberculosis as carried out by Bang in Denmark: in certain parts of that country since the tuberculin test was adopted the percentage of animals that gave the reaction had fallen from 9 per cent. to 4.7 per cent. and even lower.—*British Medical Journal.*

Reviews.

Photographic Atlas of Diseases of the Skin. By George Henry Fox, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, etc. J. B. Lippincott Company, Publishers. Philadelphia and London. Parts I, II and III.

The admirable skill displayed by Dr. Fox in the photographing of cases of diseases of the skin, and his judgment in the selection of cases, are now too well known to the medical profession to need special comment. The first atlas was widely accepted. The excellence of his larger work more recently published and especially adapted for class teaching has been of advantage to his dermatological confrères. The present atlas is the physician's edition of the latter, the plates being smaller or quarto in size, but produced in the same excellent manner. The selections are good, and the coloring, upon the whole, satisfactory, and if the subsequent parts are kept up to the standard of the first three, now before us, the profession will have at its disposal another atlas of these diseases, which in the lack of clinical opportunities, can be studied with great advantage. In Part I are presented examples of ordinary acne of the face, erythematous eczema about the eyes, macular syphiloderm, herpes zoster, of side of chest, and dermatitis venenata. With the exception of the one of erythematous eczema, they are most excellent reproductions, and especially the last three which show most clearly common clinical types. Part II contains plates of acne of the back, pediculosis corporis, psoriasis (guttata), pityriasis maculata, and variola (two figures). These several are, like those of the first part, satisfactory representations, that of pityriasis maculata not being quite up to the standard of the others in the case selection or coloring. The other forms are admirable, especially those of smallpox, psoriasis and pediculosis. Part III contains plates of lupus erythematosus, lupus vulgaris, military papular syphiloderm, vitiligo, and lichen planus (two figures), which picture the disease quite clearly, the one of lupus erythematosus is not, however, up to the excellence of the others. In addition to the test explanatory of each plate, there is succinct but sufficiently full description of the therapeutics of the various maladies, more especially as to the methods employed by Dr. Fox himself. Together there is, therefore, presented a practical illustrated treatise on the subject, that can be cordially commended, and one which will be of service to those in general practice whose work brings them in con-

tact with cutaneous diseases, especially those who have not had previous clinical opportunities of acquiring the necessary knowledge for the proper diagnosis of these affections. [H. W. S.]

Manual of Chemistry. A Text-book specially adapted for students of medicine, pharmacy and dentistry. By W. Simon, Ph. D., M. D. 7th edition, 8vo., 591 pages and Index. Lea Bros. & Co. Philadelphia 1901.

This manual has been so long and favorably known, as is shown by the fact that the seventh edition is now before us, that an extended analysis of its features is hardly needed. One of its most striking characteristics, one that attracted much attention and discussion in the earlier volumes, is still prominent in the present issue, namely, the series of colored plates illustrating precipitates. We cannot deny the excellence of these, nor fail to admire the pains and skill which have been bestowed on the work, yet it is certainly open to argument as to whether such illustrations are necessary, when the actual preparation of the compounds is so easy, and under present methods of instruction required in most colleges. Dr. Simon's experience, has, however, led him to preserve this feature, and those who do not agree with him may, at least, rejoice that the method has been carried out with brilliancy and exactness.

As far as regards the general character of the book, it need only be said that it maintains the excellent position that it has held heretofore. The first part relating to chemical physics has been largely re-written, among the additions being a brief note on the modern theory of ionisation. Inorganic chemistry covers over two hundred pages, including some methods of analysis; organic chemistry, under the title "Chemistry of the Carbon Compounds" includes over one hundred and fifty pages, after which follow about one hundred pages devoted to "Physiological Chemistry," under which are included the important methods of clinical chemistry. In connection with the discussion of the coal-tar products we do note an explanation of the so-called benzene ring-symbol, now so much used in general literature, and so convenient for presenting the isomeric relations of these bodies.

A commendable feature is a table of known elements corrected according to the most recent data. On the question which is now under active discussion among chemists, namely the standard for atomic weight, Dr. Simon takes system $H=1$, but in the descriptive text both values are given in many cases.

The work is full of valuable information, is excellently printed and illustrated and is highly creditable to author and publisher. [H. L.]

The Principles of Hygiene. A Practical Manual for Students, Physicians and Health Officers. By D. H. Bergey, A. M., M. D., 8vo., 843 pages and Index. W. B. Saunders & Co., Philadelphia, 1901. \$3.00 net.

This is a comprehensive treatise on sanitary science, dealing with all the important issues in that field, in accordance with methods in general use. After a brief consideration of the principal causes of disease, the special sources of insanitary conditions are discussed in separate chapters. Among these are: Air, Ventilation and Heating; Water and Water-supplies; Disposal of Waste; Food and Diet; Industrial Hygiene; School Hygiene; Military and Naval Hygiene; Quarantine. It will be understood that the great mass of matter conforms to the principles of hygiene as laid down by the leading authorities, nevertheless the author has incorporated much that has been suggested by his own experience or evidences the bent of his mind. Some very important points of progress in recent years have been well presented and the book is well up to date without following every supposition that is conceding for recognition. Upon many points discussed in the book, sanitarians will be found in general accord; upon others differences of opinion will prevail. The reviewer is obliged to express dissent from some of Dr. Bergey's statements. The statement on page 223, that alcoholic beverages may be regarded as food by reason of the "extractives they contain" is misleading. While persons differ as to the methods by which the abuse of alcoholic beverages may be prevented, no intelligent and informed

scientist should even by inadvertence offer supposititious data that may encourage such abuse. As a matter of fact, one of the most used and most dangerous of beverages, whiskey, contains no nutritive extractives, and it is further very doubtful if the extractives of malt liquors are of any real value. Modern malt liquors are made with the aid of glucose, which contains no appreciable amount of nitrogenous matters, but does frequently contain much unfermentable carbohydrate of unknown physiological effect, and, therefore, as likely to be harmful as harmless. Serious errors have been made in the tables in the appendix. Factors for converting various data are given. Such factors should be reduced so that the necessary conversion may be made by one operation and that preferably by multiplication. Dr. Bergey gives methods of converting some data in water analysis, involving both multiplication and division, but these factors can be easily condensed to one requiring but a single operation. A more serious criticism is that many of the factors are quite wrong. Thus to convert nitrogen into nitric anhydride it is directed to multiply by 108 and divide by 14; the correct divisor is 28. The reverse procedure is also in error as well as the methods for conversion of nitrous anhydride. Several factors are given for the conversion of the gallon into parts per million and analogous data, but only the Imperial gallon is considered, while American chemists, physicians and pharmacists use almost exclusively the U. S. gallon, a very different measure. A cubic foot is stated to be 6.23 gallons; this again is the Imperial gallon; a cubic foot contains nearly 7.5 U. S. gallons. The printing of the work is satisfactory, but the highly surfaced paper is trying to the eyes, and the title page is in bad taste, suiting an obituary memoir rather than a work on science. The book is but sparingly illustrated. [H. L.]

Libertinism and Marriage. By Dr. Louis Jullien, Surgeon of St. Lazare Prison, etc. Translated by R. B. Douglas. Philadelphia, F. A. Davis Company, Publishers, 1901. Pp. 169.

This little volume contains an interesting and readable account of the methods of transmission of gonorrhea in the male and female by innocent and other means. It is suited only for professional perusal although doubtless it would make absorbing reading for those not in the medical profession. There is nothing in it in the therapeutic line, nor does the book contain anything of original value. As far as it goes the material is reliable, although it is a question whether some portions of unwritten medicine should not remain in obscurity. [W. A. N. D.]

Correspondence.

A CORRECTION.

By GEORGE S. GRAHAM, Esq., of Philadelphia.

Dear Sir:—In your publication of my comments upon the Czolgosz case, an error appears which I would like to correct. It may be my mistake in omitting two letters in the writing of the article; or, a typographical error on your part.

I am made to say "If the counsel had medical testimony tending to prove sanity and did not produce it to the jury," etc., whereas I should have appeared as saying "If counsel had medical testimony tending to prove insanity," etc.

The law presumes sanity in every person accused of crime. No evidence could be offered on the subject of the prisoner's sanity before it was assailed. The Commonwealth could not offer to prove affirmatively what the law assumed to exist. The prisoner's counsel would only be concerned to prove *insanity*, to rebut the presumption of law. One can readily see how inappropriate and senseless the language attributed to me in the article must be. If you will kindly place me properly before your readers, I will be grateful to you.

[Note by the Editor.—The error, which we greatly regret, was ours.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Society Meetings.—The Neurological Society of Philadelphia will hold its next meeting at the College of Physicians, upon Monday evening, October 28, 1901, at 8.15 P. M.

University of Pennsylvania.—Five appointments were made recently in the Department of Medicine by the trustees of the University, as follows: Dr. R. Norton Downs, Jr., assistant demonstrator of obstetrics, Drs. M. H. Biggs and J. B. Carnett, assistant instructors in surgery, Dr. Maurice Ostheimer, instructor in children's diseases, and Dr. C. C. Norris, instructor in gynecology.

Alvarenga Prize.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1902, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the college on or before May 1, 1902. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of the competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1901 has been awarded to Dr. George W. Crile, of Cleveland, Ohio, for his essay entitled "An Experimental and Clinical Research into Certain Problems Relating to Surgical Operations."

Leprosy in Philadelphia.—Wung Ta Sung, a Chinese laundry worker, at 6001 Westminster avenue, has what is pronounced to be a true case of leprosy. He presents a number of large skin lesions on his shoulders and back. The fact that the patient has been occupied daily in washing other person's clothing makes the discovery of the dread disease somewhat sensational, though there is little or no danger that any spread of the disease could be started in this way. (He left for New York before the Municipal Hospital physician had located him).

St. Luke's Hospital, Bethlehem.—St. Luke's day was celebrated at St. Luke's Hospital, Bethlehem, October 18th. Dr. Foster, editor of the *New York Medical Journal*, delivered an address, after which the Rebecca Nickley Thomas Memorial Pavilion was presented to the hospital. The medical society of Northampton county, which had been holding its annual meeting in Bethlehem, attended in a body.

Dr. Henri Hartman, professor of surgery in Paris, secretary of the Section on Gynecology at the Thirteenth International Congress last year, has been visiting Dr. Ernest LaPlace, professor of surgery in the Medico-Chirurgical College of Philadelphia.

Death of Dr. Hannah E. Longshore.—Dr. Hannah E. Longshore, the first woman to practice medicine in Philadelphia, died October 18th in the 83d year of her age. Death was due to nervous prostration. Dr. Longshore was born May 30, 1819, in Montgomery county, Maryland. She was the daughter of Samuel and Paulina Meyers, who had emigrated from this State, and were descendants of Edward and Eleanor Foulke, pioneer members of the Society of Friends in Philadelphia. During her early childhood her parents moved to Ohio, where they made their home on a farm, near New Lisbon, Columbia county, about 1833. At a very early period her interest in medical science was manifested by her examination and dissection of insects and small animals, and she pursued it with the care and accuracy that distinguish the thoughtful student. Not long after she began to study medicine, she married, at the age of 22. Six years later, when the younger of her two children was four years old, she resumed her favorite study. In this she was assisted by her brother-in-law, Professor Joseph S. Longshore, of Langhorne, Bucks county, Pa., who tendered her the use of his medical library, skeletons and great knowledge of medicine and surgery. Subsequently she entered the Woman's Medical

College of Pennsylvania, and was one of the ten members who comprised its first graduating class. She was immediately elected Demonstrator of Anatomy, and distinguished herself by being the first woman to put out her sign as a medical practitioner in Philadelphia. She made such a success during forty years of activity that she retired with a modest fortune, and it was said that her practice was larger, with one exception, than that of any other woman physician in the United States. She is survived by two children. Dr. Longshore's manner was characterized by entire simplicity in speech and dress; always unpretending, yet assured in judgment.

Vital Statistics of Philadelphia for the week ending October 19, 1901:

Total mortality	401	Cases.	Deaths.
Inflammation of the appendix 5, brain 19, bronch 11, heart 1, kidneys 25, liver 3, lungs 37, peritoneum 5, pleura 1, stomach and bowels 13, uterus 1			121
Marasmus 23, inanition 20, debility 6			49
Tuberculosis of the lungs			38
Apoplexy 12, paralysis 7			19
Heart-disease of 30, dropsy of 2, fatty degeneration of 3, neuralgia of 3			38
Uremia 3, Bright's disease 7, diabetes 2			12
Carcinoma of the face 1, breast 1, stomach 4, uterus 2, liver 6, neck 1			15
Convulsions			10
Diphtheria	71		7
Brain, dropsy of 1, softening of 1 ..			2
Typhoid fever	78		11
Old age			6
Scarlet fever	57		2
Smallpox	69		10
Abscess of the stomach 1, alcoholism 2, asthma 2, anemia 1, burns and scalds 4, casualties 12, cholera infantum 3, cirrhosis of the liver 2, cyanosis 4, diarrhoea 2, dysentery 2, gangrene, leg 1, hemorrhage from stomach 1, hernia 2, jaundice 3, shock, electric 1, sclerosis, spine 1, shock, surgical 2, septicemia 1, sarcoma, jaw 1, sarcoma larynx 2, suffocation 3, starvation 1, tumor, ovarian 1, ulceration of the stomach 1, unknown coroner cases 2, whooping cough 3			61

NEW YORK AND NEW JERSEY.

The New York Pathological Institute.—The plan of reorganization of the Pathological Institute of the New York State Hospitals for the Insane, undertaken by the State Commission in Lunacy, is gradually taking shape. It is the aim of the reorganized institute to carry on work in the sciences correlated with psychiatry. Original research in the various sciences bearing upon insanity will continue, and the institute will be utilized for special instruction in clinical psychiatry and methods of scientific research for physicians in the hospitals for the insane. The institution will use one of the asylums on Ward's Island until a reception hospital for the insane can be established in Manhattan. The Commission in Lunacy has established an advisory board, consisting of Drs. J. M. Cattell, professor of psychology, Columbia University; James Ewing, professor of pathology, Cornell University; C. A. Herter, professor of pathological chemistry, Bellevue Hospital and University Medical College, H. C. Bumpus, assistant to the president of the American Museum of Natural History; Henry Hun, professor of nervous diseases, Albany Medical College; C. W. Pilgrim, superintendent of the Hudson River State Hospital at Poughkeepsie; A. E. MacDonald, superintendent of the Manhattan State Hospital, East; and Frederick Peterson, president of the Lunacy Commission, ex-officio. All but two of the appointments are permanent, the two superinten-

dents of asylums being elected for two years only. All selected have accepted their appointments.

New York Obstetrical Society.—At the annual meeting of the New York Obstetrical Society, held October 8, 1901, the following officers were elected for the ensuing year: President Dr. Malcolm McLean; first vice president, Dr. J. Riddle Goffe; second vice president, Dr. LeRoy Brown; recording secretary, Dr. George L. Brodhead; assistant secretary, Dr. George G. Ward, Jr.; corresponding secretary, Dr. E. E. Tull; treasurer, Dr. J. Lee Morrill; pathologist, Dr. W. S. Stone.

Cigar Stumps and Disease.—In Jersey City, New Jersey, policemen are trying to prevent the gathering of cigar and cigarette stumps by Italians who make new cigars and cigarettes out of them. This practice, which is especially prevalent in Jersey City, is considered by the Board of Health to be the cause of the spread of certain diseases, especially tuberculosis and cancer.

Camden Municipal Hospital.—The Camden Board of Health has concluded negotiations for the site for the erection of a temporary municipal hospital. It is supposed that the building will be erected on land of the Camden Cemetery Association. At present the eight patients with smallpox are kept in an empty house rented by the Board of Health. There has been but one other suspicious case reported in Camden.

Hospital for Contagious Diseases Burned.—The Common Council of the city of Elmira, N. Y., purchased a house and lot to be turned into a detention emergency hospital for contagious diseases, in spite of the opposition of the residents of that section of the city. On October 12th the house was burned to the ground.

NEW ENGLAND.

The New Faulkner Hospital.—Near the outskirts of Boston, a hospital for the poor inhabitants of Jamaica Plain, Forest Hills, Roslindale, and West Roxbury is being erected, in accordance with the regulations provided by the will of the late Mrs. Abby Faulkner. The ground left by Mrs. Faulkner consists of between six and seven acres. Work has already begun upon the administration building and one of the ward buildings, which will accommodate 30 patients. The hospital, which will be modern and well equipped, will represent an investment of almost \$100,000.

Boston Camp for Consumptives.—As soon as the weather will permit and proper locations can be selected, there will be pitched near Boston the first of a number of camps for consumptives. This camp (and each succeeding camp will be like it) will consist of ten piano box tents, arranged in a circle with an open air fire in the centre, and surrounded by a duck wall eight feet high. Each of these tents will be a consumptive's home; a consumptive will sleep there, even through the coldest weather, with no other protection than plenty of felt blankets, felt sleeping boots and a two gallon jug of hot water.

WESTERN STATES.

The Healthiest Town in America.—The most healthful place in the United States is Marion, Ia., according to reports received by the Marine Hospital Service from 1,190 cities and towns having a population of 1,000 or more. There may have been a more healthful place than Marion, but no official returns were received from it. Marion has a population of 4,100, and there were only six deaths in 1900, making the death rate the phenomenally low figure of 1.46 per 1,000. The average death rate in all the cities and towns was 17.47. The State having the best record for health last year was North Dakota with a death rate of only 6.95 per 1,000 of population. By far the most healthful of the very populous States, however, was Iowa, the death rate being 11.17. Ohio, which made reports from towns aggregating a population of more than a million and a half, shows a death rate of only 14.84. The notable reports of healthfulness, however, come from the Northwest and far Western States. Minnesota, the Dakotas, Nebraska, Kansas, Iowa, Idaho and Montana, all have exceedingly low death rates. On the other hand, the States which are widely known as health resorts, such as Arizona, Colorado and California, have a comparatively high mortality, probably because many persons suffering from incurable pulmonary troubles go there and die. California last year had an average death rate of 17.63, Colorado 25.29 and Arizona 32.28. The last-named had the highest mortality of any State or Territory in the Union. New

York State's mortality was 19.35. The town in the United States having the highest ratio of mortality last year was Carlyle, Ill., where the death rate was 53.31. The most unhealthful of the very large cities was Washington; death rate 21.71. Baltimore's death rate was 21.02, Philadelphia's 19.38, Boston's 20.82 and Chicago's 14.68.

Smallpox in Wisconsin.—It was reported last week that seventy-one cases of smallpox exist at the Odanah Government School, on the Bad River Reservation. An investigation shows that of seventy pupils boarding at the parochial school, forty-eight are infected. The district schools have been closed, and the reservation doubtless will be quarantined.

The University of Michigan.—The corner-stone of the new medical building of the University of Michigan was laid at Ann Arbor, October 15th, Dr. John A. McCorkle, of Brooklyn, who delivered an address.

Virchow Banquet in St. Louis.—The physicians of St. Louis met at a banquet at the St. Nicholas Hotel, Tuesday, October 15th, in honor of the eightieth birthday of the most celebrated living physician, Rudolph Virchow. Dr. Robert Luedeking was toastmaster and speeches were made by Drs. Hugo Summa, Willard Bartlett, Amand Ravold, Robert Terry and Mr. Perry Post Taylor.

Rudolph Virchow Honored.—In the "Kommers" which closed the meeting in honor of the 80th birthday of Prof. Rudolph Virchow at the Republican House, Milwaukee, Wis., Saturday night, October 12th, addresses on the great scientist and statesman's life were made by Edward A. Birge, acting president of the University of Wisconsin, Mayor David S. Rose, Gen. F. C. Winkler, Prof. Emil Dapprich, Dr. Ernst Voss of the University of Wisconsin, and Prof. L. R. Parker of the University of Chicago. Emil von Schleintz acted as toastmaster. Prof. Dapprich spoke of the breadth of Virchow, of his work as a teacher and in medicine, and the application of his knowledge and discoveries in science for the improvement of the common lot of mankind. Dr. Birge referred to the German scientist's achievement in organizing facts of science so that they could be understood and applied. Virchow had applied them to the benefit of municipalities as well as medicine and other sciences. Mayor Rose said that Virchow's perfected sewerage system of Berlin has been copied all over the world. The flushing tunnel in Milwaukee owed its existence to Prof. Virchow. Gen. Winkler spoke in German. He said that Virchow had won first place among statesmen of the world. Prof. Parker recounted several amusing incidents in the life of the scientist. A silver loving cup, ten inches in height, and inscribed with the fac-simile signatures of its donors, will be sent to Prof. Virchow this week. There are four local physicians who have studied under him—Drs. Gustav A. Kletzsch, Horace M. Brown, Arthur J. Puls and Otto Thlenhaus, Dr. Thlenhaus having been under him for five years. Over a hundred physicians attended the banquet.

Infirmery for Consumption.—A tract of twenty-five acres near Elysian Park, Los Angeles, has been purchased and \$7500 raised for the purpose of establishing an infirmery dedicated to the use of the indigent tuberculosis patients of Los Angeles. The promoters of this charitable object will build the first cottage at once. The infirmery will be erected on the cottage plan and maintained by private subscriptions.

CANADA.

(From our Special Correspondent.)

Infectious Diseases in Public Schools.—The need of daily inspection either by the teachers or physicians appointed by the local board of health is a question now being discussed in Toronto. If this is brought about, it will be on a line with similar work carried out in New York, Boston and Chicago. The scheme has already been endorsed by the Ontario Board of Health, and the only objection seems to be the matter of expense.

Queen's University.—During the opening exercises of the medical department of Queen's University, Kingston, Principal Grant sent a message to the students, urging them to take the study of medicine as seriously as divinity students study for the ministry. In his letter, he says: "I pledge myself to do more for the faculty and for the hospital than ever before. . . . As for yourselves, for the sake of all that is noble, and worthy, take your profession seriously from the outset. . . . It is awful to think that men, women and children should be at the mercy of irreverent and half-taught young doctors. I pledge myself,

that hereafter, for your own sakes, and for the sake of humanity, I shall try to let no such students pass our examinations."

Medical Students are Becoming More Numerous in the Province of Ontario.—In Trinity Medical College more students were registered, in the first year class on the opening day, than had been registered within the last twenty years. At the Toronto School of Medicine, the Dean announced that the freshman class was greater than ever before. As evidence of the way in which the numbers have increased, the records of the last four years tell an interesting tale. In the fall of '97 61 first year students were in attendance; in '98 73; in '99 104; in '00 124. If this increase continues, the question of a higher standard of matriculation will have to be considered in the immediate future.

Reports from Ottawa are serious regarding the prevalence of smallpox and other infectious diseases. The Medical Health Officer is away, and Dr. Law is looking after the health of the city in the meantime. Three or four cases develop daily, and since Sunday the 6th inst. twenty-three cases have appeared. Special constables have had to be appointed to see that quarantine is strictly carried out, and Dr. Law has advised closing the public schools and general vaccination. Dr. Bryce, Secretary of the Ontario Board of Health, has been summoned to the Capital, as there is understood to be a good deal of friction among members of the health board. A special order has been issued by the Minister of Public Works to the heads of all branches in his department, ordering vaccination at once. Sir James Grant is fearful that there will also be an epidemic of typhoid, owing to low water in the Ottawa River.

Montreal is Guarding Against the Invasion of Smallpox both from Ottawa and St. Henri, one of her own suburbs, where the disease already exists. The Quebec Board of Health has issued a general call for vaccination, and points out that the Ottawa outbreak renders it necessary for all municipalities to prepare to fight the disease. A special hospital is being established in Montreal, and in the meantime persons in the infected houses in the suburbs are being vaccinated and special quarantine officers placed on guard over them. Dr. Laberge, Medical Health Officer, and Dr. Pelletier, secretary of the Quebec Board, state that the outlook is serious. The Civic Hospital, which was designed for smallpox patients, is full of other cases of infectious diseases, so a special hospital is being hurriedly improvised to meet emergencies.

The Toronto Clinical Society held its first regular meeting for the season on the evening of October 2d, with Dr. J. F. W. Ross in the chair. Dr. Bruce showed the specimen of a hairy tumor from the stomach of a young married woman of 26, which he showed at the Canadian Medical Association meeting at Winnipeg, a report of which has been published in the columns of the *Philadelphia Medical Journal*. Dr. A. A. Small showed a woman with a cystic tumor in the left popliteal space, which was either growing from a tendon sheath or from one of the bursae; and another case of supposed polymastia, the supernumerary gland being situated on the back, close to the right posterior axillary line. The tumor was very characteristic and occurred in a woman of sixty who had borne several children, although the breast never showed any enlargement during lactation. The nipple had always been present, but the balance of the gland had developed within the last five years. There were no openings on the surface of the nipple. The consensus of opinion seemed to be that this was a lipoma, although remarkably like the female breast. Dr. A. A. Macdonald showed a cystic adenoma, which he had removed with a breast. A point of interest in the case was that the cyst had developed in eight weeks.

The Toronto Medical Society held its first meeting for the season on the evening of October 3d. Dr. F. N. G. Starr occupied the chair, and delivered a very interesting address on the deceased members of the profession in Toronto since the time when the city was known as the "muddy town of York." Mr. J. H. Cameron showed several specimens of calculi. In one case he secured fourteen small calculi in the cul-de-sac behind the prostate, by high section, from an old man of 76. Dr. Graham Chambers showed a girl of thirteen, the subject of hydroa vacciniformis for the last ten years. The patient exhibited sev-

eral scars, which simulated pock marks. Drs. Primrose and Chambers presented a patient, a young man of twenty-five, afflicted with blastomycosis. Two lime light views showed the warty outgrowths situated on different parts of the patient, one being on the right malar bone, another on the right shoulder, another on the neck, and still another at the inner canthus of the right eye, the latter being very like an epithelioma. Dr. Primrose excised portions of these growths and applied the actual cautery with success. The fungus was readily found under the microscope.

The Ontario Board of Health held its regular quarterly meeting in Toronto last week. The Secretary, Dr. Bryce, made a report upon smallpox, tuberculosis, and the question of the propriety of the Dominion Government founding an Institute for Scientific Research. His report upon smallpox showed that there had been, during the nine months of this year, 1064 cases of smallpox, the largest outbreak in Ontario in the history of the Board of Health, with only six deaths, a mortality of less than one per cent. Since the first of October some forty cases have been reported, principally from Ottawa, Oxford County, Manitoulin Island, and the County of Algoma. Referring to the subject of tuberculosis, he advised that municipalities should prohibit expectoration in public places, and that physicians be compelled to register all cases of tuberculosis. He considered that the time was opportune for the Dominion Government to commence the manufacture, under the Department of Agriculture, of vaccines and anti-toxins.

Notre Dame Hospital, Montreal, held its annual meeting last week. The reports were so encouraging, that it was decided to erect a new building and a site will forthwith be selected. During the past year 2,200 sick cases have been treated, an increase of 177 over the previous year. Two thousand and eighty-three of the patients were Catholics, and 117 Protestants. The cost for each case was ninety cents per day, a decrease of eight cents in comparison with the year before. Of the total number of cases treated, 1,854 left the hospital cured or convalescent, 155 were not improved, while 134 died, making the percentage 6.09, 79 of these cases being brought to the hospital in a precarious condition. In the dispensary there were 20,078 consultations, a decrease of 1,740 in comparison with the previous year. The financial part of the report states that the receipts amounted to \$32,293, while the expenditures amounted to \$29,480.51, leaving a surplus of \$2,812. Dr. E. P. Lachapelle was elected superintendent and Dr. Benoit, secretary.

Rockefeller Research Fellowship.—Professor W. M. Ford, of Johns Hopkins University, has been awarded the Rockefeller Research Fellowship, in pathology, of McGill University, Montreal. Dr. Ford is at present at work in the Pasteur Institute in Paris.

MISCELLANY.

Singers' Nodules.—Nodules the size of a pin's head have been noticed upon the vocal cords of singers, and are known by the name of "singers' nodules." These are described by Dr. Chiari as consisting of hypertrophied epithelium and connective tissue, occasionally containing dilated blood-vessels but without any trace of glandular structure. Much confusion has arisen in regard to these nodules, chiefly from the want of a clear definition of what was meant by the term. Anything in the nature of a growth which has a pedicle should undoubtedly be excluded from the group, and any tumor larger than the size of a pin's head does not come under this head. Another distinctive feature of these nodules is their situation upon the free edge of the cord, at the junction of the middle with the anterior third, and it is laid down that this is the only position in which they grow.—*Medical Press and Circular*.

American Losses in the Philippines.—The losses from all causes in the regular army and the volunteers from July 1, 1900, to June 30 last, totaled 16,924 officers and men in the former and 8191 in the latter. The casualties to the troops in the Philippines since the date of the first arrival, June 30, 1898, to June 30 last were 115 officers and 3378 men killed, and 182 officers and 2646 wounded.

The Healthiest Land in Europe.—An article in the *Statistische Wochenschrift* upon the comparative increase of longevity in the various nations of Europe imagines that Sweden will before long become recognized as the healthiest of European lands. In the early part of the last cen-

tury its sanitary reputation was bad, but between 1830 and 1840 its mortality was reduced to 26.8 in the 1,000. Each successive decade has shown a remarkable improvement in the longevity of its inhabitants. In 1870 the deaths were 20.2 in the 1,000; in 1880, 18.3; in 1890, 16.9, and lastly, in 1900, 16.5. With such favorable conditions of health it is no wonder that the tourist in Sweden should say that he "met an old Swede at every turn."

It is not generally known that a man, to be perfectly well proportioned, should weigh 28 pounds for every foot of his height.

Mosquitoes Blamed Again.—Selence has gone a step farther in incriminating mosquitoes for the propagation of marsh fever. A French army doctor in Algeria has proved that an outbreak in a barrack standing in marshy ground was coincident with the first appearance of the mosquitoes for the season. All cases were first attacks.

Yellow Fever in Mexico.—The Mexican Superior Board of Health learns that yellow fever continues in Vera Cruz and on the Isthmus of Tehuantepec. There have been several new cases at Vera Cruz and on the Isthmus.

International Sanitation.—At the Pan-American Congress just held in the City of Mexico, a plan of international agreement for the sanitation of sea coast cities, particularly against yellow fever, has been suggested by an agent sent by Surgeon General Wyman of the Marine Hospital Service. He proposes sanitary improvements of harbors, improved sewerage, soil drainage and paving, and the elimination of infection from buildings. An international sanitary commission should be appointed, comprising five members, a diplomat, a lawyer, a physician and sanitarian, a sanitary engineer, and a commercial representative. To these five it is proposed to add temporarily two to represent the government in whose domain is located the city or town to be investigated or made to conform to sanitary requirements. The duties of the commission would include visits to the cities and reports upon the sanitary measures necessary. If the president of the State in which the unsanitary city is located fails to carry out the recommendations of the commission within a year, then, under Surgeon General Wyman's plan, all the republics will impose upon vessels arriving from it an additional tonnage tax and duties upon specified imports from the port, until the sanitary work has been completed.

Malaria and Mosquitoes.—Last year an Italian scientific expedition visited Northern Sardinia in order to study malaria. 104 people composed the expedition, and they all covered the exposed part of their bodies with netting. But one of them developed malaria. A thorough and detailed investigation has but recently resulted in the discovery that he had removed his head mask at night, in order to smoke.

An Indian Burying Mound.—E. P. Valentine, of Richmond, Va., has discovered an old Indian burying mound on Hays Creek, in which he unearthed 300 skeletons of men, women, and children. They were found lying in concentric circles in the mound, which was about seventy feet in diameter. Some were in a good state of preservation with the hair yet intact. Some were lying feet to feet, while others were head to head. A skeleton of a dog or wolf was found. In the center of the last or inner circle, which was twenty-four feet in diameter, were found four layers of bodies, each covered by a layer of stone. On the forehead of each skeleton found was a piece of limestone 8 by 10 inches and 2 inches thick. Many of the skeletons were taken to Richmond.

The Glove as an Infecting Medium.—The surgeon cannot be too careful about his gloves. After operating upon septic cases, it is exceedingly difficult to render the hand again aseptic for some time. Hence the advisability of wearing rubber operating gloves in septic cases. The surgeon is very apt to wash his hands with less care after an operation than before, and going from his operating room into the carriage, draws on his driving gloves or outdoor gloves, which, in turn, rapidly become infected with staphylococci, streptococci, etc., so that for days or weeks the surgeon's hands are reinfected by means of his own gloves. This occurred some years ago to an obstetrician in whose practice several cases of puerperal fever arose. After a most careful investigation, giving up his obstetric practice, it was found that his driving gloves had been contaminated by his hands from a case

of scarlet fever he had treated some time previously. The *Pacific Medical Journal* urges the necessity of wearing surgeons' gloves at all operations having pus, and suggests that the surgeon does not wear outdoor gloves for several days after a septic operation, so that the air and sunshine with the natural attrition of the skin will destroy the infection, and not communicate it to the glove, which may in turn reinfest the hands for days and weeks thereafter.

The Idiotic Children of a Cocainomaniac.—Marfan has recently reported the interesting case of a man who had been addicted to the excessive use of cocaine for eight years, from having employed it to relieve hypertrophic rhinitis. He absorbs as much as three grammes by the nose daily. His last two children, boys aged 6 years and 10 months, are both idiots. Marfan believes this condition to be the result of the father's cocaineomania.

Obituary.—Dr. William K. Doherty, San Francisco, Cal., October 9, aged 70 years.—Dr. William L. Harding, at New York City, October 11.—Dr. W. W. Duvall, at Gladstone, Md., October 13, aged 80 years.—Dr. Donald R. Hinekey, at Northampton, Mass., October 14, aged 30 years.—Dr. H. K. Jilison, at New London, Wis., October 15.—Dr. Paul Shultz, Bloomsburg, Pa., October 16, aged 28 years.—Dr. William E. D. Jewson, at New York City, October 15, aged 84 years.—Dr. Samuel J. Jones, at Hyde Park, Ill., October 4, aged 65 years.—Dr. Hannah E. Longshore, at Philadelphia, Pa., October 18, aged 82 years.—Dr. Charles H. Voorhees, at Philadelphia, Pa., October 19.—Dr. Henry R. Rogers, at Dunkirk, N. Y., October 19, aged 79 years.—Dr. Joseph Sanders, at OH City, Pa., October 21 aged 34 years.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended October 19, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
IOWA:	Ottumwa	Sept. 7-28.	21	
MASSACHUSETTS:	Boston	Oct. 5-12	5	
MICHIGAN:	Detroit	Oct. 5-12	1	
NEW JERSEY:	Camden	Oct. 5-12	1	
	Newark	Oct. 5-12	4	3
NEW YORK:	New York	Oct. 5-12	7	2
OHIO:	Youngstown	Oct. 5-12	1	
PENNSYLVANIA:	Erie	Oct. 5-12	2	
	Norristown	Oct. 5-12	1	
	Philadelphia	Oct. 5-12	60	2
RHODE ISLAND:	Newport	Oct. 5-12	1	
VERMONT:	Burlington	Sept. 28-Oct. 12	13	
WISCONSIN:	Green Bay	Oct. 6-13	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Sept. 21-28.	1	
BELGIUM:	Antwerp	Sept. 21-28	2	1
	Ghent	Sept. 21-28.	1	
BRAZIL:	Rio de Janeiro	Aug. 18-Sept. 1.	115	
COLOMBIA:	Colon	Sept. 30-Oct. 6.	1	
	Panama	Sept. 30-Oct. 7	125	
ECUADOR:	Guayaquil	Aug. 3-Sept. 21	25	
FRANCE:	Paris	Sept. 10-28.	9	
GREAT BRITAIN:	London	Sept. 21-28.	163	6
ITALY:	Naples	Sept. 21-28.	71	4
	Palermo	Sept. 14-21.	1	
MEXICO:	Huamantla	Sept. 21. Epidemic.		
	Vera Cruz	Sept. 28-Oct. 5.	7	4
RUSSIA:	Moscow	Sept. 14-21.	1	
	St. Petersburg	Sept. 14-28.	3	1
URUGUAY:	Montevideo	July 27-Aug. 24	71	10

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Aug. 18-Sept. 1.	3	
COSTA RICA:	Port Limon	Sept. 28-Oct. 5.	8	3
CUBA:	Havana	Sept. 28-Oct. 5.	3	
MEXICO:	Merida	Sept. 14-21. a few deaths.		
	Valladolid	Sept. 14-21. Epidemic.		
	Vera Cruz	Sept. 21-28.	6	2

PLAGUE.

PHILIPPINES:	Manila	Aug. 25-31.	5	4
JAPAN:	Formosa	Sept. 7-14.	5	1

CHOLERA.

JAPAN:	Onsen District	Sept. 7-14.	1	
STRAITS SETTLEMENTS:	Singapore	Aug. 25-31.	1	

GREAT BRITAIN.

Glasgow University.—Dr. John Young, professor of natural history in the medical department of Glasgow University has been obliged to resign on account of ill health. He has held the position as professor of natural history for thirty-five years. He was also lecturer in geology and curator of the Hunterian Museum.

Vaccination in Schools.—The Council of Almoners of Christ's Hospital, one of the largest boys' schools in London, is having all the boys in the school, who have not been vaccinated or revaccinated within the last seven years, vaccinated now.

An Immense Reservoir.—Rapid progress is being made upon the new reservoirs at Staines, Middlesex, for the supply of London, and it is anticipated that they will be completed in about two years. The reservoirs are approximately four and a half miles in circumference, and their capacity will be 33,000,000,000 gallons—a sufficient supply to serve the district catered for by the water companies to whom they belong for 100 days. The reservoirs will be supplied from the flood water of the Thames.—*Indian Medical Record.*

Metropolitan Medical Schools.—From information received from the deans of some of the metropolitan medical schools, it would appear that the number of medical students taking the full medical course has diminished this year. On the other hand, those wishing to take a special or partial course have greatly increased in number.

A Bequest to the Hospitals in Glasgow.—By the will of the late Sir William Laird, £50,000 was left to the various hospitals of Glasgow and West Scotland.

Harveian Oration.—Dr. Norman Moore delivered the Harveian Oration at the Royal College of Physicians in London, on St. Luke's Day, October 18, 1901.

Appointments.—Dr. Lindsay Steven has been appointed examiner in medicine and clinical medicine, and Dr. Charles Workman examiner in pathology, in the University of Glasgow.

A Martyr to Science.—A tablet to the memory of the late Dr. Walter Myers, of Birmingham, given by the Liverpool School of Tropical Medicine, has been erected in Birmingham University. Dr. Myers died of yellow fever in Brazil, while investigating the pathology and etiology of that disease.

CONTINENTAL EUROPE.

The New Home of the French Academy of Medicine.—As soon as the superb new building on the Rue Bonaparte is finished, the Academy will move its valuable collections, comprising 200,000 volumes, 120,000 manuscripts, and over 6000 portraits and engravings, from the old chapel of the Rue des Saints Pères, where it has been located for fifty-one years. The new building, which contains a large amphitheatre, library, laboratory, vaccinating rooms, etc., cost over \$300,000.

Expansion of American Quackery.—An advertisement appeared in a Russian newspaper offering a sure income of 125 to 250 roubles a month, for the introduction of a patented American remedy. Similar advertisements of various panaceas invented in America appear from time to time in the daily press, and are even distributed in the form of circulars. Is this a sign of overproduction or a general tendency to expansion?

A Great Honor.—The statue of Dr. Armauer Hansen, the discoverer of the bacillus of leprosy, by Visdal, the Norwegian sculptor, was erected in the gardens of the Museum in Bergen, Norway, upon his sixtieth birthday. Professor Lassar delivered an address, in which he remarked that it had taken the world a quarter of a century to fully realize the import of Dr. Hansen's discovery, but that already, in consequence of it, great improvements had been effected in Norway, long one of the favorite haunts of that terrible disease. That this has happened during the life of Dr. Hansen shows the high esteem in which he is held by his countrymen.

The New Children's Hospital in Paris.—The new Trousseau Hospital, in the Rue Michel Bizot, by far the handsomest hospital in Paris, has just been finished at a cost of almost \$400,000. The ground, which includes about 20,000 square meters, contains 21 pavilions, separated by extensive grass-plots. Upon the street next to the main entrance are the home of the director and the dispensary, to which a bath-

ing establishment is attached. The dispensary has a special entrance, and the medical and surgical cases are at once separated, the suspicious contagious cases being placed in a small room, twelve of which adjoin the waiting-room. The medical building contains four large wards of twelve beds each, with a separate small home for infants, with eight cribs and four rooms for mothers with children. The surgical service consists of two buildings, one for septic cases, containing two wards of ten beds each, the other for general surgery, with two wards of sixteen beds, one of twelve beds, a room for four infants, and four rooms with one bed. Each department has its own operating room. There is one pavilion for doubtful, suspicious cases, containing sixteen separated glass box-rooms; very similar to this are the four contagious pavilions, each containing two wards of eight beds, and the diphtheria pavilion, with twelve separated glass rooms and a ward of eight beds for convalescents. Beside these buildings, all of which also contain baths, water-closets, laundries, electric lighting, hot air and ventilating apparatus, there are separate pavilions for the mortuary, with an autopsy room and laboratories, for disinfection, stables, kitchen, residents' house, servants and nurses' quarters, the machinery, etc. The cost of construction was much less than either the Boucicaut or Bretonneau Hospital, previously the most modern of the Paris hospitals. While each of the 244 beds of the Trousseau Hospital cost approximately \$1600, one of those in the Boucicaut Hospital cost \$2400. Unfortunately the predominance of septic cases has caused a re-arrangement of the surgical services, 20 beds being devoted to general surgery, while 50 are needed for the septic cases. In the opinion of Dr. F. Jayle, the enormous distance from the more thickly populated parts of Paris to this new hospital will result in a poor dispensary service. The structure, furniture, appliances, and equipment of this new hospital for children are superb.—*Presse Medicale.*

Paris.—Boxes are soon to be placed upon the lamp posts of the streets of Paris, containing dressings for wounds and an alarm with which to call out the nearest ambulance. One has already been erected.

A Fort Made Hospital.—During the next three months the old fort at Noisy-le-Sec will be transformed into a hospital to contain 350 beds. This hospital will be used for the convalescent patients from the Paris hospitals.

Appointments.—Nancy: Professor Gross has been appointed dean of the medical faculty.—Algiers: Dr. Bruch, professor of clinical surgery, has been appointed director of the medical school.—Marseilles: Dr. Queirel, professor of obstetrics, has been appointed director of the medical school.—Angers: Dr. Raimbault, professor of pharmacy and materia medica, has been retired, becoming honorary professor.—Clermont: Dr. Blatin, professor of physiology, has become honorary professor upon his retirement.—Rennes: Dr. Bellamy, professor of medical chemistry, has become honorary professor upon his retirement.—Rouen: Dr. Tincl, professor of anatomy, has been retired, becoming honorary professor.

Obituary.—Dr. Hans Wiss, professor of medical jurisprudence, is dead.

A Peculiar New Bacillus.—From Vienna comes the news of the discovery of a peculiar bacillus, gas producing, yet only developing where oxygen is excluded. Dr. Gussenbauer, professor of surgery in the University, noticed that, in several operations in which asepsis had been maintained, there occurred "gas abscesses" which prevented recovery. Then bacteriological examination brought to light this peculiar new bacillus. Later it was found upon the ceiling and walls of the operating room.

Typhus Fever in Prussia.—An epidemic of typhus fever has broken out at Gelsenkirchen, Westphalia. Over 2000 persons out of a population of 12,000 are already ill with the disease. From forty to sixty new cases are reported daily. Dr. Koch, who is continuing his investigations there on behalf of the government, says he believes the epidemic is due to the bursting of pipes in a house where a typhus patient was under treatment, this leading to an infection of the entire water system with typhus bacilli.

A Danish Physician Contracts Leprosy.—Dr. Fellberg, City Physician of Copenhagen, who recently visited the West Indies, is suffering from a strongly developed case of anesthetic leprosy, which he is believed to have contracted from a patient whom he attended while in the West Indies. The case is regarded as hopeless.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

October 5, 1901.

1. Introductory Remarks by the President on Puerperal Fever, etc.
2. A Discussion on the Causation, Prevention and Treatment of Miscarriage. P. HORROCKS, the late A. LAWRENCE, A. SMITH, G. A. HAWKINS-AMBLER, J. A. LYCETT, W. DUNCAN, J. I. PARSONS, MRS. BOYD, F. W. N. HAULTAIN and PROFESSOR BYERS.
3. Deciduoma Malignum. PETER HORROCKS.
4. Cesarean Section with Notes on Three Successful Cases. J. M. MUNRO-KURR.
5. Shock in Abdominal Operations. G. A. HAWKINS-AMBLER.
6. When and How to Operate on Uterine Fibroids. WILLIAM DUNCAN.
7. A Case of Cystic Fibromyomata in a Single Woman Aged 22 Years. CUTHBERT LOCKYER.
8. On a New Gynecological Position. F. JAYLE.
9. A Successful Laparotomy for Abdominal Pregnancy with the removal of the Fetus (Full Term) Placenta and Gestation Sac en Masse. ALFRED SMITH.
10. A Case of Twin Pregnancy, Extrauterine and Intrauterine. MRS. BOYD.
11. Ovarian Pregnancy. HASTINGS GILFORD.
12. A Discussion on the Diagnosis and Treatment of Metritis, and its Relationship to Malignant Disease. J. CAMPBELL, MRS. SCHARLIEB, H. SNOW, the late A. LAWRENCE, J. I. PARSONS, J. B. JESSETT, E. PURSLOW, MRS. GARRETT ANDERSON, A. S. COOKE, MRS. BOYD, G. A. HAWKINS-AMBLER, M. HANDFIELD-JONES, R. J. FERGUSON, E. S. SAVAGE, F. W. N. HAULTAIN and J. W. BYERS.
13. Further Report on a New Operation for Prolapsus Uteri, etc. J. INGLIS PARSONS.
14. Extirpation of the Uterus and Vagina in Cases of Intractable Prolapse. CHRISTOPHER MARTIN.
15. The Treatment of Chronic Uterine Inversion, by Abdominal Hysterectomy, with a Successful Case. F. W. N. HAULTAIN.
16. Notes on Enteric Fever at the Imperial Yeomanry Hospital, Pretoria. H. D. ROLLESTON.
17. A Case of Beriberi (?) Possibly Due to Arsenic Poisoning. RONALD ROSS and ERNEST REYNOLDS.

1.—Byers, as President of the Obstetrical Section of the British Medical Association, gave some introductory remarks on puerperal fever, uterine cancer and the falling birth-rate. He states that in 1847-56 the mortality from puerperal fever in England and Wales was 1.8 per thousand. It rose to 2.28 in 1875-84, and to 2.46 in 1886-95. He believes that by the observation of the two principles—the avoidance of meddlesome interference and the rigid use of antiseptic principles—we may hope that in the present century the occurrence of puerperal fever will eventually be as rare in private practice as it became in the nineteenth century in lying-in hospitals. As regards the falling birth-rate he states, that in England and Wales in 1861-71 the birth-rate per thousand was 34.8; in 1871-81 it was 34.7; in 1891 it was 31.4 per thousand and since then it has steadily gone down until in 1900 it was only 29 per thousand. In other words the birth-rate has fallen by 2.67 in the last ten years. He remarks that if fewer children are in the future to be born in England the efforts to lower the high death-rate of infants must be doubled. [W. A. N. D.]

2.—In a discussion on the causation, prevention, and treatment of miscarriage, Horrocks remarks that the proportion of miscarriages to labor at term has been estimated differently by different authors. According to the reports of the Guy's Lying-in Charity the proportion in 25,777 cases was about 1 to 182. In fact the proportion is far greater than this, when all the instances of miscarriage are included. Some authors give the proportion of 1 to 5, and probably that underestimates it if anything. A primipara is less likely to miscarry than a woman who has already had one or more children. The majority of early miscarriages are criminal. Anything that disturbs the attachment between the fetus and the mother may cause miscarriage, such as overstraining, hard work, coughing vomiting, etc. Surgical operations, major or

minor, may likewise induce abortion. The extraction of teeth is peculiarly liable to cause miscarriage, probably because of the increase in the intraabdominal pressure, as the patient holds herself to bear the pain, or possibly owing to the influence of shock. Fibroid tumors are very apt to induce a miscarriage, as are also diseases of the adnexa. Syphilis is the most potent and probably the commonest of fetal causes. Endometritis is supposed by some to play an important rôle in the production of miscarriage. Displacements of the uterus, especially retroflexion, zymotic diseases, eclampsia, placenta previa, cancer of the cervix, over-suckling and traumatism are all to be grouped among the causes of miscarriage. As to the prevention of this accident nothing must be done by the patient, that would be likely to disturb the connection between placenta and uterine wall, damage to the ovum, or rupture of the membranes. Hence she must avoid riding, dancing, golfing, tennis, cycling, excessive coitus, lifting, walking, or standing too long, and all shocks and frights. Tight lacing should be avoided, the bowels should be kept open but without purgation; enemata must be given with caution; if syphilis is suspected antisyphilitic treatment is indicated. Hawkins-Ambler thought that recurring miscarriage is due to endometritis oftener than is believed. As regards the treatment of miscarriage, the finger is undoubtedly the best means of emptying the uterus. Lycett said that the erect carriage of the woman with the consequent frequent association of uterine displacement has not *per se* any direct influence in producing miscarriage. He believes in the toxic influence which alcohol undoubtedly has in the production of premature discharge of the ovum. Duncan regards retroflexion as a common cause and advises the use of a well fitting pessary. Parsons believes that healthy subjects may do almost anything without abortion occurring, but when the woman is delicate or when abortion has already previously occurred unusual precautions must be taken. [W. A. N. D.]

3.—Horrocks reports a case of deciduoma malignum occurring in a patient aged 48, who had had two miscarriages prior to the appearance of the disease. The uterus was removed and showed the characteristic features of the disease. The patient subsequently succumbed to a recurrence, but no postmortem was allowed. [W. A. N. D.]

4.—Kerr reports three cases of Cesarean section which he has met with in his own practice, the operation being indicated by extreme degrees of pelvic deformity. He remarks that in cases of pelvic deformity we are now hardly ever justified in destroying a living child by craniotomy or any other destructive operation. The only circumstances under which such operations are permissible are where fruitless attempts have been made to extract the child by forceps or inversion from ignorance of or miscalculation of the extent of the pelvic deformity, where the mother's condition is such as to preclude abdominal section, and where the child is the subject of hydrocephalus or some other extreme malformation. The only advantage of the fundal incision in Cesarean section, as far as Kerr can see, is that the wound is removed from the most probable source of infection. [W. A. N. D.]

5.—Hawkins-Ambler discusses shock in abdominal operations. He remarks that operative interference in a healthy animal is followed by a certain degree of apoplasia or drying of the blood. This depends to some extent on the severity of the lesion, but it is always considerable. It causes an increase in the specific gravity of the blood. This is also in association with a change in the condition of the nerve-cells. There occurs a decrease in the size of the nucleus, an irregularity in its outline, and it takes a darker stain. There is also a slight shrinkage in the size, with vacuolation of the cells in the spinal ganglia. Time is an important element in the production of shock. Add to this the hemorrhage of the operation, the direct loss of blood from severed vessels, and the exudation of plasma which is a constant factor, and it is easily realized that the effect on the circulation may be enormous, and that heart and brain may be dangerously deprived of blood in these directions. The author advocates prophylaxis. A visit to the country prior to the operation is an excellent thing in its way and improves the chances. He states also that patients are sometimes starved and purged too much before operation. At times it may be of value to eliminate the shock of general anesthesia; in a warm room and on a hot-water table the chances of shock are diminished. Saline injections by the rectum or hypodermically are of the

utmost value in the treatment of the developed condition. Small doses of morphin with atrophin given hypodermically before the patient leaves the table prevent the development of the condition. [W. A. N. D.]

6.—Duncan states that there are four conditions indicating operation upon uterine fibroids, namely: (1) when they cause severe hemorrhage; (2) when they cause pressure symptoms; (3) when they are growing rapidly larger; (4) when they complicate pregnancy. The removal of the appendages, either to stop hemorrhage or arrest the growth of the tumor has now been dropped, because of failure to obtain the desired results. Hysterectomy is the best operation to perform in most cases of uterine fibroid which require medical treatment. It is performed in various ways. Panhysterectomy is the name given to the removal of the whole uterus, either through the vagina or after opening the abdomen. Intraperitoneal hysterectomy is one of the terms used when most of the uterus is removed, leaving a stump consisting of a portion of the cervix. When a fibroid tumor takes on rapid growth, this is due to cystic or mucoid degeneration and always calls for hysterectomy without delay. When pregnancy occurs in a uterus, the lower portion of which is occupied by fibroids obstructing the pelvic brim and perhaps filling the pelvic cavity, three courses are open, namely: (1) To empty the uterus; (2) To at once perform hysterectomy; (3) to permit the case to go to term and then to perform Cesarean section followed by hysterectomy. [W. A. N. D.]

7.—Lockyer reports a case of *cystic fibromyomata* in a single woman, aged 22 years, which was discussed by Doran. He states that small, hard fibroids which cause no pressure-symptoms and are not associated with hemorrhage, should not be removed, but fibroids which are increasing and softening or which press on the bladder, rectum or important blood-vessels, or which cause continuous metrorrhagia should be removed. Doran has operated on 29 bad cases of fibroid of the uterus since January 1, 1901. In every case the operation was retroperitoneal hysterectomy. Martin does not advocate operation as routine treatment. Each case must be considered on its own merits. No operation should be done if the tumor is stationary in size, if the hemorrhage be moderate and controlled by rest and ergot, or if the patient be near the menopause. The operations that may be performed are vaginal myomectomy, vaginal hysterectomy, abdominal myomectomy, and panhysterectomy; the latter he regards as the best and safest operation for the majority of cases of big myomata demanding operation. Cousins states that the tendency of the discussion shows that fibroid tumors, with very few exceptions, should be removed by the abdominal route and not by posterior vaginal operations. [W. A. N. D.]

8.—Jayle describes a new gynecological position which consists in the combination of the ordinary position of the speculum or of the lithotomy position, and of the sacral dorsal position of Trendelenberg. In order to obtain this position it is necessary to have a balancing table with a system of shoulder-rests which hold the patient in a delicate position without securing the lower members, which remain free. This position can be used either for examination or operation. It has the advantage of throwing back the intestines, of determining by the entrance of air dilatation of the vagina which becomes almost vertical, and finally of stretching the anterior vaginal wall. As a result exploration of the tubes and ovaries and especially of the uterus is greatly facilitated. The introduction of the speculum is very easy, and exploration of the vaginal walls is easy, for it is sufficient to depress the perineum either with the finger or with the valve speculum in order to get a good view of the anterior wall and at times of the cervix. [W. A. N. D.]

9.—Smith records a successful laparotomy for abdominal pregnancy with removal of a full term fetus, placenta, and gestation-sac *en masse*. The patient was a woman, 26 years of age; the fetus a well developed female, weighing 10½ pounds and measuring 20 inches. He states that tubo-abdominal, tubo-ligamentary, subperitoneal, and tubo-ovarian pregnancy may go on to term. He believes the present case was primarily a tubal pregnancy which had ruptured into the peritoneal cavity. The fetus was dead, but he was unable to say how long. No movements had been felt for three months but there was no evidence of maceration, peeling, or skeletization. [W. A. N. D.]

10.—Boyd describes a case of twin pregnancy, extrauterine

and intrauterine. The tubal ovum in this case perished in a very early stage in the third or fourth week, while the intrauterine pregnancy continued to term. [W. A. N. D.]

11.—Gilford discusses ovarian pregnancy and remarks that the first instance on record of impregnation of an ovum within a Graafian follicle is probably that which is mentioned by Bernutz and Goupil. Granville in 1820 recorded another. During the latter half of the nineteenth century other cases were recorded, but Tait and other authorities believed that true ovarian pregnancy was exceedingly rare, while Bland-Sutton expressed his belief that it was impossible. It is now known, however, that such a condition can exist. Gilford describes the cases that are now recognized as authentic cases of ovarian pregnancy. [W. A. N. D.]

12.—In a discussion on the diagnosis and treatment of metritis and its relationship to malignant disease, Campbell remarks that early pregnancy may be mistaken for this condition, especially when the metritis has produced considerable enlargement and congestion. The character of the discharge in metritis may present a superficial resemblance to cancer, and the appearance of the cervix may also temporarily deceive the observer. The mucopurulent and viscid discharge of metritis contrasts with the red, serous, and foul smelling flux of cancer. Incomplete abortion may simulate metritis and can only be distinguished with certainty from it by curetting and discovering thus the characteristic placental tissue. Fibroids, salpingitis, cystitis and proctitis may all simulate the disease. As regards the treatment of metritis, prophylaxis is most important, and this includes the careful attention to patients in labor and abortion. An abdominal belt, the use of douches and hip-baths, the use of the tampon in suitable cases and daily applied, local bleeding, intrauterine medication and curetting are all included in the cure of this condition. Curetting is admittedly the best of all the methods and should be done under thorough vaginal and uterine antisepsis. Two varieties of metritis are worthy of especial attention as regards treatment, namely, the hemorrhagic and the chronic painful metritis; for the former hot douches, the recumbent posture and the administration of ergot are unquestionably useful. In bad cases tamponade of the uterus may be required. Chronic painful metritis is one of the most troublesome forms of the complaint. In it a certain amount of benefit will be derived from scarification and puncture. The virtues of ichthyol are, he thinks, very doubtful. Columnization of the vagina may have a good effect. The relationship between metritis and cancer of the cervix has not so far been demonstrated beyond question, but the evidence in favor of its existence is strong. The connection between metritis and cancer of the body of the uterus has been definitely settled. [W. A. N. D.]

Scharlieb also discusses the relation of metritis and endometritis to malignant disease of the body of the uterus. She states that the endometritis appears in various forms such as the glandular, interstitial, hypertrophic, exfoliated, gonorrheal, tuberculous, and septic. The first four are named from their histological characters, and the last three from their microbial causes. She quotes various authorities who speak of the relationship between adenoma and metritis and endometritis. Snow in discussion states that in these cases the patient should never be condemned to hysterectomy on microscopic evidence alone. That instrument should only be employed to conform an opinion based already on other grounds. Lawrence recognizes the difficulty of diagnosing metritis as a pure and simple condition independent of disease of the tubes. He advocates full dilatation of the cervix and exploring by the finger before using the curette. Parsons states that certain cases of metritis are chronic in spite of all treatment, and that metritis is probably an antecedent condition in all cases of cancer. Handfield-Jones considers that the treatment of endometritis depends on the degree and virulence of the infection, whether gonorrheal or syphilitic. [W. A. N. D.]

13.—Parsons gives a further report of his new operation for prolapsus uteri. He states that four years have now passed since the first patient was treated by this method, and he has now the record of forty operations. The operation does not prevent or interfere with pregnancy. The general idea of the operation is to strengthen the band within the broad ligaments and enable them to hold the uterus. This band, consisting of fibromuscular and elas-

the tissue, runs upward and outward to the walls of the pelvis. This strengthening is secured by the use of a stimulus, which is antiseptic and has a local action. Sulphate of quinine fulfills these conditions, and this is the substance Parsons injects into the broad ligaments through the vagina. One injection is not always sufficient and after the injection has been made, a pessary should be used to give support until the drug has exerted its action. [W. A. N. D.]

14.—Martin describes a case of **extirpation of the uterus and vagina for intractable prolapse**. This operation is indicated in cases in which the pessary cannot be maintained or where the patient objects to its use, or where the ordinary suspending operations have failed. [W. A. N. D.]

15.—Haultain reports a successful case of **abdominal hysterotomy performed for chronic uterine inversion**. The abdominal route presents three distinct advantages over the vaginal as recommended by Küstner and Piccoli: (1) the uterine incision is reduced to a minimum; (2) the assistance acquired by being able to pull on the broad and round ligaments as well as by pushing up the fundus; (3) the more efficient control of hemorrhage which can be acquired by stitching the incision in the uterus with the organ in its normal position, and not in an exaggerated state of ante flexion or retro flexion. [W. A. N. D.]

16.—Itolleston finds that a previous attack of **enteric fever** in England, India, Egypt, or even in South Africa itself does not necessarily protect the individual against enteric in South Africa. He believes that the explanation of this condition lies in the assumption, that there are varieties in typhoid infection, just as there are in streptococcus infection, only in a less marked degree, which do not mutually protect against each other. It follows that atypical cases of enteric fever should be more often followed by relapses than the typical straightforward cases. He has found that antityphoid inoculation does not absolutely protect against a future attack of enteric fever; but when enteric does occur in an inoculated person there is, as a rule, an interval of at least 6 months before the appearance of the disease. He believes that inoculation protects against a fatal termination of the disease. The explanation of the occurrence of enteric fever after inoculation is much the same as that of the occurrence of a relapse or of a second attack of that disease, and may be briefly summarized by supposing that the individual has been rendered immune against some, but not against all the strains of the typhoid bacillus. Among 244 cases there were 52 relapses, or 21%. In a certain number of cases already in the hospital for dysentery, enteric fever developed. In many of these it appeared that dysentery and enteric fever had been contracted at the same time, and that the comparatively long incubation period of enteric fever accounts for the fact that the enteric fever appeared a considerable time after the dysentery. It is probable that when a mixed infection of saprophytic germs and typhoid bacilli attacks the alimentary canal, the diarrhea which rapidly results may so thoroughly remove the typhoid bacilli that the disease does not develop, and that for the time being, at least, a certain degree of immunity to typhoid fever may result. A noticeable feature in many cases was the rapid pulse rate during convalescence, becoming more manifest when the patient was first allowed to get up. This rapidity of pulse was connected with the continued hard work involved in "trekking" previous to the onset of the attack. Considerable hemorrhage from the bowels occurred in 21 out of 244 cases, or 8.7%. Of these 21 cases 76% were fatal. Phlebitis was the commonest sequel and its usual situations were the deep veins of the leg and the femoral vein. There were 3 cases of enteric fever in which the testes were inflamed. There was one case of solitary abscess of the liver and one of multiple abscesses of the skin about the buttocks. [J. M. S.]

17.—Ross and Reynolds saw cases of **arsenical poisoning** at Chester, England, that were so similar to cases of **beriberi**, seen in the East, that the idea that some beriberi cases might have an arsenical origin suggested itself. In August, 1901, at Sierra Leone, a lady was seen who was suffering from a **peripheral neuritis** so similar to beriberi and to arsenical neuritis that the diagnosis was reserved. The patient, who was 27 years old, was the wife of a missionary. She went to the West Coast of Africa in November, 1900, and lived

largely on canned foods, especially fruits of American origin. She was a total abstainer from alcohol. She had a feverish attack in May, 1901, which was described as "low fever." Shortly after this there was pricking at the ends of the fingers and the legs became so weak that she felt unsafe when walking. At this time the patient was pregnant and at the same time the forearms and arms became weak and wasted. There was no actual pain but there was total loss of power in the legs and in the arms and hands, which was of gradual development, as well as well-marked edema of the feet, legs and hands. In July she was delivered of a dead child at full term and the paralytic symptoms then became worse. She started for England and at once began to improve. During the voyage a marked erythema developed on various parts of the body. After treatment with solution of strychnine there was gradual improvement. A lock of the patient's hair was found to contain a considerable quantity of arsenic. [J. M. S.]

LANCET.

October 5, 1901.

1. A Case of Acromegaly. J. PIRIE.
2. Morvan's Disease (?) or Leprosy. D. DOUGLASS CRAWFORD.
3. An Interesting Case of Compression. EUGENE J. O'MEARA.
4. A Case of Sudden Death Eight Days After Amputation of the Forearm. P. N. GERHARD.
5. Physiological Phenomena preceding or accompanying Menstruation, etc. HELEN MACMURCHY.

1.—Pirie reports a case of **acromegaly** which occurred in a married woman 43 years of age. The disease first showed itself in 1886, at which time menstruation suddenly ceased and there developed paresthesia, pains in the arms and legs, headache, and dimness of vision in the left eye, enlargements of the hands and feet, and alteration in the contour of her face. Twelve months after the onset of the affection she gave birth to her last child. In the course of the disease she developed glycosuria, which condition, however, abated during the last few years of her illness. In September of 1896, she presented the classical features of acromegaly. The lymphatic glands were enlarged, and in the sites of the parotid and submaxillary glands there appeared large swellings; goitre also developed. The enlargement of the hands was limited to an increase in the breadth rather than an increase in the length. The patient also suffered from tachycardia, profuse perspiration and seborrhea, particularly well marked about the scalp. The patient's voice was hoarse, the appetite was large, constipation was a symptom, and attacks of bilious vomiting occurred. Many of the muscles of the extremities and the scapular muscles wasted, but this change did not affect the muscles of the trunk. Slight exophthalmos was present. A coal tar product was administered for the relief of pain with considerable success. Typhoid gland substance appeared to give a limited improvement. The patient died suddenly. A post-mortem examination was refused. [F. J. K.]

2.—Douglas-Crawford reports a case of **Morvan's disease (?) or leprosy**. This condition occurred in a man, 27 years of age, who had been employed in a lime quarry for five years. He was compelled to give up this occupation on account of the development of fissures in the palms of the hands. These persisted even after a change of employment. Six months after the change of occupation, he again returned to his former work in the lime quarry. He continued at his work intermittently until November 6, 1899. Whitlows unaccompanied by pain began to form on the fingers of both hands. A few years before he came under the observation of the author, a swelling of the right shoulder and subsequently of the arm developed, which afterward left the shoulder joint greatly enlarged. Fluctuation was detected in the joint. Fluid was withdrawn from the joint five times by incision; at each time the oper-

ation was followed by great relief to the patient, but the condition rapidly returned. The digits of both hands were swollen and deformed, speech was indistinct. He could not protrude the tongue or move it laterally. The skin covering the fingers presented impaired sensation to pain, heat, and cold. The knee-jerks were exaggerated and the plantar reflex and ankle clonus were well marked. The upper thirds of both thighs and the dorsal surface of the feet also showed impaired sensation to pain, heat and cold. A slight plastic condition of the gait was noticed. After a year (ending in July, 1901) the disease presented no signs of advance. [F. J. K.]

3. O'Meara reports an interesting case of compression which developed in a man 26 years of age, after an injury inflicted to the head with a heavy stick. The signs of compression showed themselves in about 24 hours after the injury. The patient was operated upon under slight chloroform anesthesia; the trephine was applied over the anterior branch of the right middle meningeal artery. On removing the bone, a clot protruded through the trephined hole, but the artery was uninjured. Another opening into the skull was made over the posterior branch of the middle meningeal artery, but again the seat of hemorrhage could not be determined and this artery was uninjured. A large clot was removed with a spoon—the brain expanding as the clot was turned out. Strips of gauze were introduced between the dura mater and the bone in order to assist in draining the hemorrhage and to minimize as far as possible the danger of edema from too sudden expansion of the brain. The hemorrhage continued for 36 hours after operation and in 48 hours after it ceased; the gauze was then carefully removed and the flaps drawn over the opening and stitched together with wire sutures. The patient made a gradual recovery without the development of any cortical irritation or mental impairment. [F. J. K.]

4.—P. M. Gerrard reports a case of sudden death occurring eight days after amputation of the forearm. The patient was up and walking about when he was suddenly taken ill and died within a very short time. The postmortem showed a clot situated in the right auricle extending into the ventricle and it is this that Gerrard believes produced the death. No pulmonary embolus was found. The case was a septic one. [J. H. G.]

MEDICAL RECORD.

October 19, 1901.

1. The Case of President McKinley.
2. Failure of the Knife in the Treatment of Cancer.
ROBERT REYBURN.
3. Report of the Summer Work of the Milk Commission of the Medical Society of the County of New York.
HENRY DWIGHT CHAPIN.
4. Laboratory Aid in Surgical Technique.
GEORGE B. BROAD.

1.—See the Philadelphia Medical Journal, October 19th issue, 1901.

2.—Robert Reyburn discusses the failure of the knife in the treatment of cancer. After prolonged study of the subject, this writer has come to the conclusion that when an incision is made into any part of the body for the removal of a malignant growth, we at once divide and lay wide open for infection every vein and lymphatic vessel in the part operated upon. No matter what we may believe to be the contagium of cancer, the fact remains the same. Reyburn believes that the operative measures may be substituted by the electric cauter, or, in a limited number of cases, the use of arsenic or chloride of zinc for the removal of morbid growths. He concludes that the results of John Byrne in the treatment of uterine cancer show that the treatment of this affection by the electric cauter will accomplish the best results. [T. L. C.]

3.—Henry Dwight Chapin, of New York, Chairman of the Milk Commission, appointed by the Medical Society of the

County of New York, reports upon the summer work of the commission. The commission have considered: 1. The condition of the barns. 2. The condition of cows. 3. The milkers. 4. The condition of utensils. 5. The process of cooling. 6. Transportation. 7. Condition of cans or bottles when returned from the city. Considerable amount of data is included in this article as a result of a summer study of the milk question. The information is the result of thirty visits made to various farms and dairies, some at a distance of 100 miles. Each of these visits consumed, at least, one day, and some several days, so that a thorough study of the matter could be made. In general, they suggest that the essential conditions for thorough sanitary preparation of milk may be included under three heads: First, strict cleanliness, which includes the barns, yards, cows, milkers, and all utensils. Bacteria which get into the milk by means of dirt are thus thoroughly excluded. Second, rapid and sufficient cooling of the milk. The few bacteria that do get in are thus prevented from growing. Third, thorough icing around the milk until it reaches the consumer. The production of toxins from the growth of bacteria is thus retarded. [T. L. C.]

4.—George B. Broad presents a paper on laboratory aid in surgical technique. He describes the difficulty of disinfecting the hands and the failure of blechloride of mercury and formalin to accomplish this end successfully. The possibility of the suture material being contaminated and the methods for its sterilization are also discussed, as well as the sterilization of rubber gloves and the gauze to be employed. [T. L. C.]

MEDICAL NEWS.

October 19, 1901. (Vol. LXXIX, No. 16.)

1. The Case of President McKinley.
2. Virchow's Birthday Celebration.
3. Report of the Summer Work of the Milk Commission of the Medical Society of the County of New York.
1.—See Philadelphia Medical Journal for October 19.
2.—See Philadelphia Medical Journal for October 19.

THE NEW YORK MEDICAL JOURNAL.

October 19, 1901. (Vol. LXXIV, No. 16.)

1. Operative Peritoneal Rupture of the Bladder, with the Report of a Case. JOHN A. WYETH.
2. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
3. A Brief Statement of the Sanitary Work so far Accomplished in the Philippine Islands and of the Present Shape of Their Sanitary Administration.
CHARLES R. GREENLEAF.
4. The Advisability of Early Operative Intervention in Acute Mastoiditis; Report of a Case.
EDWARD BRADFORD DENCH.
5. Report of the Medical Staff Attending the Late President, William McKinley.
P. M. RIXEY, MATTHEW D. MANN, et al.
6. Report of the Summer Work of the Milk Commission of the Medical Society of the County of New York.
HENRY DWIGHT CHAPIN.

1.—J. A. Wyeth reports a case of operative pre-peritoneal rupture of the bladder, and says that he has performed between 60 and 70 suprapubic cystotomies and in every case sterile water was injected, the minimum quantity varying from twelve to fourteen ounces, and, in bladders which have been distended by retention, at times twenty-four ounces have been employed. In no other case than this now reported has rupture occurred. He has advised the injection of as much fluid as can be safely carried, in order to give the operator as much room as possible between the vesical peritoneum and the symphysis pubis. In cases where the habit of frequent micturition has prevailed through several years, leaving the bladder in a more or less contracted condition, it would be advisable to contend with the difficulties and possible dangers of operating through a narrower incision, with from eight to ten ounces of injected liquid, rather than run even the very small risk of rupture of this organ by employing the greater quantity. [F. M. T.]

3.—C. R. Greenleaf concludes his article by saying that

no tropical islands in the world enjoy a better climate than do the Philippines; but certain classes of diseases have to be reckoned with there. As to the disease, if proper laws are enacted or enforced to govern the public health, the intelligent foreign visitor or resident may enjoy almost perfect immunity from sickness, provided he will only take care of himself. The native, however, does not know how to take care of himself; not only is he ignorant of the first principles which govern the preservation of health, but he has never had anybody sufficiently interested in him to instruct him in these principles. It has been part of the duty of the Philippine Commission to so instruct him. [T. M. T.]

4.—E. B. Dench states that early operative interference in Acute Mastoiditis is advisable, as it should be remembered that under aseptic precautions, the opening of the mastoid process is without danger. On the other hand, delay in a doubtful case may lead to most serious complications, such as infection of the intracranial structures. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

October 17, 1901.

1. The Value of the X-Ray in the Diagnosis of Renal Stone; Report of Cases. PAUL THORNDIKE.
2. Malignant Disease of the Tonsil. F. E. HOPKINS.
3. Tubercular Peritonitis. HENRI F. FONTAINE.
4. Privileged Medical Communications. DAVID W. CHEEVER.
5. A Brief Résumé of the Life and Work of Ambroise Paré, etc. (Continued). CHARLES GREENE CUMSTON.
6. Association of Anemia with Chronic Enlargement of the Spleen. (Continued).

ARTHUR H. WENTWORTH.

1.—Thorndike reports the following cases: (1) A case of renal calculus composed of uric acid and urates, in which there was abundant clinical indication for operation without the confirmatory evidence of an indistinct shadow on the X-ray plate, which shadow was, however, undeniably present. (2) A case of hydronephrosis in which stone was suspected, and in which a most complete exploration of the kidney definitely demonstrated its absence. (3) A case in which there were 3 small calculi of calcium oxalate, probably secondary to a pyelitis, which resulted from the extension upward of an old gonorrheal cystitis, and in which the photographer interpreted a shadow that the writer could not see. In this case also there was ample clinical indication for operation without the X-ray photograph. (4) A case in which a number of uric acid stones, covered with a thin coating of calcium phosphate, in a thoroughly disorganized kidney, could be readily seen, both in the plate and in the print, by the most uneducated observer. In all these cases renal stones were believed to be present, and X-ray photographs were taken for confirmatory evidence. In 3 of them the stones were found, and the fourth case proved to be one of hydronephrosis, due probably to sagging of the kidney. The writer referred to the method of operation by which the entire kidney is lifted on to the loin, and then split along its convex border in such a way as to expose its whole interior to examination. He has been able to carry out this exploratory technique in 6 instances, and has never had the least trouble from hemorrhage or otherwise, either during or subsequent to the operation. In some stout people it is a practical impossibility to carry out this method of investigation, and efforts to do so should not be persisted in. [J. M. S.]

2.—Carcinoma of the tonsil is rare; but when it does occur it is of much gravity, and demands on the part of the surgeon the exercise of a considerable degree of judgment and skill. As a rule carcinoma occurs at a later period in life than sarcoma, and at a time when the lymphatic structures of the tonsil have undergone certain retrograde changes, but the epithelial structure persists. If, as a result of local irritation, heredity, or some unknown cause, nutritive activity undergoes an abnormal increase, we have the conditions which may prove the starting point of carcinoma. It would be expected then that the form would be epithelioma, and it is found, in the great majority of cases, that this is true. If, then, a case of malig-

nant disease of the tonsil comes before one, the diagnosis lies between a round-celled sarcoma and epithelioma. So far as symptoms are due to the presence of a tumor in the fauces, carcinoma resembles sarcoma, but pain is likely to be an earlier and more troublesome symptom with carcinoma. One must differentiate between simple hypertrophy, syphilitic manifestations, tuberculous process, and even phlegmon. The author cited a case that illustrated the difficulties in differentiating between sarcoma and simple hypertrophy of the tonsil. The prognosis of malignant disease is most serious. The tumor should be enucleated with the finger and blunt instruments, if the case is seen before the surrounding structures are invaded; and the cervical lymphatics should also be removed if they are involved. If the new growth has passed beyond the stage that admits of this shelling-out process with reasonable hope of successful issue, external operation is to be performed. [J. M. S.]

3.—Will be abstracted when finished.

6.—Will be abstracted when finished.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

October 19, 1901.

1. The Treatment of Malignant Disease. FREDERICK S. DENNIS.
2. Carcinoma of the Cecum, Etc. WM. J. MAYO.
3. On the Growth of the Epithelium. LEO LOEB.
5. Some Considerations Regarding the Hygiene of Early School Life. JULIUS NOER.

1.—Frederick S. Dennis discusses in detail the treatment of malignant disease after first collecting various statistics to show the great increase in cancer during late years. It is shown that in the city of Philadelphia there has been an increase of 179% in the mortality of cancer of the breast when the figures of the five years between 1861 and 1865 are compared with those of 1896 and 1900. The increase however, from the period of 1876 to 1880 to the period from 1896 to 1900, was only 12 per cent. The explanation of this falling off in the death rate during the last few years is attributable to the operative treatment of cancer in this city during that time. In the United States in 1890 there were over 18,000 deaths from carcinoma. The Röntgen rays as a method of treatment of malignant disease are still *sub judice*. Some benefit has certainly followed their use in certain cases of epithelioma, but much more time must elapse before this means of treatment becomes a recognized therapeutic agent for carcinoma. Dennis condemns electricity as "worse than useless." Caustics, although useful in some forms of myxoma have won no stable place in the treatment of cancer. The application of caustics is much more painful than the more radical removal with the knife. With the use of nitrous oxide gas Dennis has been able to operate upon many cases in which the use of ether was contraindicated, and in which formerly caustics might have been recommended. Many drugs, such as formalin, pyoktanin, chian turpentine, methylene blue, potassium iodide, and thyroid extract have at various times been extolled as curative remedies. None of them have, however, done more than alleviate and improve certain cases. No absolute cures have been attributed to any drug. Dennis has obtained more benefit from the use of thyroid extract than from any of the others. Considerable space is devoted to the discussion of Coley's toxin treatment. The author thinks that the only cases in which this treatment is apt to prove of much value are those in which after one or two operations it is used as a prophylactic. It is believed that the knife offers the only absolute cure for cancer. The latter part of the paper is devoted to a discussion of the results which the author has been able to obtain by early and thorough operation. No case is given as a cure which has not passed the three year limit. In every instance the diagnosis of malignancy has been confirmed by the microscope. He presents 87 cases of malignant tumors in which operative treatment has resulted in recovery without recurrence after periods

ranging from three to 22 years. Forty-eight of these were cases of sarcoma, 39 of carcinoma. [J. H. G.]

2.—Wm. J. Mayo discusses the question of carcinoma of the cecum and reports two cases in which the cecum was removed for malignant disease. Ewald has collected 1148 cases of intestinal cancer, and in 61 instances the disease was situated in the cecum and in 26 in the ileum. Lymphatic infection is found in less than one-half the cases dying from intestinal carcinoma. The malignant growth usually originates at the ileo-cecal junction and has a tendency to produce obstruction. The symptoms of the disease are colicky pains, constipation alternating with diarrhea, and progressive wasting. Sometimes the tumor may be felt. It is very difficult to make a differential diagnosis between malignant disease of the cecum and a chronic appendicitis. Occasionally the symptoms come on suddenly, being ushered in by an attack of acute obstruction of the bowels and in other instances by an acute intussusception. Both tuberculosis and syphilis may produce inflammatory thickening of the cecum which will render diagnosis difficult. Mayo recommends the formation of an anastomosis between the end of the ileum and the side of the colon above the seat of disease and then the extirpation of the cecum. If it is found difficult to approximate the cut end of the cecum and the side of the colon, then a side-to-side anastomosis between the ileum and the transverse colon may be made. Mayo has excised the cecum four times, twice for malignant disease, once for tuberculosis, and once for chronic intussusception. All of the patients recovered from the operation. His first case of carcinoma of the cecum was operated upon in April, 1899, and is now pursuing his avocation. In this case a diagnosis of chronic appendicitis had been made. The second case was operated upon in January, 1901, for carcinoma of the cecum. In this case also the condition was believed to be one of chronic appendicitis. [J. H. G.]

3.—Loeb gives the results of investigations which were undertaken to determine the growth of epithelium. In a previous report published in 1898 the *Archiv f. Entwicklungsmechanik*, he showed that epithelium has the power of branching in the coagulated blood of healing wounds. The results of his present investigations show that when epithelium penetrates into the blood of healing wounds, it surrounds small particles of blood and occasionally these epithelial cells present mitotic figures. The blood corpuscles surrounded by a sheath of epithelium did not cause the epithelial cells to become pigmented. He was able to demonstrate that epithelium removed from the body of an animal possesses the power to regenerate cells where placed into agar, and that these cells may invade the agar in all directions. He also observed that some of the cells surrounded particles of agar. In a few instances, the beginning formation of epithelial pearls was observed in agar. He concludes the following: "During its growth the epithelium forms a mass of cells, all layers of which are equally able to grow in different directions. A distinct differentiation between different rows of these cell masses does not exist. Later on the epithelium, which comes into contact with connective tissue well supplied with blood vessels, forms again regular epithelium, the lowest rows producing new cells, which now undergo the changes leading to the formation of normal keratohyalin and keratin. We see that these growing cell masses do not need connections with either resting or growing connective tissue; although under the usual conditions found during the growth of epithelium, the epithelial cells are found accompanied by connective tissue. The possibility of separating the growing epithelium from other tissues might be used to subject an isolated tissue like epithelium to certain experimental conditions, as for instance, to the influence of different chemical substances and thus study the reaction of isolated tissues, other than connective tissue and leukocytes to different stimuli." [F. J. K.]

4.—Noer discusses some considerations regarding the hygiene of early school life. The author states that from

the data at our disposal it is evident (1), that mental and physical abnormalities exist in school children and, (2), that these abnormalities are always aggravated, if indeed they are not actually produced by pedantic, pseudo-educational methods." He emphasizes the following: "Regular periodic medical inspection, which should include physiologic and anthropometric examination of the school children, should be a requirement in all public schools. These examinations would not only furnish valuable physiologic and anthropometric data, but would disclose cases of infectious and other communicable diseases. They would also detect mental and physical defects—stigmata—not readily recognized by parents and teachers. These children with marked mental and physical abnormalities, developmental defects, or stigma, should be segregated for special training. Every town with a school population of from 800 to 1000 will have a sufficient number of children of this sort to fill a room, which should be in charge of a person having the exceptional qualifications necessary for success in this kind of work." [F. J. K.]

AMERICAN MEDICINE.

October 19, 1901.

1. The Case of President McKinley: Surgical History, etc. R. M. RIXEY, MATTHEW D. MANN, HERMAN MYNTER, ROSWELL PARK, EUGENE WADDIN, CHARLES McBURNEY and CHARLES G. STOCKTON.
2. The Simultaneous Employment of Analgesia Obtained by Spinal Cocainization and Ether or Chloroform Narcosis. GEORGE RYERSON FOWLER.
3. The Practical Value of Blood Examination in Medicine and Surgery. THOMAS R. BROWN.
4. Extrauterine Abdominal Pregnancy: Operation by the Vagina; Recovery. CHARLES GILBERT DAVIS.
5. Purpura Hemorrhagica Following Acute Lobar Pneumonia, Recovery. H. L. UNDERWOOD.
6. A New Operating, Dressing and Examining Table. M. G. BURGESS.

1.—See Philadelphia Medical Journal of October 19.

2.—G. R. Fowler reports three cases in which he employed simultaneously spinal cocainization and ether or chloroform narcosis. He believes that this method of inducing anesthesia is of especial advantage in that the nervous dread and anxiety are removed, and at the same time general narcosis is accomplished to the extent of rendering the patient oblivious to the surroundings with a very small dose of the general anesthetic agent. [T. L. C.]

3.—Thomas R. Brown presents a paper on the practical value of blood examination in medicine and surgery. He regards the value of leukocyte count in surgery as established, especially in appendicitis, and for the following reasons: Its presence or absence tells whether we are dealing with an inflammation of the appendix, or with a case of hysteria, floating kidney with twisted ureter, gallstones of renal calculus or the gastro-intestinal type of influenza, these conditions not being associated with a leukocytosis; the grade of the leukocytosis tells us about the severity of the infection; a systematic counting will show whether the condition is becoming better or worse; it may be our only means of diagnosis in a fulminating case, especially in children, in whom many of the characteristic symptoms are absent. [T. L. C.]

4.—Davis records a case of extrauterine primary abdominal pregnancy at full term in a woman, 32 years of age. She was operated on through the vagina, the skull of the child being opened and the entire body removed by morcellation. The patient was slightly septic after the operation, but eventually made a good recovery with the exception of a small fecal fistula, which eventually disappeared. [T. L. C.]

6.—M. G. Burgess describes the new operating, dressing and examining table of elaborate type. Eight cuts accompany the article upon the various positions in which the table may be placed. [T. L. C.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

August, 1901.

1. Anesthetics in Heart Disease. JOHN M. T. FINNEY.
2. Cardiac Accidents After Anesthetization. ALFRED STENGEL.
3. Pre-existing Heart Disease in Reference to Surgical Operations. WILLIAM J. MAYO.
4. The Safest Anesthetic to Use in Organic Diseases of the Heart and Vessels. H. A. HARE.
5. Some Conditions Other Than Aortic Aneurysm Which Determine the Occurrence of the Tracheal Tug. HENRY SEWALL.
6. Primary Sarcoma of the Thyroid Gland. AUGUST J. LARTIGAU.
7. Splenic-Myelogenous Leukemia with Pulmonary, Laryngeal and Facial Tuberculosis. ARNOLD STURMDORF.
8. A Case of Cervical and Bulbar Tabes with Necropsy. SOLOMON S. COHEN and WILLIAM G. SPILLER.
9. Some Observations on Typhoid Fever Complicated by Croupous Pneumonia, with Reports of Four Fatal Cases. HENRY M. FISHER.

1.—Finney, discussing the preferable anesthetic to be employed in heart disease, calls attention particularly to the very marked differences observed according to the skill of the anesthetizer. In one case, a middle-aged man, who was subjected to six anesthetizations, showed a variation in the quantity of ether required, from 300 to 1,000 grms. He believes that in cardiac disease remarkably few cases ever exhibit bad symptoms as the result of the administration of ether, and that many of them take chloroform without the slightest symptom that would give rise to anxiety, from the beginning to the end of the operation. Theoretically, chloroform should be considerably more dangerous in cases where there is degeneration of the heart muscle. He gives some statistics, collected from the wards of the Johns Hopkins Hospital, which are based upon 142 cases of various forms of organic and functional disease of the heart. In 8 cases of myocarditis, 5 took ether badly and 3 well. In one of these the initial anesthetization was done with chloroform, but on account of alarming symptoms it was necessary to substitute ether. In one of these five cases the patient died shortly after the operation, but as it was a case of perforative peritonitis, shock was probably the cause of the death. In 7 cases of aortic insufficiency, 4 stood ether well and 3 cocaine. In 6 cases of mitral stenosis, 4 took ether well and 1 chloroform. Local anesthesia was also employed in 2 cases. In 2 cases of aortic stenosis both took ether well in long severe operations. In 49 cases of mitral insufficiency 28 were given ether, 28 of which took it well, 5 rather poorly and 5 badly. Nine cases were operated upon under local cocaine anesthesia and all did well. Two cases were given chloroform. In 7 cases of simple hypertrophy, 5 took ether well and 1 took it badly on 2 occasions. In 16 cases of functional heart murmurs, 42 were given ether, 2 cocaine and 2 chloroform. Seven of these took the anesthesia badly. In 4 cases of systolic murmur heard best at the base, 1 took ether badly. In 9 cases of arrhythmia all took ether well, but one of them had the arrhythmia increased. The severity of the operation did not appear to have much influence upon the effect of the anesthesia. In patients subjected to complete excision of the breast, herniotomy, resection of the appendix, etc., showing all forms of cardiac trouble, no bad effects could be determined on account of the duration of the anesthetization. [J. S.]

2.—Stengel believes that it is not yet positively proven that chloroform produces fatty degeneration of the heart and blood vessels. If it does the lesion is certainly extremely infrequent. In all cases it is doubtful whether the shock of the operation or the anesthesia is the immediate cause of the collapse. In 6 cases of myocarditis in which it was necessary to give ether, he has found

that, as a rule, they bore it well, although in some instances it was necessary to abandon the operation on account of threatened collapse. In an instance under his observation, of general arterial sclerosis with slight aortic disease, the patient, after etherization, died of progressive exhaustion of the heart muscle, which, at the autopsy, proved to be the seat of fibroid change. He mentions the interesting observations of certain gynecologists in reference to the influence of fibroid disease of the uterus upon the vigor of the heart. In some cases he is sure that the administration of ether has a temporarily beneficial effect upon the cardiac condition. Some remote results, however, may be due to the weakness of the heart. [J. S.]

3.—Mayo regards myocarditis as the most serious condition in reference to anesthesia. It is very difficult to determine its existence, and sometimes it is only discovered after the patient has died suddenly upon the table. He reports 2 cases, one of which died 48 hours after a cholecystotomy, and the other upon the table during an abdominal hysterectomy. The condition of the heart is not mentioned. In the third case of thyroidectomy for exophthalmic goitre in which the operation was performed with local anesthesia, the patient died 24 hours later. [J. S.]

4.—Hare calls attention to the great uncertainty regarding the dose of the anesthetic employed in surgical operations, because it is impossible to tell how much of the drug is dissipated in the surrounding air, and how much enters the patient's lungs. He believes that patients of exceptional height usually bear the anesthesia badly. The effect of ether is to increase arterial tension, therefore in cases in which the arterial tension is already increased it is not advisable. With regard to its administration he believes it is disadvantageous to use the rubber bag into which the patient respire, because it involves the inspiration of a large amount of carbon dioxide. Oxygen given with the anesthetic may possibly produce chemical changes in it. In myocarditic conditions chloroform should not be used, and nitrous oxide is strongly contraindicated. In certain forms of valvular disease there may be very marked improvement during the administration of the ether. [J. S.]

5.—Sewall has made careful investigations upon 430 persons taken without reference to their diseased condition, in regard to the presence or absence of the tracheal tug. He has found that a downward pulsation of the larynx immediately following systole of the ventricles, is an exceedingly common phenomenon. It is, however, as a rule, very slight, and only becomes unusually pronounced in cases of aneurysm. The non-aneurysmal tug usually occurs during the period of inspiration although this is not invariable. The statistics of these cases, which are given in tabular form, are as follows: In 245 males, 131 had no signs of pulmonary disease, but in 52 there a slight tracheal tug. Of these, 37 had the tug in a severe form. 112 cases pulmonary lesions, probably causing adhesions of the left pleura, were present, and 84 of these had distinct tracheal tug. In 71 cases it was pronounced. In several cases of tuberculosis of the left lung with cavity formation, the tug was absent. 185 women were examined, and of these 125 were normal. Only 30 of these had tracheal tug, and of these 30 only 10 had distinct tracheal tug. In 47 cases with probable adhesions of the left pleura, 34 had positive tracheal movements, which were marked in 20. In 9 cases of emphysema or arterial sclerosis the tug was present in 4. He concludes that in the majority of cases adhesions of the left pleura produce the tracheal tug, and that diminished extensibility of the lung may cause the same phenomenon. Also that in normal individuals it is possible that the diaphragm may pull down the heart and cause the aortic arch to press upon the left bronchus and cause a palpable tug of the larynx. [J. S.]

6.—Lartigau has been able to collect together 55 cases of sarcoma of the thyroid gland. He believes, however, that

the disease is more common than these figures would indicate. He reports a case occurring in a woman 45 years of age, who, 8 years previously, had noticed a lump in the neck. This gradually increased in size but did not cause any discomfort. Ten days before admission a second lump appeared in the left side of the neck, which was tender and produced some interference with the respiration on swallowing. The tumor was removed by operation and found to consist of an angiosarcoma replacing the thyroid gland. Active recurrence took place, and the patient finally died of asphyxiation. At the autopsy the findings were those of primary sarcoma of the thyroid gland and fibromas of the uterus and breast. The primary tumor was evidently a simple cystic goitre. In 51 of the cases of primary sarcoma, 35 had had goitre previously, and it is likely that the benign enlargement precedes the growth. Sarcoma of the thyroid appears to be commonest between the years of 40 and 70 and equally frequent in males and females. It is most common in the right lobe of the thyroid. The growth is very rapid and operative interference appears to be of little benefit on account of the great tendency to recurrence. Metastasis is quite common, especially to the cervical lymph glands, the lungs and the blood. In rare cases extensive tumor thrombi are found in the large veins. The commonest forms are round or spindle-cell sarcoma, although angio-sarcomata are not rare. [J. S.]

7.—Sturmdorf reports the following case: A woman of 35 suddenly developed sore throat, cough and hoarseness. Her general condition rapidly deteriorated; a collection of glands appeared in the left submaxillary region, and the abdomen protruded greatly. Physical examination showed enormous enlargement of the liver and spleen; marked reduction of the red blood corpuscles, great increase in the white blood corpuscles, and the characteristic changes in the blood of leukemia. There was also tuberculosis of the larynx, and the physical signs of tuberculosis of the right apex. There was considerable fever and from time to time the blood showed slight variations. The patient is still living, and a diagnosis of *spleno-myelogenic leukemia associated with tuberculosis*, has been made.

8.—Cohen and Spiller report the case of a man who had, at the age of 25, contracted syphilis. Thirteen years later he noticed nocturnal incontinence of urine. Six or seven years after this there was ptosis, and later inequality of the pupils. At the age of 52 some teeth were extracted, during which he felt no pain. At the age of 55 there was slight paralysis of one side of the face, disturbance of articulation, curious sensory disturbances, particularly extreme sensibility to cold water, loss of taste, impairment of vision, inequality of the pupils, diplopia, signs of myocarditis and slight disturbance of intelligence. The reflexes were normal; co-ordination perfect, and the muscles responded normally to electricity. Twelve years later the patient died at the age of 67. There had been progressive loss of strength, darting pains in the legs, which were relieved by warm applications to the abdomen, and death finally occurred as a result of uremia. Dr. Spiller examined the brain and cord, and found degeneration in the posterior roots in the lower cervical and upper dorsal regions. There was also a small area of degeneration of the columns of Burdach. There was also some degeneration in the extra-medullary portion of the fifth nerves and some of the other cranial nerves and their nuclei. The right cerebral peduncle was smaller than the left. The lesions justified the diagnosis of *atypical tabes*. They call attention to certain of the interesting symptoms: the slight disturbance of mentality, evidenced by a tendency to repeat stories and forget details; the springing mydriasis, and they conclude with an analysis of the literature of the subject.

9.—Fisher reports the following case of *typhoid fever* in a girl of 16, who, in the course of the disease, developed signs of *croupous pneumonia* of both lower lobes, which

were confirmed by the autopsy. Another case, a girl of 19 who developed signs of congestion of both lower lobes. There was some leukocytosis, great rapidity of pulse and respirations, and the patient died. An autopsy was not permitted. The third case, a boy of 16, was admitted with the signs of severe typhoid fever, muttering delirium, no leukocytosis, and on the 28th day of the disease there was some evidence of pulmonary complication and the leukocytes had increased to 45,000. He rapidly grew worse and died. The fourth case, a boy of 6, was admitted to the hospital, when he did not present the characteristic signs of typhoid fever, but developed consolidation of the lower lobe of the right lung. At the autopsy there was croupous pneumonia and swelling of Peyer's patches, apparently indicating convalescence from typhoid fever.

[J. S.]

EDINBURGH MEDICAL JOURNAL.

August, 1901. (Vol. X, No. 2, N. S.)

1. Some Notes on Alcohol in Its Medical and Scientific Aspects. G. SIMS WOODHEAD.
2. Indications for Surgical Interference in Appendicitis. WALTER G. SPENCER.
3. Traumatic Separation of the Lower Epiphysis of the Femur, with Notes of a Case and Skiagrams. A. H. TUBBY.
4. A Ship of the Veldt. ANDREW BALFOUR.
5. Reduplication of the Second Sound of the Heart. C. C. GIBBES.

1.—See Philadelphia Medical Journal, Vol. viii, No. 8, p. 279.

2.—Spencer divides the diseases of the right iliac fossa into (1) cecal distention, (2) perityphilitis and (3) appendicitis. He divides **appendicitis** into (1) acute perforating appendicitis, (2) suppurative appendicitis, sthenic, asthenic and septic extension, (3) relapsing and recurring appendicitis, and (4) chronic latent appendicitis with septic anemia. The treatment of cecal distention is entirely medical. Perityphilitis may be due to decomposition within the cecum or appendix or from other causes that leave no adhesions behind. In such a case medical treatment will be followed by cure. On the other hand, perityphilitic adhesions may be present, and, by their kinking, cause obstruction in the lumen of the appendix. Such cases require surgical treatment. In acute perforating appendicitis an immediate operation is the only means of saving life. In acute suppurative appendicitis, whether of the sthenic or the asthenic type, the appendix should be exposed as soon as the diagnosis can be made, by keeping outside the general peritoneal cavity, draining the abscess and removing the appendix at a later date. Relapses should be distinguished from recurring appendicitis by careful examination after the attack, and if signs of chronic appendicitis are found, the appendix should be removed at once. General septic anemia may be set up by a continuous latent appendicitis in which there is great danger of the disease not being recognized until too late for successful surgical interference. The author relies on the pulse rate in diagnosing between cases that require immediate operation and those in which medical treatment is indicated. If the pulse rate rises above 110 surgical exploration is strongly indicated while a pulse rate of 100 indicates medical expectant treatment. There are exceptions to these rules, however. In chronic cases the question of operation turns on careful palpation of the cecal region. If no deep-seated tenderness is discovered the case should be considered one for medical treatment. [J. M. S.]

3.—Tubby reports the case of a boy aged 9 years who was suffering from *traumatic separation of the lower epiphysis of the right femur*. The condition was treated by open operation and the epiphysis was retained in its place by a screw. There was also a fracture of the middle of the left femur. [J. M. S.]

5.—Gibbes considers that if both the aortic and pulmonary elements of the diastolic sound can be distinguished that the diastolic sound is reduplicated. It is not necessary that the component parts be separated by a distinct interval. He believes that the side of the heart that has to cope with the greatest amount of abnormal intra-arterial pressure takes the longest time in getting up

steam to overcome the said pressure and open the semilunar valves; it, therefore, begins its contraction before the other ventricle. The closure of the semilunar valves takes place, under normal conditions, at the moment when the intra-arterial pressure rises to a point higher than the intraventricular pressure. If, therefore, any alteration occurs in the relative aortic and pulmonary pressure, those valves would close first on the side on which the arterial pressure was in excess of this normal ratio. In his paper the author deals with those cases in which the pulmonary pressure is abnormally high. The author finds that, as a rule, the point of maximum intensity of the first portion is in the pulmonary area, and that the intensity of the second portion is greater in the aortic area. He records two cases in which there was increased intensity of the second portion of the reduplicated sound to the left of the apex. When an aortic diastolic murmur is associated with reduplication of the second sound, the murmur always follows the aortic or second portion. In mitral stenosis with an early diastolic murmur the same thing occurs; if reduplication is absent, the murmur accompanies the second sound and is called an early diastolic murmur; should reduplication be present, it follows the second or aortic portion of the reduplication, and is called a mid-diastolic murmur, the distance between the murmur and the pulmonary portion of the second sound depending on the amount of asynchronism present. In some cases in which the aortic portion of the second sound is very feeble, the murmur may drown it and appear to entirely replace it; the murmur being separated from the pulmonary second sound by a distinct interval. [J. M. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

July 8, 1901. (No. 27.)

1. Paroxysmal Tachycardia. U. ROSE.
2. Report of Cases of Pulmonary and Laryngeal Tuberculosis Treated from December 18th to April 10th 1901 at Karase's Polyclinic with Intravenous Injections of Hetol (Landerer). H. GUTTMANN.
3. The Advancement of Medicine Through Laryngology. GRABOWER.
4. Remarks on a Case of Aneurysm of the Aorta. LANDGRAF.

1.—Will be abstracted when concluded.
2.—The author gives a summary of the results obtained in cases of pulmonary and laryngeal tuberculosis that had been treated with intravenous injections of hetol, as prescribed by Landerer. The treatment was instituted in thirty-three cases and is recommended by the author. In cases of laryngeal tuberculosis there were microscopical evidences of improvement in portions of tissue that had been obtained by curetting. One case was cured and ten were markedly improved. Even in cases that did not terminate favorably there was at least transitory improvement. The dosage of hetol must be a guarded one, notwithstanding that no toxic phenomena are reported in these cases. Guttman recommends the hetol treatment in all cases of inelapent tuberculosis. [M. R. D.]

4.—Landgraf urges the importance of considering the involvement of the recurrent laryngeal nerve in cases of aortic aneurysm, and cites a case of his own in which he made the diagnosis of aneurysm of the thoracic aorta in an officer 43 years of age, simply from the pressure that the aneurysm caused upon the left recurrent laryngeal nerve and the effect upon the circulation in the left carotid and subclavian arteries. [M. R. D.]

July 15, 1901. (No. 28.)

1. The Question of Zomotherapy. C. FRAENKEL and G. SOBERNHEIM.
2. Cryoscopy of the Urine. H. KOEPPPE.
3. The Treatment of Aphasia. H. GUTZMANN.
4. Double Formation of the Lower Turbinate Bone. STURMANN.
5. Paroxysmal Tachycardia. U. ROSE.

1.—Treated editorially in the Philadelphia Medical Journal of August 10, 1901.

2.—The results of the author's investigations may be summed up as follows: In estimating the freezing point of the urine it is to be taken into consideration that not only the urines of the two kidneys may be dissimilar, but

also urines that have been secreted at different times; the urine that is emptied from the bladder, therefore, is practically a mixture of various urines, which must be borne in mind when determining the reaction and the molecular concentration. The urine of each kidney, therefore, should be separately obtained. The author states that, as a rule, the reaction of the human urine is acid in the morning, alkaline in the forenoon, again acid before the mid-day meal, alkaline again thereafter, and again acid during the evening and the night. He emphasizes the statement that the chemical equilibrium of the urine may be changed by the addition of a solution of salts, and that a change of reaction may take place under these circumstances to such an extent that a neutral urine, by the addition of an alkaline salt solution, may subsequently show an acid reaction. [M. R. D.]

3.—Gutzmann states that in speech exercises during aphasia individual syllables should be systematically practiced. Furthermore, it is important to have the patients perform writing exercises with the left hand, in order to prepare the brain for the speech exercises. Tactile and optical sensations should also be taken into consideration. He believes that, even in cases of long existing aphasia, the results are very encouraging. [M. R. D.]

4.—Sturmman reports a case in which there were visible three turbinate bones on the left side. The middle of the three bones occupied about the anterior half of the nasal wall, while above and posteriorly was seen the superior turbinate. The author states that in the human fetus, between the third and fourth months, there is superiorly a curved prolongation of the turbinate bones, which reminds one of the mallian, which later unwinds and utterly disappears. He explains the phenomenon in this case as due to a retardation of the above-mentioned metamorphosis occurring in the fetus. [M. R. D.]

5.—The author reports a typical case of apoxysmal tachycardia, in which there was no dilatation of the heart during the attack, although cardiac weakness was observed during the paroxysm. The author's case, as a whole, is an example of the assumption that paroxysmal tachycardia is to be attributed to a central neurosis. [M. R. D.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

June 27, 1901.

1. Topography of the Brain. WALDEYER.
2. Differentiation of Human and Animal Blood by Means of a Specific Serum. E. ZIEMKE.
3. Clinical and Therapeutic Investigations Concerning Pulmonary Phthisis. E. STADELMANN.
4. Concerning "Cancer a deux" and Infection with Cancer. R. BEHLA.
5. Biological Investigations of Natural Chalybeate Waters. O. ADLER.
6. Trauma and Extrauterine Pregnancy. L. SEELIGMANN.

1.—To be continued.

2.—Ziemke has made further studies of the specific biological blood reaction, having been furnished by Wassermann and Schuetze with two serums, (A and B, A having been prepared by somewhat more prolonged and more numerous injections of human blood.) The blood investigated was dissolved in a 0.75 salt solution or a 0.1% soda solution diluted until the color was a faint pink and the serum was added in a proportion of 1 to 10. He reports investigations of fresh fluid blood, of foul decomposed blood, dried blood as old as two years, blood in cloth, the spots dating back as far as 1878, blood in earth, on instruments, blood washed out of clothes where it had been as long as 18 years, blood from a cellar wall, blood stains on wood, and on glass, blood from a man poisoned with CO., blood on paper, ten months old, and blood stains on linen which had been exposed to the open air for several months. With serum A he had only one negative result (blood-stains made on a shirt in 1883) and in this case the solution had absolutely no color and evidently the blood was not extracted by the solution. With serum B he had seven failures evidently because the animal yielding this serum had not been so strongly dosed. The reaction when most striking occurred at once; sometimes there was only a very gradually appearing cloudiness. With other varieties of blood than human, he never got a reaction with the human antiserum. [D. L. E.]

3.—Stadelmann refers to the work of his assistant,

Meyer, in regard to eosinophile sputum and its relation to prognosis in phthisis. He could not confirm Teichmüller's results (extracted from *Deuts. Arch. f. Klin. Med.*, 1899). Many cases were seen that were certainly mild early phthisis that showed no eosinophiles in the sputum; in one case with rapid course there were always numerous eosinophiles and in many cases bacilli and eosinophile cells were found together in the sputum. Stadelmann thinks that contrary to Teichmüller's very definite statement that eosinophile sputum means a favorable case, one may say flatly that there is no known relation between the number of eosinophiles in the sputum, or even their presence or absence therefrom, and the stage, severity or other nature of cases of phthisis. Guacamphol is next discussed as a means of controlling the night sweats of phthisis. He gives it in doses of about 3 gr. in the evening and advances to as much as 15 grs. and finds that it has an effect equal to that of atropine and is harmless and had no unpleasant collateral or after effects. The active ingredient is camphoric acid, but Stadelmann believes that it acts better than camphoric acid. Pyramidon was used in doses of 3 to 4 grains twice daily (or larger doses) to control the fever of phthisis. The results were good in most cases, but it failed in a considerable number. Nevertheless Stadelmann considers it a very useful drug for this purpose but prefers camphoric acid to pyramidon in cases which tend to sweat as the plain drug tends to increase sweats while the camphoric acid preparation controls sweats. [D. L. E.]

4.—Behla presents a series of cases of "Cancer a deux" i. e. instances in which persons living in intimate contact with each other, but not related, died of cancer one after the other. He speaks of these cases quite freely as instances of infection of one person from another, and insists that there is perfectly satisfactory evidence that cancer is contagious in a limited degree, somewhat as leprosy is. He believes that there should be regulations to prevent the spread of cancer through direct contagion or fomites, and pleads for a special German institution for the study of cancer. [D. L. E.]

5.—Adler, in investigating the reason for the occurrence of a precipitate in Carlsbad water found that adding an antiseptic to the water prevented this occurrence and afterward found that bailing the water well had the same influence. He then studied the precipitate and found long spirilli in enormous numbers. After bailing water and seeing that it kept perfectly clear and no precipitate formed, he introduced some of the spirilli and a precipitate soon formed thus leading him to the positive conclusion that this precipitation of iron salts is due to bacterial action. A matter which is of considerable importance to the bottlers. [D. L. E.]

PRESSE MEDICALE.

July 17, 1901. (No. 57).

1. Adiposis Dolorosa. PROFESSOR DEBOVE.
2. Injections of Iodo-mercuric-cacodylate.

L. BROCC, CIVATTE and FRAISSE.

1.—Debove presented the first case of adiposis dolorosa which he had ever seen. The name, which was given the disease by Dercum in 1888, is particularly appropriate, representing, as it does, the two main symptoms of the disease. Women alone have been found subject to it. This case, a woman aged 80, the mother of 5 children, fell 15 years ago, after which accident an operation was performed upon her hip, some bloody fluid being evacuated. Since that time her legs have been weak. For three years afterward, and off and on since, to her 65th year, irregular metrorrhagia existed. Pain appeared in the left hip and lumbar region, always along the nerves. It is made worse by pressure. She grew stouter very gradually, weighing now 163 pounds, while she is under five feet high. The fat is in large masses about the malleoli, hips, calves, buttocks, abdomen, forearms, and backs of the arms, especially. This fat is only found in certain regions, and is not universally or equally distributed. The masses are, however, symmetrical and the pain appears in or near them. The prognosis is grave, as no treatment has ever cured the condition. But the patient may live years with it. Debove believes the condition is due to some disturbance in the fat regulating apparatus of the spinal cord. Thyroid extract will be given. [M. O.]

2.—Iodo-mercuric-cacodylate is made by neutralizing acid mercuric cacodylate by adding to it sodium iodide. It has always been given in injections, as diarrhea followed its in-

gestion. There was no smell of garlic to the breath. The doses given were 1 or 2 c.c. of a solution containing 3 cg. of sodium cacodylate to the c.c. The injections were given in the buttocks. This treatment proved successful when biniodide and calomel injections and mercurialunctions failed. In all, 49 cases of syphilis were treated. After a full exposition of the experiments, their success and their failures, they conclude that Iodo-mercuric-cacodylate contains sodic cacodylate, sodium iodide, and mercuric biniodide; that it is soluble in water, sterilizes at 120°, and mixes with blood-serum without producing any precipitation; that it is well supported in subcutaneous injection, without pain or abscesses; and that it is indicated in syphilis with marked lack of nutrition, with emaciation, neurasthenia, etc., in the rebellious secondary manifestations upon the skin and mucous membranes, when syphilis exists as a complication, and when the stomach will not bear mercury, in the tertiary stage.

July 20, 1901. (No. 58).

1. The Antitubercular Dispensary in Lille.

A. CALMETTE.

1.—Calmette relates the facts which led to the foundation of the Emile Roux Dispensary for Tubercular Patients in Lille, describing in detail the buildings recently erected. The purpose of the dispensary is to find those laborers who have tuberculosis, to treat them gratis, to distribute milk, food, and antiseptic spittoons, to obtain their absence from work when necessary, and to allow the carrying out of a general prophylaxis against tuberculosis. This idea has been followed in other cities of France, aided by public subscriptions. Questions are asked about the family and personal history, clothing, work, hygiene, home, etc. The examination of each patient includes measurements of the chest, weight, expectoration and thorough examinations of the lungs, heart, and larynx. Assistants visit the homes of the patients once a week. People in the same house are instructed in antitubercular hygiene. Bed-clothes, etc., are carefully disinfected. Some cases are sent to the country. Calmette hopes to teach the people by this means the best manner to combat tuberculosis.

[M. O.]

CENTRALBLATT FUER CHIRURGIE.

1. The Surgical Treatment of Thrombosed Varices of the Leg. W. KRAMER.

1.—According to the author, thrombosis occurs frequently in varices of the leg, and particularly in the superficial ones. This complication was once looked upon as a favorable occurrence and as leading to a cure of the venous dilatation; earlier surgeons have even attempted to bring about this condition artificially for therapeutic purposes. But our knowledge now of thrombosis leads us to regard it in these cases as an unfavorable complication on account of the recurring inflammations which lead to abscesses, ulcers, eczema and even fatal emboli. Improvements and cures have but very rarely been brought about by organization and calcification of such thrombi, and then only after weeks and months of rest in bed. As such surgical procedures as ligating the saphenous vein or its total extirpation have been instituted, the author believes himself justified to recommend a new procedure which is a safe one. If performed under rigid asepsis. This consists in making an incision into the skin and an incision into the varicose veins in their long axis and carefully removing the coagula. He reports fifty favorable cases in which there were no secondary hemorrhages, which he explained was due to the fact that the termini of the vessels were closed by the coagula. The operation wounds healed without fever or reaction and without fistulae, the scars which remained being narrow, painless, and in no case the seat of the ulcers or eczema. [M. R. D.]

REVUE DE CHIRURGIE.

June, 1901. (21me. Année, No. 6).

1. Symmetrical Lipomata in a Patient with General Paralysis of the Insane.
CHARLES FERE and MARTHE FRANCLION.
2. The Treatment of Stricture of the Rectum with Stenosis. ALFRED NAVARRO.
3. The Examination of the Blood as a Means of Surgical Diagnosis. JACQUES SILHOL.

4. Accidents Attending the Eruption of the Wisdom Teeth. MOTY.
5. Scapulo-humeral Arthrodesis. BOTHEZAT.
6. Genital Tuberculosis in the Female.
MARIE GOROVITZ.
7. The Treatment of Artificial Anus.

X. DELORE and M. PATEL.

1.—Féré and Francillon report a rare case of **symmetrical lipomata** occurring in a man of 51, with **general paralysis of the insane**, which followed a blow on the head two years ago. His general condition is good. Lipomata, symmetrical in position, are seen upon his arms and legs. Some have existed 20 years, others over 7 years; in both cases long before he became insane. They are all small and lobulated. The literature of the subject and the different theories to explain their occurrence are reviewed. Féré and Francillon believe that the usual antecedents of general paralysis, syphilis and alcoholism show a tendency to the development of certain disturbances of evolution, even before any signs of general paralysis appear. These tumors are not considered trophic changes, in any way connected with the general paralysis of the insane.

[M. O.]

2.—Navarro reports in full the histories of three cases of **stricture of the rectum with proctitis**. The first case was in a syphilitic woman of 38; the second, in a syphilitic man of 42; and the third, in a non-syphilitic woman of 32, following hemorrhoids. In all three, the strictures had almost produced stenosis. Navarro operated upon all of them, performing laparotomy, with extirpation of the affected part of the rectum *en masse*, leaving an iliac artificial anus. Strictures of the rectum may be found high up in the rectum, or in the sigmoid flexure, with all grades of dilatation above the stricture. He attaches the intestine, which is well stretched, between the iliac and the parietal peritoneum, after having performed torsion by the Gersuny method. Thus a true anal canal is made, which can be controlled by the patient voluntarily. An excellent result was secured in every case.

[M. O.]

3.—From a series of **blood examinations**, with estimations of the amount of hemoglobin, the number of red and white blood corpuscles, and their characteristics from cover-glass preparations, Sihol concludes that a patient with gastric symptoms, who presents a considerable diminution of hemoglobin, a notable decrease in the erythrocytes, marked leukocytosis, and irregular, deformed red cells, probably has a tumor of the stomach. If there are all of these things present, very irregular in form, the tumor is cancer. Leukocytosis in carcinoma has been noted, especially in carcinoma of the rectum. In a number of cases of cancer of the breast, bladder, and cardiac extremity of the stomach, leukocytosis was absent. With suppuration it always exists. Leukocytosis found in a case of appendicitis is a cause for immediate operation. From the small number of examinations made as yet, no definite conclusions can be drawn. [M. O.]

4.—Will be abstracted when concluded.

5.—Will be abstracted when concluded.

6.—Will be abstracted when concluded.

7.—Delore and Patel consider the **treatment of the true artificial anus**, not including suppurating stercoral fistulae. When a communication exists between the intestine and the outside air through the abdominal wall, an artificial anus, or true stercoral fistula results. At first the intestine is normal; later a spur forms opposite the opening and the mucous membrane atrophies. Surgical treatment will result favorably if no spur exists, when the openings are small, and when granulation tissue lines the wound; it will result unfavorably when there is a protruding spur, when the openings are large and when the intestinal mucous membrane covers the wound. Numerous useless extraperitoneal operations have been devised to re-establish the intestinal circulation. To close the external orifice extraperitoneally, compression, cauterization, sutures, with total closure of the wound, have all been attempted. The results were not very satisfactory. Nowadays the intraperitoneal operations are chosen, on account of the good results obtained. Three operations are employed, **lateral enterorrhaphy**, **entero-anastomosis**, and **enterectomy**. The technique of all three operations is given in full. Two cases of Professor Poncet, cured by enterectomy with the use

of the Murphy button, are described in detail. While entero-anastomosis is a benign procedure, it is not curative. Thirteen case histories follow, of patients in whom the Murphy button was employed. Delore and Patel conclude that the extraperitoneal methods of treating artificial anus should only be employed exceptionally, as they are often dangerous and incomplete. They are only to be done when no spur is present. Of the intraperitoneal operations, entero-anastomosis is useless, lateral enterorrhaphy may do good when the large intestine is affected; **enterectomy is the best operation of all**. Circular enterorrhaphy with sutures is rarely done, the Murphy button being now generally used. It is sure, safe and rapid. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

June 20, 1901. (Vol. xli, No. 25.)

1. On the Symptomatology and Treatment of Perforative Peritonitis in Gastric Ulcer. F. K. VEBER.
2. The Connection Between Diabetes Mellitus and Insipidus and the Female Genital Organs and Pregnancy.
K. K. SCROBANSKI.
3. On the Physiology of the Pyloric Portion of the Dog's Stomach. A. I. SCHEMIKIN.

1.—Veber reports a case of **gastric ulcer** in a man 42 years old, who suffered from gastric disturbances for several months prior to the appearance of the ulcer. The latter was made evident by vomiting of blood three weeks before admission, and **perforated five days before the patient was brought to the hospital**. In spite of the perforation, the patient walked about the day following. When examined, he was found in a state of partial collapse. Facies Hippocratica was more or less marked. The pulse was rapid, but quite full. The abdomen was distended and tympanitic throughout. A very rare and hitherto undescribed symptom was observed, namely, **vocal fremitus distributed throughout the abdomen**. This symptom was attributed to the presence of free gas within the abdominal cavity. When the latter was opened a considerable quantity of gas, free from odor, escaped. The perforation was found on the small curvature near the pylorus and in contact with the liver, to which the edges of the ulcer became adherent, thus localizing the inflammatory process. The perforation was closed by three silk sutures and gauze drainage introduced. During the first two days the patient received nutrient enemata, but the condition of the rectum necessitated the administration of liquid food by the mouth. On the sixth day the wound of the stomach opened, and the entire food introduced came out through the fistula. The patient died from exhaustion on the ninth day after the operation. The autopsy revealed a large round ulcer of the stomach undergoing carcinomatous degeneration. The author suggests that in this and similar cases **jejunostomy might be the means of saving life**, as it would enable the patient to receive direct nourishment, at the same time affording rest to the stomach. With regard to the peculiar symptom observed, the opinion is expressed that abdominal ceecal fremitus can only take place when the abdominal cavity is filled with gas and free from adhesions of the viscera. It is due to the gas being in direct contact with the diaphragm, from which the impact is received and transmitted during articulation. [A. R.]

2.—Will be abstracted when concluded.

3.—Schemikin was led by a large number of experiments on drugs to the following conclusions: 1. The conditions determining the secretion of the pyloric portion of the stomach are entirely distinct from those of the fundus. 2. The masses of food remain in the pyloric portion for a short time, and pass through the pylorus in small portions. 3. The pyloric portion is, therefore, to be considered rather the beginning of the intestines than the terminus of the stomach. [A. R.]

The Therapeutic Value of Electric Light.—G. A. Kliatchkin (*Kazanski Vredinski Journal*, March, 1901) employed electric light in the treatment of neuralgias, artralgia as a result of gout, articular rheumatism and obesity, with remarkable success. From 16 to 32 candle powers were used. In the three cases of obesity the loss in weight amounted to 6 to 9 kilos within 2 to 3 months. One case of psoriasis of the head was cured in twenty-eight sittings. Altogether twenty-six cases were thus treated. [A. R.]

Society Reports.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Fiftieth Annual Meeting Held at Philadelphia, September 24-25, 26th, 1901.

(Continued from Page 638.)

A Case of Ascites due to Hepatic Cirrhosis; Treated by Transplanting the Omentum Between the Peritoneum and Abdominal Wall; Result with Autopsy 8 months later. Dr. W. J. Roe, of Philadelphia, read this paper. The patient's abdominal cavity had been tapped 31 times before the operation was performed, averaging 760 ounces per tapping. There were 21 tapplings subsequent to operation, averaging 218 ounces. Microscopical examination of the ascitic fluid was negative. Post-mortem examination showed cirrhosis of the liver, absence of the right kidney and a very large horse-shoe kidney. The portal vein and its chief tributaries were found to be uninvolved. The etiology and literature have been freely alluded to. (This paper will appear later in the Philadelphia Medical Journal.)

Typhoid Fever in a Prematurely Born Child, by Dr. Harry C. Westervelt, Pittsburg. The speaker referred to the scarcity of well authenticated cases of this kind. Enteric fever in children had been frequently termed infantile remittent fever until its real nature became known. He reported the case of a woman who had typhoid fever in her third pregnancy, in whom the course of the disease was severe, but who recovered. An accident caused the birth of a fetus 7 months and 2 weeks old at the beginning of the third week of the mother's illness. The child presented the weazen old-man appearance of the prematurely born and no hope of its living was entertained. It was placed in an improvised incubator, the child's temperature being 103.8°. It had diarrhea and weighed but three pounds and 14 ounces. It was removed from the incubator and placed at room temperature, the temperature of the child varying for 17 days from 99.4° to 102°. At one time the temperature of the little patient was 106°. The temperature subsequently became normal and the child recovered, weighing 14¼ pounds.

Ruptured Tubal Gestation and the Physician. By Dr. John M. Fisher, of Philadelphia. The author stated that unfortunately but few cases come to the attention of the surgeon in time and it is only when grave conditions are present that he sees them. The responsibility is forced on every physician and there is nothing more important in any branch of medicine for him to know than to be able to make a diagnosis in these cases. As soon as the diagnosis has been made, prompt surgical intervention is indicated. The writer has repeatedly found patients in an exsanguinated condition and in no case should this condition have been recognized as anything else than ruptured ectopic gestation with concealed hemorrhage. Ectopic gestation with few exceptions is tubal. The most important cases are those combined with inflammatory conditions and their sequelae. In most of the author's cases the patients had previously miscarried. There may be but two symptoms for diagnosis before the time of rupture; namely, metrorrhagia, sterility of several years standing, following a previous pregnancy. Often, when the patients are subject to a severe strain, they are seized with collapse, acute anemia and pallor, the pulse being absent or rapid and flabby. There may be nausea and vomiting. The condition cannot be confounded with fainting which is of but short duration as well as its accompanying symptoms. In ectopic gestation the anemia is profound and persistent. A boggy swelling in Douglas's cul-de-sac is usually present, due to blood clots. The condition has been confounded with gastric perforation, intussusception, volvulus and appendicitis, in

which conditions however there is less anemia, a less erratic pulse, pain extending over a longer period of time, and the absence of the clinical evidence of pregnancy.

Post-Typhoidal Nephritis and Chronic Nephritis with Intercurrent Typhoid Fever. By James Ely Tally, of Philadelphia. The author discussed the renal complications in enteric fever, and stated that when they were present albumin was present in the urine in a large percentage of the cases. The albumin usually disappears but has been known to persist for years without nephritis. When there is a nephritis it is generally of the parenchymatous variety, and may also be hemorrhagic. He quotes statistics and stated that there have been many cases with urinary changes without the renal structures being involved, and vice versa.

A New Method of Performing Nephropexy. By Henry D. Beyer, of Philadelphia. Dr. Beyer stated that the disadvantages of operation for these cases are that the sutures cut and result in electrical injury to the kidney. He described a method devised by him which consists in encircling the kidney with a rubber tube inserted through the perirenal fascia and then bringing it out of the wound, securing it in an aseptic manner through gauze.

Statistics of Typhoid Fever at the Philadelphia Hospital from 1897 to 1899. By Herman B. Allyn, of Philadelphia. The author's observations comprise 181 cases of which 31 were fatal, 1 case being due to ruptured ectopic gestation. 14 cases died of progressive asthenia, 8 from pneumonia, 5 from hemorrhage, 3 from perforation, and 1 from ectopic gestation. The disease occurred in negroes to the extent of 1/5, which is responsible for 1/2 of the mortality. He advises the employment of separate wards for typhoid fever and pneumonia, and believed that in the future many cases will be saved by operation. (This paper will be published later in the Philadelphia Medical Journal.)

Amyotrophic Lateral Sclerosis, with the Report of a Case. By Thomas L. Coley, of Philadelphia. The case reported was an atypical one which is of particular interest as it had been under observation from the incipency of the disease and carefully watched during its course. It occurred in a man, 41 years of age, with intercurrent acute bronchitis and vague pains in the calf of the right leg combined with a dragging sensation. When the patient was 12 years of age he had been run over by a wagon which passed over his abdomen. Myelitis was excluded by the absence of vesical and rectal symptoms. There is no personal history of inebriety or of venereal infection. Coordination, station, vision and papillary reaction were normal. The knee jerk on the right side was markedly increased. Ankle clonus was present and the calf muscles spastic. The left knee jerk was also increased, but on this side there was no ankle clonus present. Finer movements could only be executed by the left leg. The case progressed presenting a typical picture of spinal spastic paraplegia. The absence of involvement of the long bones, vertebrae, and the bones of the head, and the approximately normal condition of the patient's lungs excluded osteoarthritis. The differential diagnosis between this case and many other nervous affections was carefully considered, as well as the literature relating thereto.

The Value of the Tallqvist Hemoglobin Scale to the General Practitioner. By M. Howard Fussell, of Philadelphia. The author recommends the Tallqvist test for hemoglobin estimation stating that upon comparing this test with those of Gowers and von Fleischl he has found a variation of but 5 per cent. He described the method, showed the color scale, and emphasized the fact that the test must be conducted in daylight.

Fracture of the Neck of the Femur, Report of a Case, X-Ray and Specimen. By Charles E. Thomson, of Scranton. Dr. Thomson showed the specimen of the head of a femur of a man, aged 62, who in August, 1899, had sustained a fracture by a rock falling upon him, and in whom no diagnosis had been made at the time of the injury. He had been in bed

three months when seen by the author, and an operation advised. The performed operation followed the method of Gillet, of St. Paul, which exposes the seat of the injury. The fracture was found to be a comminuted one. The pieces were removed, and a silver nail driven through the neck of the femur which held the fragments quite firmly. The limb was encased in plaster of Paris and a spica bandage applied. In five weeks the patient was allowed to move about. Later a sinus appeared and pus was evacuated. 18 months operation only a slight sinus persisted and the patient walked into the hospital unassisted with 90 degrees of painless motion. The patient finally died of heart disease.

The Pathology, Symptomatology and Treatment of Uremia. By David Riesman, of Philadelphia. The speaker discussed uremic hemiplegia, uremic aphasia, and the complications of mental confusion and uremic insanity. Uremia may produce hemiplegia and monoplegia without a cerebral lesion, as he has frequently found post-mortem in cases previously diagnosed as apoplexy. The treatment was carefully discussed and the author believed that in persistent cases the patient should be put in a bath of 110° and afterward in a hot pack.

The Etiology of Acute Dysentery. By Simon Flexner, of Philadelphia. Dr. Flexner spoke of the unsuccessful attempts that had been made to classify the varieties of dysentery. It now appears by bacteriological examination conducted in various countries, that there is a peculiar organism not normally present, but which is present in cases where acute dysentery exists. The organism resembles the bacillus of enteric fever, occurs in the intestines, can be obtained in the dejecta, and does not occur in the same situations in health. These observations do not exclude the ameba which causes a particular kind of dysentery, but the new organism is probably pathognomonic of the acute variety.

At the close of the afternoon session the Trustees and Faculty of the Medico-Chirurgical College gave a reception in honor of the Medical Society of the State of Pennsylvania, guests and visiting ladies, at the college building. In the evening a special lantern demonstration was given which comprised *The Life History of the Ovary*, by Dr. John G. Clark, of Philadelphia; *Skiagraphy in Supposed Sprains*, by Drs. George G. Ross and M. I. Wilbert, of Philadelphia; *The Various Types of Smallpox with Remarks upon Differential Diagnosis*, by Dr. Jay F. Schamberger, of Philadelphia; *Some Medical Uses of the X-Rays*, by Dr. M. K. Kassabian, of Philadelphia, and the Kromskop, by F. E. Ives, of Philadelphia. Following the lantern demonstration, the Medical Club of Philadelphia gave a reception to the Medical Society of the State of Pennsylvania, at the Hotel Stratford.

The following officers were elected for the ensuing year: President, Dr. T. P. Ball, of Lock Haven; Vice-Presidents, Dr. Walter Lathrop, of Hazleton; Dr. A. S. Harshberger, of Lewistown; Dr. R. W. Stewart, of Pittsburg, and Dr. J. K. Weaver, of Norristown. Secretary, Dr. Cyrus L. Stevens, of Athens, and Treasurer, Dr. George Benson Dunmire, of Philadelphia. The outgoing President, Dr. J. P. Davis, was elected a Trustee. Dr. W. H. Hartzel, of Allentown, is Dr. John H. Musser's successor as head of the Committee of Arrangements and Credentials.

The next annual convention of the Society will be held in Allentown, Pa.

The Wills' Eye Hospital Ophthalmic Society met in Philadelphia May 13th, 1901, Dr. Conrad Berens in the chair. Dr. P. N. K. Schwenk presented a case of **dislocated cataract** in a man of 35, who had been struck in the eye thirty years before. Dislocation into the anterior chamber, accompanied with symptoms of secondary glaucoma, had occurred one week before the case was seen. There had been no irritation of the other eye. Dr. Berens referred to a

case in his clinic. The patient, a man of 47, had received an injury of the eye thirty years previously. He had poor vision until a few days before he appeared at the hospital, where he came for relief from severe attacks of pain. The globe was markedly swollen in comparison with the other eye and intraocular tension was greatly increased. There was ciliary tenderness of the good eye with hyperemia in the optic nerve and macular region. Enucleation was performed. Examination of the eye showed that the crystalline lens was dislocated downwards and forwards. The iris was atrophied, the ciliary body degenerated, and there was secondary glaucoma. The interesting point was the long period during which such a dislocated lens can remain inert. His theory was that an exudate of lymph had formed between the lens and the iris, the symptoms of secondary glaucoma being produced by a blocking up of the fluids of the eye. Dr. Charles A. Oliver presented a case of **dislocated lens into the anterior chamber with symptoms of acute secondary glaucoma**. The patient was struck in his right eye with a boxing glove eighteen years previously, becoming blind in a year's time. The eye was not painful until four days ago. The pupillary area was blocked by a cataractous lens that was bulging into the anterior chamber. Vision was limited to a point of light perception in the lower temporal field. The lens was readily extracted through a section made through the lower periphery of the cornea with a wire loop, without the loss of any vitreous. The wound healed in 48 hours. The other eye was healthy. Dr. Schwenk stated that he intended to remove the lens in addition to doing iridectomy in cases of glaucoma. This procedure he deemed desirable, provided there was no probability of severe hemorrhage. He believed that such a dislocated lens produced secondary glaucoma more frequently than any exudate, and pointed out that it was a hard foreign body in the anterior chamber. Dr. Oliver stated that glaucoma complex arises from many conditions. In the traumatic lenticular type the eye is usually quiescent for a long time, when suddenly some slight injury occurs, by which the more or less opaque lens is thrust into a false position—such as the pupillary area, by which the lymph flow between the chambers is stopped. In such cases he has frequently performed and advised immediate removal of the lens. His experience has been that totally dislocated lenses remain in the vitreous for years without any gross symptoms appearing beside uveal disturbances; but should they get into the line of flow of the intraocular fluids and cause lymph blockage, glaucomatous symptoms must be expected. He believed the plan of combining peripheral iridectomy with extraction of the lens to be useful in appropriate and carefully chosen cases, citing a successful example under his care. Dr. William Thomson presented a case of **exenteration for orbital sarcoma** in an old man of 79. He exhibited a photograph of the condition before operation, showing enormous masses of sarcomatous material filling the orbit and protruding from it, following the removal of the eye some two years before. The tumor-mass was found attached to the periosteum of the external, superior, and inferior walls of the orbit. Dr. Oliver gave a brief account of a case of **orbital sarcoma** involving the frontal, ethmoid, and sphenoid sinuses and the antrum, which he had removed by breaking into these cavities from the orbit. The socket granulated thoroughly into shape, and there has been neither recurrence nor metastasis. Dr. Berens called attention to some very interesting points of diagnosis in such cases, especially those elicited on palpation.

Society Reports: The Section on Practice of the College of Physicians and Surgeons held its regular meeting Monday evening, October 14th, when the following papers and case reports were read and discussed. Dr. J. A. Scott reported a case, and showed a specimen of an **Aneurysm of the Aorta which ruptured into the Pericardium**, which was discussed by Drs. Hare, Spiller and Steele. Dr. Jos. Sailer read a paper on "**A Case of Malignant Endocarditis**"

and Brain Abscess with Unilateral Kernig's Sign." This paper was discussed by Drs. Packard, Stengel, Hare and Clarke, especially as to what constituted Kernig's sign, and where to draw the dividing line between its presence and absence. Dr. Alfred Stengel made a report on "Sodic Purpura," and showed photographs illustrating the condition. Following this paper a very interesting discussion on Methods of Keeping Case Records in Private Practice, by Drs. F. A. Packard, Louis Starr, J. P. Crozier Griffith, Alfred Stengel, and J. K. Mitchell, closed the scientific program of the evening.

The Section on Gynecology of the College of Physicians of Philadelphia met Thursday, October 17, at 8.15 P. M. Dr. C. P. Noble read a paper upon an Improved Suture for Anterior Colporrhaphy, Dr. O. H. Allis read a paper on Intestinal Anastomoses with the illustration of methods and instruments, Dr. H. D. Beyer reported a case of Fibroid Tumor of the Cervix Uteri, with presentation of the specimen, and Dr. G. E. Shoemaker reported a case of Uterine Fibroma.

At the University of Pennsylvania Medical Society meeting in the University Hospital, Friday, October 18, at 8.15 P. M., Dr. A. O. J. Kelly exhibited a patient with an Intrathoracic Tumor, Dr. Edward Martin read a paper upon Abdominal Affections Characterized by Sudden Agonizing Pain, and Dr. Joseph Saller read a paper on the Relations between Tuberculosis and Hodgkin's Disease.

Manhattan Dermatological Society. A regular meeting was held on Friday evening, October 4th, 1901, at the residence of Dr. Oberndorfer, No. 1037 Lexington avenue, with Dr. Gotthell in the chair. Dr. Gotthell presented a case of *favus corporis* in a child of seven months. Three typical patches had existed in the interseapular region for four weeks, without any subjective symptoms or knowledge of infection on the part of the parents. Dr. Coeks presented a baby of two months, with redness and scaldiness of the lower abdomen, buttock, thighs and legs for opinions as to its syphilitic nature. Dr. Klineh believes it syphilis, owing to the involvement of the entire lower extremities. Dr. Abrahams and Dr. Bleiman call it *eczema intertrigo*. Dr. Sobel classifies these cases as *dermatitis erythematosa eczematoides*. Dr. Oberndorfer calls it *intertrigo* with more intense manifestations than usual. Dr. Geyser considers it *intertrigo* and not syphilis. Dr. Weiss states that it is a clear cut case of *seborrheic eczema* of the new born, the lesions in the inguinal region and inner surfaces of the thighs being modified by moisture. Dr. Gotthell also called it *seborrheic eczema*. The general opinion prevailed that the absence of rhagades, coryza, palmar and plantar lesions, and of enlargement of the liver and spleen spoke against syphilis. Dr. Coeks presented three cases of syphilis, a mother and two daughters. Seven months ago the mother presented herself with a chancre, syphilide, iritis, and mucous patches. Despite the most explicit directions as to the dangers and consequences of further contagion, the daughter of 13 years was brought three months later with a chancre of the right tonsil and a syphilide; four months afterward the second child showed a syphilide and a specific pharyngitis. Dr. Sobel remarked that instances of family syphilis were not uncommon and very deplorable. Dr. Weiss stated that it would be advisable to have syphilis classified by the local health boards as a reportable disease in the same manner as tuberculosis. Dr. Gotthell said that infection through the mouth is not uncommon and often explains many obscure cases. Dr. Abrahams presented a woman with *parasitic eczema* of ten years duration, situated on the abdomen and thighs. In addition, the flexor surfaces of the forearms showed a *papular eczema* very suggestive of *lichen planus* on account of the central depression in some of the lesions. Dr. Klineh thinks it a combination of *eczema* and *lichen*. Dr. Bleiman says that the thighs and genitals are *eczema marginatum* and the arms *lichen*. Dr. Oberndorfer states that it is an atypical case of *psoriasis*. Dr. Sobel calls it *eczema mycotic* on the trunk, *papular* on the forearm. The latter regions show the

retrogressive *eczema papules* which, as Gotthell states, so closely resemble *lichen*. Dr. Weiss considers it *eczema marginatum* aggravated by acute attacks. Dr. Gotthell excludes *lichen* and *psoriasis* and calls it a *mycotic eczema*. Dr. Abrahams showed a girl of thirteen years with *herpes tonsurans maculosus et squamosus*. The face and body presented scaly patches of various shapes and sizes. All were agreed on the diagnosis of *seborrheic eczema* mainly on account of the involvement of the scalp, post-auricular regions and forehead, the thickness of the scales, and the infiltration of the skin. Dr. Bleiman presented a woman with *vittiligo* of the arms, face and body. Dr. Oberndorfer presented a man with a *gumma* of the *glans penis*, to demonstrate how difficult it often was to differentiate from ulcerating chancre. No history of a previous syphilitic infection was obtained. Dr. Weiss advised rapid and heroic treatment. Dr. Gotthell remarked that histories were useless in such cases and that a diagnosis must be made from what is seen. Dr. Sobel showed a patient with *eczema marginatum* of the suprapubic region and thigh. Dr. Abrahams presented a child with a *papular scaly eruption* of almost the entire body with a diagnosis of *chronic papular eczema*. Dr. Coeks would call it *seborrheic dermatitis*. Dr. Oberndorfer terms it *lichen planus acutissimus* complicated with *seborrheic eczema*. Dr. Bleiman says it is *keratosis follicularis* and Dr. Gotthell believes it to be *congenital follicular keratosis*.

VRATCH.

July 7, 1901. (Vol. XXII, No. 27.)

1. Ruptures of the Uterus During Labor and Their Treatment. V. N. ORLOFF.
2. Old Russia. Changes of the Body-temperature and Pulse Under the Influence of Various Baths of the Same Temperature and the Effect of the Material of the Bath Tub on the Cooling of its Contents. I. I. MAKAVEEFF.
3. On the Purification of the Air of the Yards and Streets of St. Petersburg. I. M. IAKOVLEFF.

1.—Orloff reports 6 cases of rupture of the uterus in multipara during protracted labor. 2 were incomplete and 4 complete. All recovered after appropriate treatment, except one, the woman dying on the 8th day, of peritonitis. Statistics and observations of other authors are cited and the usual treatment discussed. [A. R.]

2.—Makaveeff studied on himself the effects of mineral baths on the body temperature in one of the bathing resorts of Old Russia. He found that baths of 32 R. (40C.) increase the internal as well as the external temperature of the body, although not in the same proportion, the temperature of the surface of the body being higher than that of the rectum. In this respect, the strongest effect is noticed in the case of general diluted mud-baths, then general salt baths, less so in pure mud-baths and weaker still in mixed or sitz-baths, the latter having the weakest effect of all. During the first 15 minutes both the external and internal temperatures are lowered. The cooling of the bath depends largely on the material from which it is made. Brass, zinc, iron and cast iron are very good conductors of heat and therefore cool the bath quickly; marble is less of a heat conductor than the above but still great, especially in comparison with wood which is the worst conductor of all and therefore the best material for a bath-tub. Many other observations are described in detail, but they are of interest only in connection with the resort. [A. R.]

3.—Iakovleff points out the unsanitary condition of St. Petersburg brought about by defective plumbing and improper disposal of sewage. By means of strips of filter paper impregnated with acetate of lead and dried, he was able to detect various quantities of sulphuretted hydrogen in the atmosphere in and about dwellings. To this condition he ascribes the exceedingly high rate of mortality which reaches 22 to 30 per 100. [A. R.]

Original Articles.

POLITICAL ASSASSINATIONS

In Some of Their Relations to Psychiatry and Legal
Medicine.*By CHARLES K. MILLS, M. D.,
of Philadelphia.Professor of Mental Diseases and of Medical Jurisprudence in
the University of Pennsylvania.

The assassination of President McKinley has caused horror and alarm throughout the civilized world. It has also awakened widespread interest in the subject of political assassinations, of which we have had so many examples during the last decade—in Spain, France, Italy and the Orient. This interest cannot be regarded as merely morbid. In the community at large it is founded on the interest which everyone who is law-abiding has in the protection of human life and property and in the preservation of government and of society. At the root of the general concern is the doctrine of self-preservation, the first law of nature. To the student of medicine, of law, and of history, the subject of political assassination has a true scientific interest. It leads him to consider the criteria of mental soundness, the workings of the unbalanced mind, the springs of human motives and the character of the times in which the assassinations occur. Every such assassination is a terrible historical episode, and one inclination, born of the wish for enlightenment, is to turn to history for the annals and to legal medicine for the analyses of similar crimes.

Although it has been the incitement to the choice of my subject, this paper will not be concerned chiefly or even largely with the assassination of President McKinley; nor shall I take up at any length the study of the assassin Czolgosz. This event will be used only as one of many, the article being based on a brief and perhaps too hasty study of about fifteen historical cases, beginning with the assassination of Henry III. of France by Jacques Clément in 1589.

A glance at the historical cases used in the preparation of this paper shows that the assassins can be conveniently divided into four classes: (1) sane conspirators, (2) assassins clearly recognizable as insane, (3) degenerates who are not insane, and (4) degenerates of doubtful sanity.

Among sane assassins, however depraved, may be classed the Orloffs and their confederates, who in 1762 brought about the death of Peter III. of Russia for the usurper Catharine. It is generally believed that the actual assassins were members of the Orloff family. In the same category should be placed the assassination of Paul I. of Russia in 1801. It is supposed that he was assassinated by Count Pahlen, General Beningsen, Uwarow, or other nobles. The obscurity as to his real assassin results from the fact that he came to his death in a darkened room during a quarrel. A conspiracy was formed by the above-mentioned noblemen and many others, to put an end to the capricious despotism of Paul. It was at first intended only to urge his abdi-

cation, but during an argument with Paul his ungovernable temper precipitated a hand to hand struggle, during which the lamp went out, and when it was relighted the Emperor was found to have been strangled. No punishment was inflicted. Gustavus III. of Sweden also lost his life probably at the hands of a sane conspirator, although a man of erratic character and violent passions. Gustavus was assassinated in 1792 by John Jacob Anckerström, an ex-captain of the Swedish army, who had conspired with others against the crown because of the King's efforts to curtail the power of the nobles and of the Senate. He shot the King with a pistol loaded with broken bullets. John Wilkes Booth should also be ranked among sane conspirators and assassins. The assassination of President Lincoln in 1865 was the result of a conspiracy of which Booth was the moving spirit. Booth might perhaps be classed as an alcoholic degenerate, having inherited a craving for alcohol which showed itself in periodical outbreaks; or he might, like his father, be regarded as an erratic dramatic genius, but nothing in his life history or in his crime compels the diagnosis of insanity. Alexander II. of Russia was assassinated in 1881 by a band of Nihilists. They were undoubtedly conspirators, but little is known as to their mental status. They were presumably sane, although some of them not improbably belonged to the degenerate class to which a large number of the violent among the revolutionaries of all countries can be relegated.

Among assassins whom I would class as clearly insane are Ravallac, Louvel and Guiteau. Henry IV., the greatest of the Bourbons, was assassinated in 1610 by Ravallac, by stabbing. What is known of Ravallac makes for the diagnosis of insanity. It is said that in his youth he became a notary's clerk, and later tried school teaching and other pursuits. Imprisonment for debt brought on sickness and delusions. He was subject to attacks of mental excitement. Shortly after his release from prison he joined the order of Feuillants, and afterwards that of the Jesuits. Louis Pierre Louvel in 1820 assassinated the Duc de Berry, son of Charles X. and heir to the French throne. Louvel in his childhood and youth was an invalid, but was docile and good tempered; as he grew older he became morose, taciturn, eccentric, melancholic and the victim of fixed ideas. His mind became possessed with the idea that the Bourbons were the destroyers of France, and that it was his duty to exterminate them. He was a saddler, and at one time was in the service of the chief saddler of Napoleon at Elba. He followed the Emperor to Waterloo, and after Napoleon's fall was in the service of Louis XVIII. Besides his monomania regarding the Bourbons, a number of facts indicate his eccentricity or insanity. At one period of his life his only pleasure was in singing hymns in the temple of the Theophilanthropists.

Charles Jules Guiteau, who assassinated President Garfield in 1881, was insane, an opinion which I expressed before his trial and which I have continued to hold. It is justified by a study of his life history, by his conduct after the assassination, and by the results of the autopsy and microscopical examination of his brain. I have not here the space to

*Address at the Atlantic City Academy of Medicine, Oct. 11, 1901. I am indebted to Mr. Walter M. Van Kirk for valuable assistance in collecting data for this paper.

review in any detail the case of Guiteau, which abounds in interest both from the standpoint of psychiatry and of medical jurisprudence. Krafft-Ebing ranks Guiteau among his illustrations of *paranoia politica*. He certainly belonged to the type of insanity which is now generally designated as *paranoia*. My own view is that which was also held by Folsom, that he was a *paranoiac*, probably in the first stages of general paresis, a not unrecorded combination.

At the age of nineteen he left school and entered the Oneida Community, where he remained for five years, then left for a few months and subsequently returned and remained for another year, at the end of which time he withdrew from the community, and went to New York, where he contemplated the establishment of a daily journal to be called the *Theocrat*. In a letter to his father, written in 1865, speaking of his project for the establishment of a *Theocratic Press*, which was to provide the whole country with daily religious instruction, he claimed that he was in the employ of Jesus Christ and Company. The same letter abounded in similar insane extravagances. He studied law, was admitted to the bar, and practiced in a pettifogging way in New York and Chicago. He married, and afterward committed adultery to procure a divorce. In 1874 he entered a ridiculous suit for one hundred thousand dollars against the *New York Herald*. In 1875 he had a project for reviving the *Inter-Ocean*, a bankrupt Chicago paper, of which he was to be the editor. In 1875, apparently in a moment of maniacal excitement, he raised an axe to strike his sister. A physician at this time said that he was insane, and advised that he be taken to an insane asylum. He afterwards traveled about the country delivering trashy lectures, maintaining that he was a great evangelist. In 1879 he published a book of lectures called "Truth, a Companion to the Bible." In the Presidential campaign of 1880 he wrote a speech which he once delivered in part. After the election of Garfield he began to put in important claims for office. He first applied for the position of Minister to Austria, and subsequently for that of Consul-General to Paris. He urged his claims in the most absurd manner, both by letter and in person, upon President Garfield and Secretary Blaine. According to his own way of putting the matter, he now "conceived the idea of removing the President."

The conduct of Guiteau, both during his trial and on the scaffold, was consistent with the idea of insanity. I was present at his execution, and shall never forget the dramatic scene presented when this man stood with the noose ready to be placed around his neck upon the scaffold; how he chanted the foolish rhymes of his own creation, "I am going to the Lordy," until, overcome with emotion, he wept and swayed to and fro like the leading character in a religious meeting characterized chiefly by excitement; and how in the speech which he was allowed to prepare and deliver, he posed as a hero and a martyr. I was present also at the autopsy of Guiteau, which was made a few hours after his death. The appearance presented by his cerebral convexity was similar to that which is sometimes seen in general paresis. The pia presented an

opaque appearance, which disappeared in part as the fluid oozed away. The convolutions were probably somewhat atrophied, and it will be remembered that subsequent microscopical examination of blocks of brain tissue were made independently in different cities, and the report on each was to the effect that the brain was decidedly diseased. Many gyrals and fissural abnormalities were noted in the gross examination of the brain.

Our third and fourth classes of assassins—degenerates not insane and degenerates doubtfully sane, may be considered together. Glancing backward in our historical review, a word might be said about Jacques Clement, the assassin in 1589, of Henry III. of France. He was a fanatic, probably a degenerate, and may have been mentally unbalanced, as history shows that his health had become disordered by his bad habits. Others, probably degenerate on the evidence at command, although the data are meagre and not satisfactory in some instances, are the assassins of Marat, of Carnot, of Canovas, the Premier of Spain, of the Empress of Austria, and of King Humbert.

Marat was assassinated in 1793 by Marie Anne Charlotte Corday. She stabbed him in the heart while he was taking a bath, it is said, as a treatment for syphilis. On her trial she admitted and justified her deed. She was of noble family, of great beauty, and bore a striking resemblance to Marie Antoinette. It is said that the idea of slaying either Robespierre or Marat came to her while posing for the artist David as Judith preparing to slay Holofernes. At the beginning of the Revolution she became infected with revolutionary ideas, but at the outbreak of the Reign of Terror she was overcome with horror at the acts of the Jacobins. Lombroso, after a rapid inspection of the skull of Charlotte Corday, affirmed the presence of an extraordinary number of anomalies, an opinion which he holds is confirmed not only by the monograph of Topinard, the anthropologist, but also by photographs of her skull. Lombroso gives in detail the result of his investigation of what he regards as striking cranial anomalies, among a large number of these being the enormous size of the orbital cavities, especially the right, which is lower than the left, as is the whole right side of the face.

President Carnot, of France, was assassinated in 1894 by Cesare Giovanni Santo, an Italian baker. Santo in appearance was brutal and degenerate, and the alleged cause of his crime was the refusal of the President to pardon certain anarchists. Senor Canovas, Premier of Spain, was assassinated in 1897 by shooting, by Michel Angino Golli. Golli is said to have come of an honest family, but was himself a fanatical anarchist. He served for a time as a soldier, but his military record was bad; he was indifferent and disobedient, and was sent for three years' service in the disciplinary battalion. The Empress of Austria was assassinated by stabbing with a file at Geneva, Switzerland, by Luigi Lucchoni. He was an anarchist who boasted of his hatred of the rich and of those in power. While in prison he addressed a letter to a Milan newspaper in which he expressed a fear lest he be mistaken by Professor Lombroso for a degenerate. King Humbert of Italy

was shot in Monza, Italy, by Gaetano Bressi, an Italian silkweaver, who was living just previous to his crime at Paterson, New Jersey. He is said to have been of moody temperament.

The crime of Czolgosz is so recent as scarcely to need a recital in detail. He shot President McKinley in two places, one of the wounds eventually proving fatal. He carried the weapon concealed beneath a handkerchief, which was wrapped around it and his hand. It has been suggested in some quarters that this seemed to point to an accessory or accessories. Czolgosz, however, consistently denied that he had accessories, and it was quite possible for him to have made use of the handkerchief in the manner in which he did, without any assistance. It is not improbable that he got the idea of concealing the pistol from the published accounts of the manner in which Santo killed President Carnot. Santo wrapped his knife in a copy of the Parisian paper, the *Figaro*, and the police, it is said, believed that he had in his hand a petition which he wished to present to the President, and thus allowed him to gain access to the President's carriage.

With regard both to the mental and physical condition of Czolgosz little has been published. The alienists by whom he was examined, however, united in pronouncing him sane, and no evidence has been adduced to the contrary. The brief statement of one of these alienists, Dr. James W. Putnam, of Buffalo, in *The Philadelphia Medical Journal* of October 19, 1901, records him as a young man of twenty-eight, with a former history of good health and steady habits; educated in the public schools until fifteen; at intervals a wireworker, blacksmith's helper and farm hand; thrifty in that he had saved \$400 in six years; a voter at the age of twenty-one, and about this age a convert to anarchism, and a disbeliever, according to his own avowment, in religion, government, law, God and marriage. At his examination he said that he killed the President because it was his duty, and that he was glad that he had done it. Dr. Putnam states that Czolgosz did not at any time sham insanity; that although he refused to discuss his crime with his lawyers, he did discuss it with others; that in conversation and appearance he is more intelligent than the average Polish laborer; and that physical examination showed his pulse 82, temperature $98\frac{1}{2}^{\circ}$, tongue clean, skin clear, patellar reflexes normal and heart normal—a record so far as it goes of excellent health. Certainly we have no evidence in anything that has been published that Czolgosz is insane, nor according to the meagre accounts of him does he present any special signs of degeneracy which separate him from sane men and women of his class. Whether those who hold views such as he has proclaimed regarding the individual and society are entirely normal may be regarded by many as doubtful, but according to the rules applied in a study of the question of sanity or insanity in such cases, with the evidence before us, his insanity cannot be admitted. He probably belongs, however, to the class of degenerates.

Let us delay here for a moment to discuss briefly degeneracy and insanity in the relations to the class of criminals under consideration. Degeneracy and insanity are by no means interchangeable terms;

the degenerate are not all insane, nor are all the insane degenerate. Degeneration as Maudsley puts it is the undoing of a kind, and the term is now often used to indicate a change from a higher to a lower kind, a process of dissolution. The degenerate is the one who has been reduced or relegated to a type lower than the standard normal individual. Degeneracy is generally regarded as shown by certain bodily landmarks called stigmata, as difference in stature or in the length of limb; irregularities of the skull and face; deformities of the palate, ear, genitals or other parts. On the mental side the evidences of degeneracy are "general want of harmony between volition and instincts; instability; excess or deficiency of the emotional sensibility; obtuseness; slow mental development; defective mental development; defects of speech; all stages of mental weakness down to idiocy." The landmarks of degeneracy may be present in the normal or even in those of high intelligence, but they occur in a large percentage of the idiotic, insane and criminal. Insanity, however, is not to be determined merely by a study of the indications of degeneracy. The diagnosis of insanity should be made by a study of the psychical state, and the mental symptoms presented by the subject of the investigation. In order to be classed as a degenerate in the technical sense, one whose degeneracy places him below a generally accepted normal standard, it is not necessary simply that the physical landmarks of degeneracy be present, but in addition the individual must present satisfactory evidences of psychical aberration and dissolution. Degeneracy, in other words, is relative, and the term should not be used with too wide an application when discussing questions of insanity and criminality. Not a few of the political assassins, whose crimes have startled the world, are degenerates in the fullest meaning of the word as used by Lombroso, and some of them may be classed as both degenerate and insane; while others should not fall in the latter category.

Youthful degenerates later in life not infrequently become instances of easily recognizable insanity with systematized delusions; still later passing into forms of dementia. Our attention is fixed by the immature years of the assassins here considered, and of many other historical cases. Jacques Clément was twenty-five years old, Ravallae thirty-two, Ankarström thirty-one, Charlotte Corday twenty-five, Wilkes Booth twenty-seven, Santo about twenty-one, Golli thirty-three, Lucchioni twenty-five, Bresei thirty-one and Czolgosz twenty-eight. Louvel had reached thirty-seven years and Guiteau forty-two, and in both of these cases the insanity was well defined.

Sanity and insanity like degeneracy are also relative terms. At the one end of a series is the individual with the highest grade of mental development and health, at the other end is the idiot; between these extremes are all degrees of mental health and degeneracy. For the purposes of the law, and even at times for those of medicine, it is necessary to make an arbitrary line on one side of which are placed the sane and on the other side the insane. When to draw this line is determined simply by an application of the data of psychiatry to each individual case. The marks of degeneracy are

not without value in arriving at a decision as to sanity or insanity, but it is necessary that they should be used and interpreted by one who has the requirements and acumen to make a correct interpretation.

Assassins clearly recognizable as insane frequently are to be classed under the type of insanity now commonly designated paranoia. This variety of insanity is known by various names: as monomania and primary delusional insanity. In its fully fledged form it is an easily recognized mental disease with a method of development, a course and a termination familiar to every alienist, but it is not part of my present design to discuss paranoia at length. Prominent among its clinical features are in its period of development a tendency to self-analysis, obsessions and morbid impulses, and as the disease becomes more fully organized, delusions of suspicion and persecution and false ideas of self-importance, these appearing successively, or it may be hand in hand. The dangerous delusion that the paranoiac has a mission, social, religious or other, frequently comes into the foreground. The transformation and exaltation of the paranoiac's personality is associated with the idea that he and others are the victims of persecution. Instead of paranoiacs with well systematized delusions and other manifestations constituting a familiar clinical picture, in every community are to be found degenerates, more out of institutions than in them, who are perhaps best described as paranoiacs in the making. These form a large proportion of the cranks and crack-brained of popular speech. They are in reality weaklings, but owing to their egotism and self-assertion they often impress others as they are themselves impressed with ideas of their virtue or valor.

Krafft-Ebing has well described many of these cases in his chapter on *paranoia politica*. In history as well as at the present time, he says, we meet with many who, dissatisfied with the social conditions surrounding them, feel themselves called upon to reform the world, or at least to supplant the old with something new. The main difference between the real genius and the pseudo-genius is that the genius has not only the mental organization to see the defects of his surroundings, but also the mental force to expand his ideas for its betterment in a logical and useful way. The pseudogenius, whose mental development is one-sided, resembles the genius in the originality of his views and his power of induction. In the expansion of these ideas, however, he becomes irrational and eccentric. The clinical manifestations of this disease present an infinite variety. In many the intellectual force is slight and their mental product of such a nature as to bear the stamp of crankiness and not of genius. If esthetic and ethical defects coexist, their ideas are often a priori monstrous or immoral. In many cases, however, the mental development is brilliant, though one-sided, and then the danger is imminent that the thoughtless crowd accepts the single brilliant thought as a new gospel. Very many of these abnormal subjects remain throughout life theoretical reformers and leaders of new movements, but this is but the prodrome of a severe and incurable mental state, *paranoia expansiva*. Such individuals easily lose the remnant of their mental stability under the

suggestive influence of others or of troublous times. Then they are impelled to carry their ideas into execution and become leaders of riots or founders of new parties or sects. The stage of incubation is long, often reaching back to early youth. A dreamy fantastic behavior, a tendency to build air castles of future greatness, great self-consciousness with seclusion from the vulgar herd, premonition of a great mission in life and brooding over inventions or social problems are related in the early history of these cases. Frequently neuroses as epilepsy and hysteria are to be noted. The forensic importance of this class is indeed great, as they often do not stop at words or mischief making, but keep on to deeds such as attempts to murder those in power, mistaking the representatives of a system for the system itself.*

Was Czolgosz one of a band of active conspirators? Had he associates and accessories? He has avowed himself an anarchist, but he has also, at least up to the time of the writing of this article, continued to insist that he acted on his own initiative; that he was not in a plot with others, and that the method was his own, as is also the responsibility for the crime. Probably the truth about this matter will never be known, although some contributions to the discussion may be forthcoming in the future in the shape of insane confessions and sane accusations. While some facts seem on superficial examination to point to accessories, on the whole I think it is probable that the man was alone in his crime, so far at least as direct intrigue and assistance are concerned. Even if it is admitted that he was not a member of any organization of conspirators to take the life of the President, he may have been the unconscious dupe of other conspirators with this aim. With regard to several of the historical cases here cited, it has been frequently asserted that the assassins were the unconscious dupes rather than the conscious agents of others. Jacques Clément is supposed to have been influenced by Spain, or by members of the League. It has also been asserted that the Jesuits took advantage of the unbalanced mind of Ravallac to instigate him indirectly to the assassination of Henry of Navarre, formerly the leader of the Huguenots, and who was, as the assassin may have been led to believe, still the enemy of the Catholic Church. Ravallac, however, in spite of tortures inflicted upon him, refused to confess that others were involved with him in the crime. Foolish efforts were made to have Louvel confess that he was the tool of England, but in spite of repeated application of torture he scoffed at the idea and denied having had any accomplices or instigators. It is probable that while Czolgosz's inspiration to commit the crime came from the study of anarchy and in part from listening to anarchistic speeches, that he was not directly in conspiracy with individual anarchists. The astute and cunning conspirators who are found in anarchistic and other circles are usually able to pick out from those who attend their coteries or who perhaps hang on the outskirts of their movements, the type of man who will be most likely incited to deeds of violence by their teachings. It

*Extracted from the Wien. Med. Blätter, Nos. 48-49, 1892, and the Rev. Ins. and Nervous, March and June, 1893.

is only necessary to let events take their course, to allow the seed sown a little time to ripen. I do not of course believe that the insistent and persistent denial by an assassin that he has accomplices should be taken as evidence that this is the case. My conclusions are reached by a different process, from a study of the assassin himself and of known facts regarding those with whom he is supposed to be acting.

No possible doubt can exist that in some cases the assassins of recent years included in our list have actively conspired with others and have both predetermined and prearranged the crimes. This was true of the Russian Nihilists who killed Alexander II, and of the assassins of King Humbert and of Senor Canovas. It may have been true of the assassins of Carnot and the Austrian Empress; these two assassins, like Czolgosz, were avowed anarchists, but may have acted in part on their own initiative. In my enumeration of sane conspirators I have already included the assassins of Gustavus III of Sweden, of Peter III and Paul I of Russia, and of President Lincoln.

A word might be said here with regard to the subject of insanity and conspiracy. Because a man is a degenerate, or even insane in the full sense, it does not follow, as many seem to suppose, that he is not capable of taking part in a conspiracy. Well planned, and unfortunately in some instances well executed conspiracies, have been formed by the insane inmates of asylums; and many of the half insane degenerates take as naturally to conspiracy as the normal man does to open enterprise.

What should be done with political assassins? Let us glance at what has been done with some of them in the past. When Jacques Clément stabbed Henry III in the abdomen, the King instantly wrenched the knife from his body and struck his assassin in the face with the bloody weapon, and a moment later the attendants and guards fell upon the assassin, who died pierced by twenty sword thrusts. Ravaillac, after a speedy but formal trial, was torn to pieces by horses. Anckarström was flogged on three successive days and then beheaded. Charlotte Corday, Louvel and Santo were guillotined. The assassins of Peter III and Paul I were protected and some of them even rewarded by the legates of the crimes. Booth was shot to death by Boston Corbett, one of the soldiers engaged in his pursuit. Of the Nihilists who killed Alexander II of Russia one was blown to pieces by the same bomb that killed the Czar, and five others were hanged two days later. Guiteau was hanged after a prolonged and tedious trial. Golli was executed, probably by garroting. Lucchioni was imprisoned for life, as according to the laws of the Swiss canton in which the crime was committed the death penalty could not be inflicted. Bresci was imprisoned for life, but soon committed suicide. A few days after the publication of this article Czolgosz will be electrocuted.

Some seem to favor the infliction of punishments that rival those of pestmedieval times; others cry out for execution without even the form of trial, and still others after the form but not the substance of a trial. Just punishment should be inflicted,

but it should be done by due process of law. Whenever possible, efforts should be made to reach those who are the real instigators of the crimes. It is probable, however, that in the case of the insane and degenerate the infliction of the death penalty does not always lead to the results which are hoped for in the protection of society. Krafft-Ebing says of the political paranoiacs that they do not fear death, as it stamps them as martyrs in the eyes of their followers, and he holds that the true punishment for them is the asylum. If the asylum means a place in which they can be safely confined for the rest of their lives, this opinion is for the insane correct. I have seen two men of the class referred to by Krafft-Ebing hanged, and have had interviews with others a short time before their execution. In all cases they have shown an indifference to death, and in some have looked to the scaffold as a place where they could pose as heroes and martyrs. The great publicity which is given to the details of execution certainly does much harm.

What should be done to prevent a recurrence of political assassinations? This, it will be seen, is quite a different question from that of what shall be done with assassins. One meets everywhere those who have ready methods of solving the problem. One newspaper contributor, for instance, suggests that the anarchists, whether assassins or not, be collected together on an island and be allowed to fight out their ideas as to individual rights until they exterminate each other. Something perhaps might be done as regards the prevention of individual attempts by a system of international policing, something by a careful guard over immigration. It is the proud boast of this country that it is an asylum for the oppressed of all nations, but this does not mean that it should be the dumping ground for the depraved and degenerate, the vicious and criminal. Liberty to think, to speak and to print is one of our greatest boons, but this should not mean license to incite to violence the immature, the degenerate and the insane. After all, permanent relief can only come through a study of the causes and cure of crime, through the spread of right principles, and through the elevation of the masses.

Pulsating Empyema.—II. Desplats reports the case of a girl of 14, who had a sudden chill, with pain at the base of the chest, on the left side. (*Journal des Sciences Médicales de Lille*, May 25, 1901). Fever persisted for three days. In 24 hours there was already absolute dulness over the lower half of the left chest, with a distant respiratory murmur. There were no rales. The fever grew less but the dulness increased and rales appeared. Exploratory puncture gave creamy pus, which contained pneumococci. The dyspnea and bulging of the interspaces increased, and a distinct pulsation was felt. An incision was made and three liters of pus evacuated. Recovery followed, after two rises of temperature, after which the amount of purulent discharge increased. Desplats considers three points in this case of exceptional interest; the rapidity of onset, with the size of the effusion; the distinct cardiac pulsations of the empyema *en masse*; and the probable occurrence of an interlobar empyema under the fourth rib, near the sternum, which explained the rises of temperature 8 or 10 days after the pleurotomy. Desplats believes that croupous pneumonia occurred at first, with secondary interlobar pleurisy. This went on to abscess formation, and opened into the general pleural cavity, causing the empyema. [M. O.]

THE CZOLGOSZ CASE.

By EDWARD C. SPITZKA, M. D.,

of New York.

Undoubtedly measured by the standard of public decency the spectacle furnished by the Czolgosz trial contrasts most favorably with those offered by the legal and quasi-legal procedures ensuing after the murders of Lincoln and Garfield. It remains a question, however, whether under other circumstances some of its features would not have to be regarded as—to say the least—inadequate to the cause of ideal justice. Gross violations of the prisoner's legal rights, such as through ignorance of law, natural in a court composed as that which tried the real and suspected assassins of Lincoln and several members of his cabinet, was composed, namely of military men, were avoided. Nor was there evident on the part of the prosecution any such vindictive spirit as was shown in the trial of the assassin of our second martyr President, which notoriously went the length of mutilating exhibits by removing from a prisoner's letters such portions as might have suggested or supported the theory of mental disease. The crime of Czolgosz was so evident, its elements so repulsive, and its deliberation in its association with anarchist views so manifest, that a perfunctory prosecution would have sufficed to secure a verdict entailing the extreme penalty of the law. It will all the more redound to the credit of the district attorney, that in favorable contrast with like officers, under like circumstances, he had the prisoner examined in regard to his mental state without "instructions to find for the prosecution," and so examined prior to having the prisoner indicted. He would, in case of a finding of evident insanity, have been in a position to evade responsibility for such a farce as the Guiteau trial constituted.

The prisoner's attitude rendered the position of the court an awkward one, and it evidently felt this keenly. Czolgosz's refusal to plead, or even to reply to ordinary questions, made the position of his counsel an even more difficult one. The latter was under the circumstances limited to one possible line of defence, that of insanity involving irresponsibility. How to establish such, nay, how to justify the mere surmise, where the subject of inquiry willfully closes the only channel by which thoughts and reasoning are exhibited to the examiner, is a problem rarely presented to the alienist, and when presented, one of the most difficult to solve. Obstinate mutism has therefore proven one of the more successful measures of the simulator. It could, however, prove of no value in the present case as sustaining the insanity plea, owing to the crass inconsistency of mutism with the mental state at the time of the shooting. It hence proved but an additional stumbling block to any defence whatever. That the prisoner's assigned counsel felt himself reduced to a purely formal defence need not surprise one. And when the physicians, who at his own request, examined this imposed client, reported the latter to be not insane, the last prop of a material defence fell away and the counsel cannot

be accused of dereliction of duty on the above ground.

In regard to his closing address, however, I find a most objectionable feature. It was not necessary for the counsel to anticipate the prosecuting attorney by calling up the emotions of the jury on behalf of the martyr victim of his client. The district attorney scarcely went so far as the defendant's counsel in this respect. The pathetic recital of President McKinley's noble qualities, the loss the country sustained, the bereavement the counsel asserted himself to have personally suffered, were all made truthfully. But we question whether such appeals would have been regarded as essential to his securing a verdict of guilty by the public prosecutor. All the less were they in place in counsel's final address to the jury in whose hands the fate of his client was shortly to be placed.

The crocodile tears, which certain notorious pettifoggers of criminal courts are so apt at calling forth when required, are regarded justly with equal detestation and contempt. How shall the tears of genuine grief shed by Czolgosz's counsel as he mentioned the bereavement inflicted by his client, be judged? From the general standpoint of humanity they may be condoned, but from the strictly professional standpoint the pathos manifested on so unusual an occasion and in a way so contrary to a client's interest does not seem to be in harmony with the dignity, gravity and propriety otherwise marking the proceedings.

Regarding a point which was and is of far greater importance than the retributive punishment of the single assassin, I believe that our police and legal machinery has proven grievously inadequate. I refer to the existence of possible accessories, since to my mind there are features in the crime which point to their existence. The subterfuge of the bandaged hand* strikingly suggests a female source; at all events the prisoner does not exhibit the appearance of intelligent spontaneity this dastardly trick presumes. His itinerary of the four months preceding the murder brought him in collusion with persons notoriously associated with an international set of anarchists. Barely a year ago this very set was affiliated with the notorious anarchist's leader, Malatesta, and about the time of his visit as well as shortly thereafter there were several warnings, anonymous and otherwise of a plan aiming at the leading crowned heads. Two of these warnings mentioned the President of the United States as included in the list of intended victims. The warnings were too nearly simultaneous and preceded from too widely separate quarters, South America, the States and Europe, to have been fortuitously coincident practical jokes. The event has proven the reality of such a plot; no doubt some of the selected soloists experienced stage fright at the critical moment, and not all defalcators could be substituted with as prompt effectiveness as was Sperandio by Bresci, but within a few weeks of Czolgosz's deed, we have Pietrùcci's suicidal attempt revealing prematurely the mission of Romalino; we have further the suicide of de Bungal and

* I do not attach any weight to the trivial circumstance of the handkerchief being a woman's.

the arrest of several bearers of related missions at Hamburg, in Buenos Ayres, and at St. Petersburg.

The method of arresting suspected accessories of Czolgosz, followed by the police authorities of several of our cities, smacks of the same panicky stupidity that induced the authorities to grant a paranoic in the President's native city a guard of soldiers to protect him against the phantoms of persecutorial delirium. It was at random and so stupidly initiated and carried out, that instead of furthering the interest of justice, it simply furnished opportunity for damage suits on the part of the parties arrested—which these last are too wise to avail themselves of.

To closet such persons in jail together with full opportunities for reading the daily papers and seeing emissaries passing and repassing from one to the other, as was done in several instances in connection with this case, were worthy of the palmiest days of Abdera. Solitude, time and uncertain expectancy are motive springs for confession and betrayal of associates, whose employment has at all times been regarded as essential to the end of justice in case of dangers menacing the safety of the State. But to not one of these has recourse been had and the authorities lost prestige with the public, and the awe of the guilty by this random and inconsistent procedure.

It so happens that for what may be good reasons the prosecution failed to avail itself of a means calculated to effectively trace and punish accessories, if Czolgosz had such. Though an unconstitutional law the Conspiracy Law of the State of Illinois rendered that State the more eligible one to conduct the trial of Czolgosz in.

In the first place, it provides for the case of criminals guilty of crimes in other States and extraditable from such States to its own custody when the crime committed in the latter is suspected to be the result of a conspiracy in the State of Illinois. In the second place, the collected facts point to the location of the presumptive conspiracy in that State. In the third place, the loopholes in the law open in other States for a defence of quibbles are closed in Illinois. No matter how objectionable in principle the legislation securing, and how servile the motives of the judicial advisor suggesting (at the time of the Haymarket bomb-throwing) them, these features are advantages the prosecution would have been justified in availing itself of; what may seem to justify its neglect to do so is at once a curious and a humiliating fact.

A prominent police official in Chicago has with apparent good reason become the subject of investigations whose ultimate result promises to become a prosecution of a more serious character. No better opportunity to rehabilitate himself could have happened than the discovery of criminals so vengefully regarded by the public as conspirators against our Executive. Accordingly he was all activity. His opponents fearing the overshadowing of their energy by a successful *coup*, did everything in their power to throw discredit on his efforts, and the old proverb about honest men com-

ing to their own was illustrated in an inversion: when the authorities fall out, the guilty escape.

As to the mental calibre of Czolgosz, generally speaking, I recognize nothing particularly differentiating it from the average persons belonging to his class, or if you please, "party." There is the same contracted view of the individual's relations to his surroundings; the same false ideal of heroism, and, what must not be lost sight of, the same obstinate loyalty to his associates, a feeling which will probably conduct him through the ordeal of punishment without revealing their identity and share in the crime. Like most anarchists* he has not acquired any skilled trade, nor has he, in fact, shown any capacity in other directions than the coarsest kind of manual labor. I believe that the scene which has been related in the press as his "collapse on arriving in jail" may bear a different interpretation. His movements are described as an unloosening of all his limbs in jactatory movements. They occurred when the attendants seized him to put the prison garments, which are of a somber hue, on him. Czolgosz imperfectly comprehending his sentence, whose terms it must be remembered, are in this State indefinite as to the precise time of execution, may have apprehended that this sentence was being carried out instantaneously, and his conception of the influence of the lethal current by "suggestion" as it were, was illustrated in the movements which struck casual observers as so singular.

In a study made some years ago relative to mental epidemics and historical periods as influencing insane mentality as well as its sane counterpart, it appeared incidentally that assassinations have not become more frequent in the present era. The social disease of which these acts are mere surface manifestations has been coeval with the history of civilization, and under different guises has produced corresponding results at all times.

From the cuneiform inscriptions to the modern book page, the records of assassination are distributed with the same surprising evenness as are the analogous ones of suicides and of epidemic insanity. That assassination has ceased to be a relaxation of the opulent and ruling classes as it was in the days of the Ptolomies, Seleucides, Perseus and Jugurtha, and occasionally also in the later days of the Plantagenets and the Borgias, is paralleled in other fields. In those days it required a strong provocation of the ego to nerve a proletarian against a governor or a king, as it did a slave to avenge a beloved master by slaying Hasdrubal, and the peasant stab the rapacious tax collector L. Piso. Later religion supplied the motive, and from the fanatics who poinarded the chiefs of Kufa down to the Ravallacs, Gerards, Clements and Damiens, its strong influences were felt. Still later these gave way with the developing prominence of economical and social questions to socialistic, atheistic, libertarianistic and chaotic views generally. That they contained devotees in their ranks such educated men as was for example the assassin, Nobiling, is

* Kibaltshitsch among the not unrelated group of Nihilists and a well known mechanic of New York City, are among the few exceptions.

among the incomprehensible features of the subject. Equally is the fact that any historical student, for such he was, could ever have dreamed of any good result accruing from assassination. A summary of the facts elicitable from the figures in the sequel might be made the basis of an educational chart for the use of anarchists and other terrorists.

TABLE SHOWING MEANS EMPLOYED BY ASSASSINS SINCE THE USE OF GUNPOWDER HAD BECOME GENERAL.

	Number of cases in which person aimed at was killed.	Number, ditto wounded and survived.	Number of cases in which exclusively persons not aimed at were killed or wounded.	Number of attacks with no result.	Total number of failures.	Grand total.	Percentage of success.
Dagger, sword, or other weapons for cutting and stabbing.	28	8	0	5	13	41	68.2
Firearms.	28	13	2	39	54	82	34.1
Bombs, mines and explosion-methods generally.	2	0	6	1	10	12	16.6
Other methods.	0	1	0	0	1	1	
	58	22	8	45	78	136	12.6

		In successful attempts.	In failures to kill person aimed at.	Total.
I.	Number of cases in which the death penalty was exacted of one or more of the assassins concerned.	21	35	56
II.	Ditto in which death sentence was commuted.	1	5	6
III.	Ditto punished by imprisonment only.	1	7	8
IV.	Ditto killed on spot, in pursuit or retributively.	6	1	7
V.	Committed Suicide.	2	4	6
		(34)	(52)	
VI.	Pronounced Insane.	0	11	11
VII.	Immune after trial.	1	2	3
VIII.	Escaped.	1	2	3
IX.	Assassins remained unknown.	13	5	18
X.	Fate of assassin unrecorded.	5	1	6
		54	76	130

Of 588 murders attempted and consummated, including all instances in which those prominent in history have been killed from political, dynastic or other reasons connected with the public station of the victim, 277 may be termed assassinations in the accepted narrow meaning of the word, equivalent to the attentat of continental writers. Of these, 155 succeeded in so far as the death of the victim ensued. Of these, 52 were avenged by the legal execution of one or more of the perpetrators, 20 by instant death at the hands of guards or the public by the killing of the flying assassin or by

his suicide; a total of 75 cases in which death was retributive. In 5 additional cases execution occurred for later crimes, the perpetrator having escaped the immediate consequences of the former, and in 3 further cases suicide similarly ended the criminal's career. In 61 cases execution, in 6 suicide, and in 3 retributive assassination avenged unsuccessful attempts.

The "mortality" by legal and other retributive measures was therefore over fifty-five per cent. Excluding those cases where the deed was done under protecting influences, as were Czolgosz's and Masamiello's for example, over eighty per cent. of the assassins perished.

SOME RESPIRATORY CONDITIONS DEPENDENT UPON GOUT AND OBESITY.

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of Philadelphia.

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The abnormal conditions presented by the lungs in obesity have not been as thoroughly studied in the past as the subject deserves. Their pathogenesis is not clear, although it may be assumed that they are caused principally by the mechanical effects of the deposits of fat throughout the body. On account of the abnormal masses found in the thoracic and abdominal cavities, the breathing space is greatly encroached upon, hence the respiratory capacity must to an equal extent be diminished. The weight of the external fat deposits, likewise tends to restrain the respiratory movements, while the depositions in the upper portion of the abdominal cavity prevent full diaphragmatic excursions. Upon actual measurement, I have frequently observed the respiratory capacity to be less than two and one-half inches in obese subjects, and it is obvious that such interference with lung-expansion must excite dyspnea upon muscular exercise, upon over-distension of the stomach and even when occupying a recumbent posture, as during sleep.

Dyspnea is more marked in the anemic than in the plethoric variety of obesity. There is in these instances an inordinate incapacity for exercise of all sorts, probably for the reason that the fat globules are more loosely grouped together, with greater abundance of intervening material in the form of "sero-mucous fluid," which interferes with and even almost paralyzes muscular action. The blood changes presented by this form of obesity also contribute to the production of this symptom. The so-called anemic dyspnea is familiar to clinicians, and I have found that there is considerable reduction in the hemoglobin percentage as well as a well marked oligocythemia in these cases. While the symptom dyspnea is attributable in great part to mechanical interference with the respiratory function, the weakening influence of the anatomical alterations—muscular as well as hematologic—in this kind of obesity also share in its causation.

On the other hand, in the plethoric form of obesity in which there appears to be compensatory hypertrophic changes in the muscular structure, dyspnea is less marked and often surprisingly slight. The

general bodily vigor is as a rule plus in this group of cases. There is a thoracic symptom belonging to over-fatness, to which I wish to direct special attention in this connection; it is pain in the sub-scapular and intra-scapular muscles. This pain may be quite acute, especially on making a strong voluntary effort to maintain an erect posture or upon attempting to exercise the arms. It was described by one of my patients as a feeling as though the "flesh had grown fast to the bones." The pain may be localized, although more commonly it extends across the back from side to side. In one of my patients it was excited by merely lifting the arms above the level of the shoulders. This patient also complained at intervals of a rather acute, though fugitive pain, which passed through the base of the right side of the thorax, especially upon attempting unusual muscular exertion. It is interesting to note that the fat deposit was decidedly larger on the same side of the thorax, and also that a reduction of the bodily weight entirely relieved the pain. These must be discriminated from other forms of pain, notably the rheumatic and neuralgic varieties, and in attempting this the etiologic influence of over-fatness must be accorded due weight.

The marked restriction of the thoracic excursions in respiration and the enfeebled heart action often present in these cases, combine to induce a passive, venous congestion of the bronchial mucosa. Thus it is common to witness in obesity a hyperemic (passive) bronchitis with troublesome cough and oftentimes copious, mucoid expectoration. The cough is aggravated by muscular exercise, particularly if active, proportionately with the increased disturbance of the circulatory equilibrium on which this form of bronchial catarrh depends. It is also present in severe paroxysms after a night's rest and recumbency, which allows of the accumulation of mucus in the tubes. Acting either as aggravating or exciting causes of the cough may be mentioned, sudden vicissitudes of temperature, strong wind currents, especially if combined with low temperature, irritants of all sorts, however slight, in the inhaled air, damp dwellings and prolonged exposure to wet and cold.

The physical signs are variable. As a rule, the expansile movements of the thorax are greatly restricted for the reasons before pointed out, and the tactile fremitus and percussion note are enfeebled in consequence of the presence of an abnormal deposit of fat. On auscultation there is generally observed a weakened vesicular murmur or more rarely it may be exaggerated. Adventitious sounds are also audible, as moist rales, and I have noted that sibilant rales and various forms of whistling sounds usually predominate, the presence of much mucous notwithstanding. This form of bronchitis is rarely encountered in the plethoric variety of corpulence, but it is not uncommon in the anemic variety, particularly if, as happens, the phlegmatic temperament is found in association. The bronchitis of anemic obesity runs a slow and often irregular course, unless the underlying causative condition is removed by appropriate treatment.

Closely connected with this variety of bronchitis, and to some extent dependent upon it, is asthma.

This affection is usually regarded as of cardiac origin in obese subjects, and I doubt not that transient insufficiency of the heart muscle, more especially of the left ventricle, leads to an accumulation of blood in the pulmonary area, including the bronchial mucosa that excites marked temporary dyspnea. The same result, however, is favored by the accompanying defective respiratory capacity which is especially pronounced during sleep or while the patient is in the recumbent posture. Not to be overlooked are certain other factors as the blood changes, that diminish the oxygen supply to the tissues and create "air hunger" as well as the uric acid diathesis. There is also an asthma in connection with obesity due to gastric disturbance, particularly in patients who are gluttonously inclined; this is associated with high position of the diaphragm and considerable gastrectasis. The attacks usually occur at night after hours of sleep as under other circumstances. The gouty state is often an accompaniment of obesity and there are excellent reasons for thinking that both of these conditions are at times dependent upon inadequacy of the liver function. Burney Yeo (*British Medical Journal*, June 15) has pointed out that hepatic inadequacy is productive of the gouty state, since this organ is concerned in the metabolism of nitrogenous material and in the formation of urea and uric acid. I have a fixed belief that it may also lead to obesity owing to the interference with the glyco-genic function of the liver. I have observed cases of asthma due to obesity that were associated with hepatic inadequacy; they are generally curable by attention to the underlying causative liver condition and a rearrangement of the diet so as to overcome the obesity. Treatment directed to obesity alone may increase the tendency to asthma in some cases. In such it may become needful to counteract the tendency to the formation of uric acid, which probably acts as an excitant, in order to effect relief.

As to the frequency of the complaint in polysarcia there is little definite information to be found in the literature, although the prevalent view is to the effect that it is comparatively common. Personal experience and observation incline me to the opinion that the severe paroxysmal dyspnea seen in obesity is in many cases not a true asthma, and that not uncommonly these pseudo-asthmatic seizures are relieved by assuming and quietly maintaining for a brief period the erect posture. There is here little or no vasomotor spasm and no true spasm of the circular muscular fibres of the bronchi. Neither do we note the characteristic sputum coincidently with the subsidence of the attack, nor the leukocytosis that is so important and constant a feature in typical asthma. Genuine asthma, however, occurs in obesity, although it is probably less common than is supposed. Of a total of 256 cases of obesity that fell under my care, the history of associated asthma was obtained in 13, or a little over 5 per cent. These cases of asthma were met with only in extreme polysarcia. In forming this estimate I carefully endeavored to exclude those instances before alluded to, in which the symptom dyspnea was alone in evidence and readily relieved

by change of posture, i. e., from the dorsal to the upright position.

These are not to be looked upon as cases of genuine asthma, but rather as instances of congestive dyspnea, due primarily to the obesity, although excited by the decubitus. Obviously the treatment is that of the primary condition or obesity.

Of the thirteen cases that I treated, five were apparently cured for periods of time ranging from one to three years, and four were greatly improved as the direct result of dietetic and other regiminal measures directed to the obesity in a successful manner. Three of the patients failed for want of moral courage to carry out the various elements entering into the required treatment. The remaining case of the series belonged to a special class to which I have alluded previously.

The effect of the usual measures prescribed to bring about a reduction of the bodily weight in the latter instance was to aggravate the asthma both as to the frequency and the severity of the attacks. The patient developed symptoms of the gouty state, including a highly colored and extremely acid urine. There were also present evidences of hepatic torpor, such as constipation, pale dejecta, a furred tongue and slight enlargement of the liver with tenderness to palpation over the hepatic area. This case was finally cured by the use first of a course of calomel in fractional dosage, followed by the alkaline mineral waters, especially Saratoga Vichy. The diet was considerably restricted more particularly in the direction of the proteids; physical exercise was continued. Most probably the exacerbation in the asthma was in this case due to the excess of uric acid in the blood. Possibly it may have been occasioned by the gastro-hepatic condition *per se* (asthma gastrica). In my opinion the order of events is as follows, in the majority of cases at all events: the hepatic inadequacy produces the gouty state, as Yeo contends, and the latter induces the asthmatic symptoms.

Concerning the hepatic enlargement, it must be recollected that this may also arise as a secondary event in obesity. The question of the relation of asthma to polysarcia is somewhat obscure. My own tentative conclusions are: (a) That asthma occurs in about five per cent. of the cases of obesity; (b) That it only occurs in extreme polysarcia; (c) That there is present a gouty state or history in most cases in which true asthma is secondary to obesity; (d) That about fifty per cent. or one-half of the cases are curable by overcoming the causative condition.

Referring briefly to the bronchial affections in which gout figures principally, it may be pointed out first that this disease and obesity are closely associated. Among 196 of my cases of over-fatness, gout was either in association or had occurred among the antecedents in 97 cases, or 49.5 per cent. There was a history of rheumatism in 30 per cent. of the same group of cases, and it is highly probable that many of the latter were also instances of gout, so that the actual percentage of cases of overweight in which there is a gouty inheritance or a family history of this affection is even higher than

the figures given above. The prominent part played by gout in the causation of that form of asthma met with in obese subjects has already been sufficiently emphasized. Gout occurring independently of obesity may also cause asthma, and according to my observation and experience it is a more potent factor than is supposed. The attacks of asthma rarely alternate with acute gouty manifestations, while in other cases they coincide with the acute gouty seizures. More commonly asthma is met with in chronic and irregular forms of gout and the most certain method of relieving such cases is by an antipodagral plan of treatment. It is commonly associated with gouty bronchitis and emphysema, and it may happen that the asthmatic attacks are either combined or alternate with the bronchitis or other gouty manifestations. According to certain authors asthma occurring in association with the gouty diathesis, is to be looked upon as a functional nervous disorder which is engrafted upon the latter.

If, however, it is desired to successfully treat this form of asthma, it must be regarded as being closely connected etiologically with podagra. I hold that asthma may be directly dependent upon the transient, irritant action of the uric acid in the circulating medium favored by the decubitus, and hence it is one among the numerous nervous phenomena of gout.

The dry, chronic bronchitis of Laennec is recognized by most writers as a distinct variety of bronchitis due to the gouty state. When chronic bronchitis is associated with advanced gout, it is easy of recognition and its treatment obvious. It is to be regarded as a part of a general fibroid process in some cases. It is often found in association with gouty affections of the larynx and pharynx.

There are cases of the gouty state in which the more conspicuous lesions throughout the body (heart, kidneys, etc.) and characteristic articular changes are absent; they are, however, associated with hepatic and renal inadequacy and a high degree of acidity of the urine—a lithemic state. It is my purpose, in concluding, to direct especial attention to this considerable group of cases, since the cause is frequently overlooked and since also treatment is, as a rule, successful if aimed at the etiologic influence. The cough in this form of chronic bronchitis is dry, irritative and attended with slight expectoration. There is nothing peculiar about the physical signs present. The course differs somewhat from that of other forms of the affection in that an exacerbation may occur at any season of the year, depending upon fluctuations in the uricacidemia.

The presence of the preceding causative condition, i. e., the lithemic state of the system, as shown by the high acidity of the urine, diminished renal output, pale stools, large coated tongue, and hepatic enlargement, it is that clinically characterizes this sub-variety of chronic bronchitis. The principles of treatment to be observed are not new; but in order to succeed in the management of these cases the prime requisite is to embrace under the diagnosis a recognition of the cause, so that the line of conduct may be adapted to the lithemic state.

RESULTS AND ADVANTAGES OF CLOSING THE NEPHRORRHAPHY WOUND WITH ASEPTIC ADHESIVE STRIPS.

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of New York

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etc

Estheticism is not always considered in estimating the result of surgical work, yet every surgeon must realize that, to some, an unsightly scar is very objectionable, though its location may be one not exposed to public view. Apart from this a neat cicatrix is evidence of neat painstaking surgical work and is always creditable.

In addition to the avoidance of an unsightly scar the use of aseptic Z. O. adhesive strips as recommended by Howard Lilienthal, possesses other advantages.

By avoiding sutures that penetrate the skin in closing wounds means the avoidance of stitch abscesses and a quicker convalescence. Even when perfectly aseptic suture material is employed, infection of the suture track may result from drawing the sutures through the skin. Though the surface of the skin may be rendered aseptic, the deeper layers harbor germs that may become dislodged and dragged through by the sutures.

The time saved by using adhesive strips instead of sutures and the fact that they do not constrict the underlying structures and cut off the circulation as do sutures is a not unimportant item, and is sufficient to recommend them for universal adoption, when they can be employed, independently of the other advantages enumerated.

It is essential that the adhesive strips be sterile or the margins of the wound covered by the strips will become infected and primary union will not be obtained.

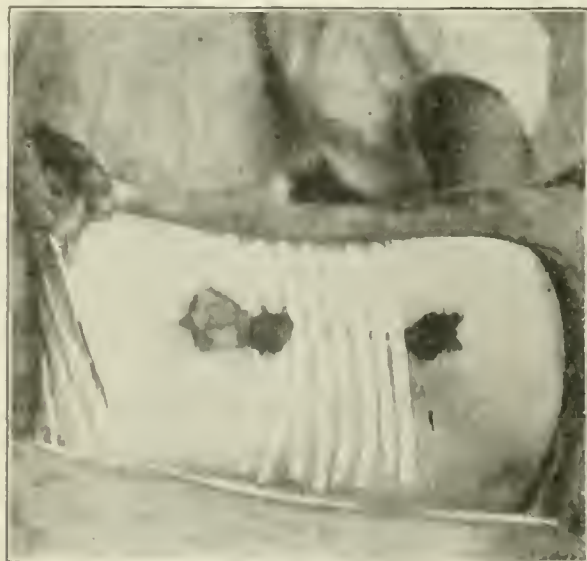


FIGURE 1.

The accompanying illustrations show, Fig. 1, the appearance of the nephorrhaphy wound, closed by adhesive strips, immediately after the operation is finished. At the upper angle of the wound above the adhesive strips is seen the gauze strip over which the sustaining sutures for the kidney are tied, and below the end of the gauze drain

projecting from the lower angle of the wound. The adhesive strips are applied, as shown, with space between, and not edge to edge or overlapping, so as to allow drainage for oozing from the margins of the wound.



FIGURE 2.

Fig 2 is a photograph of another case one week after operation upon removal of the first dressing, and shows how well the adhesive strips remain in position and firmly adherent to the skin though they have been saturated with oozing from the wound.



FIGURE 3.

Fig. 3 shows the appearance of the wound in another case immediately after removal of the final dressing three weeks after operation. It will be observed that the marking of the skin from the adhesive strips is more distinct than the line of cicatrix. These will of course disappear.

The result of fixation of the kidney for prolapse will be satisfactory if it is held immovably against the muscles of the back until it becomes adherent by sutures so inserted that they will not tear out when tied (see technique of the method of inserting these sutures further on) and if ordinary care is observed afterwards to avoid strains of any kind that would tend to force the liver down upon

the kidney and loosen the attachment. And it might be added, if the operation is not so long delayed that the kidney structure with its fibrous capsule has become so softened by long continued congestion that no form of suture will hold.

Early operation then is one very important essential for success.

Prolapsed kidney may be suspected when any of the following symptoms are present, viz.:

1. Chronic digestive disturbances; such as gastric irritability, persistent intestinal distention, repeated bilious attacks, etc.

2. Nervousness, restlessness and insomnia, without other ascertainable cause.

3. Unusual fatigue on exertion; particularly after standing or walking.

4. Palpitation of the heart and sometimes vertigo or syncope.

5. Epigastric pain, to the left of the median line, or pain over the region of the heart.

6. Dragging pains in the loin, extending to the groin and down the thigh, aggravated by long standing or walking, which is usually relieved by assuming the recumbent position.

7. Inability to rest comfortably or sleep on the left side, because the right kidney, which is most often prolapsed, drags towards the opposite side out of position when the sustaining pressure of the abdominal contents is removed by gravitating to the opposite side.

8. Irritability of the bladder, more pronounced during the day or after standing or walking. This usually disappears (though not always) after resting for a time in the recumbent position.

9. Jaundice which is transient and intermittent; due perhaps to temporary obstruction of the common bile duct from traction upon the duodenum and head of the pancreas and interference with the return circulation through the superior mesenteric vein.

10. Pain and tenderness over the region of the appendix, simulating chronic appendicitis; and tenderness upon pressure along the course of the ascending colon.

11. Pain in the right ovarian region, which is sometimes misleading in the absence of other symptoms directing attention to the kidney.

12. Acute attacks of pain resembling renal colic. These attacks, which are fortunately infrequent, are no doubt due to obstruction of the ureter from flexure upon itself or kinking as the kidney drags down, or from pressure upon the ureter by accumulation of feces or gas in the ascending colon.

Look for prolapsed kidney in every gynecological patient, whether they have symptoms directing attention to the kidney or not. It will be found in 25 out of every 100 women taken at random.

To detect prolapsed kidney stand the patient erect against a firm table or the wall with the clothing loosened about the waist. Grasp the right loin with the left hand, (sitting in front of the patient) the fingers behind and the thumb in front on a level with the lower border of the lowest rib in front. Direct her to take a deep inspiration and to cough forcibly when she has reached the limit; then to take another deep inspiration and as she expires

press the thumb deeply up under the rib, thus narrowing the space between the fingers behind and the thumb in front, so the kidney cannot pass between them without being detected when the attempt is made to replace it by pressure from below with the other hand. With the fingers of the right hand held firmly together palpate the abdomen to the right of the median line below the thumb of the left hand still held firmly depressed under the rib. If the kidney is displaced below the thumb, it can be engaged between the palpating fingers of the right hand below and the thumb above and outlined, and firm upward pressure will cause the kidney to glide under the thumb up into position. Bending of the body forward upon the pelvis fixed against the table or wall will secure relaxation of the abdominal wall and facilitate the manipulation.

If the kidney cannot be positively or satisfactorily made out in this manner let the patient lie down on her back and manipulate the abdomen so as to replace the kidney if it is down; then grasp the loin with the left hand as described above and let the patient get on her feet while the grasp is retained upon the loin. If now she is directed to take a deep inspiration slowly and to cough, if necessary, if the grasp on the loin is sufficiently maintained the kidney can be felt distinctly as it is forced down against the fingers and thumb and slips between them.

If the kidney is not sufficiently movable to become prolapsed it can be felt by this latter manœuvre, as it is depressed against the thumb on deep inspiration, and recedes upon expiration. If the kidney is not depressed against the thumb by deep inspiration, it is prolapsed and must be found below it. The normally placed kidney can be felt thus, unless the subject is very fat or the abdomen is unusually distended. A prolapsed kidney is not readily detected except by one who has become expert by constant practice unless the conditions are favorable; that is, the abdominal wall is thin or relaxed and pliable. But the method of palpation described above makes its detection much easier than by the methods usually employed; so much easier in fact that by comparison they are valueless. Yet when the prolapsed kidney cannot be made out distinctly by one method others should be tried in turn.

If the colon is distended it will interfere with satisfactory palpation and detection of the prolapsed kidney. This difficulty can be overcome, however, by giving a stimulating enema that will distend the whole colon and let it be expelled.

If the abdomen is unduly rigid or sensitive, dismiss the patient with instruction to rest up and examine her again a few days later, when the soreness has subsided.

There is no form of abdominal support that will keep the kidney in place or support it satisfactorily. All that such support can possibly do is to press upon the ascending colon and through it upon the kidney, and by this means prevent the kidney, perhaps, under favorable conditions from prolapsing to the extreme limit. This will sometimes relieve the most urgent symptoms temporarily. But the variability and uncertainty of such support can be readily appreciated.

The only method of cure is to fix the kidney in place by temporary sutures to the muscles of the back until it becomes adherent.

The technique of the operation is briefly as follows:

The surface of the back where the incision is to be made must be prepared with the greatest care to secure perfect asepsis of the skin. To this end it should be scrubbed thoroughly with brush or pad of gauze and Synol soap, and rinsed with sterile water.

The incision is made parallel to the spine, from three to four inches from it (according to the breadth of the back) on a level with the outer boarder of the erector spinae muscle, from just below the last rib down for about three inches. This incision is made through the skin and fat down to the superficial fascia covering the muscles of the back. This fascia is divided with scissors to the extent of the incision, and the successive layers of muscles are separated in the direction of their fibres and held apart by retractors. When the lumbar fascia is reached, it is divided if it cannot be readily separated from the muscles without doing so. Under this will be found the fat surrounding the kidney or its fatty capsule. This is drawn down and opened high up near the upper angle of the wound. Two fingers are inserted, the kidney located and freed of adhesion to its fatty capsule and brought up into the wound.

If the patient is placed on the table on her side with a deep, wedge-shaped pad under the opposite side the kidney will be found up in position when the fatty capsule is opened.

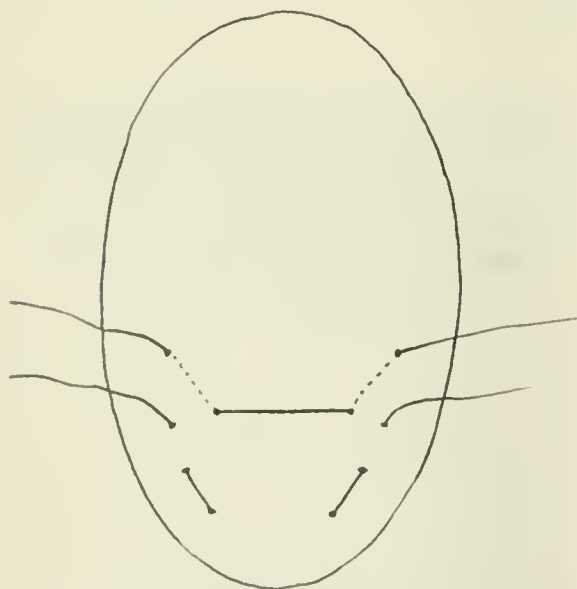


FIGURE 1.

The sustaining sutures, of which there are two, are inserted in the following manner on the lower third of the exposed surface of the kidney, viz.: A small, curved, round-pointed needle, with the suture (silk-worm gut) threaded directly into it, is inserted, first on the lateral portion of the exposed surface from above downward, taking in about half an inch and penetrating about a quarter of an inch

beneath the surface, in a direction somewhat oblique to its long axis; then it is inserted deeply through the kidney structure transversely, and again superficially on the opposite lateral face from below upward. The second suture is inserted in the same manner just above the first. But if there is not sufficient room, the second suture is introduced, as shown in the diagram (Fig. 4), with two lateral insertions only, leaving a considerable loop of suture upon the outside of the fibrous capsule. It has been found that this latter method of applying the suture will sustain even more strain without tearing than the other, and when the kidney structure is unusually soft and pliable both sutures are inserted in this manner.

The ends of these sutures (the upper one first) are threaded into a large curved needle and carried from within the fatty capsule through the muscles of the loin out upon the skin on each side at the extreme upper angle of the wound and about a third of an inch from the margins of the wound.

The redundant edges of the fatty capsule are trimmed off on a level with the bottom of the wound so as to permit the kidney to be drawn up against the muscles when the sustaining sutures are tied.

The sustaining sutures are tied over a fold of several thicknesses of gauze to protect the margins of the wound and prevent them from cutting into the skin (see Figs. 1 and 2). This fold of gauze must be of sufficient width to cover completely the surface between the suture ends as they emerge through the skin. The tying of these sutures brings the kidney up under the ribs and holds it against the muscular structure of the back so it may become adherent.

To lessen the strain on the sustaining sutures and to drain the wound, gauze is packed around and under the lower pole of the kidney and the end is brought out at the lower angle of the wound (see Figs. 1 and 2).

Sutures are not required for approximating the muscles of the back in closing the wound. As they have not been divided they fall together when the retractors are removed; but I usually insert two or three interrupted sutures of catgut to approximate the margins of the lumbar fascia.

It is seldom necessary to apply ligatures to vessels in the wound as they are drawn aside in separating the muscles and are not wounded. Bleeding points, if found, however, should be controlled by forcepressure and, if necessary ligature before the wound is closed. Oozing is controlled by free irrigation with hot salt solution before the gauze is inserted.

The surface of the skin is cleansed thoroughly of blood and wiped dry, and the margins of the wound are carefully approximated by the assistant while the adhesive strips, a quarter of an inch wide, are applied with spaces between them as shown in Fig. 1.

The wound is then plentifully covered with loose gauze and absorbent cotton held in place by a bandage encircling the body.

This dressing is not to be removed for a week, unless it is saturated by oozing from the wound

when it is renewed for another week without disturbing the adhesive strips.

The gauze drain at the lower angle of the wound is carefully withdrawn on the third or fourth day, lifting up the dressing for this purpose and replacing it afterwards. The opening at the lower angle remaining after removing the gauze drain may be closed with one or two additional adhesive strips of the same width as first applied.

At the end of two weeks the sutures are removed but the adhesive strips need not be removed for another week when all the dressings may be removed and the patient permitted to get up.

During this period of confinement in bed (three weeks) the patient must be kept rigidly on her back, or she may be permitted to turn on the side of the sutured kidney, but must not turn on the opposite side, as that would cause the kidney to drag on the sutures.

MULTIPLE PRIMARY NEOPLASMS IN ONE INDIVIDUAL, (SPINDLE-CELL SARCOMA OF FORE-ARM, ADENO-CARCINOMA OF PYLORUS, MYOMATA OF STOMACH-WALL). TREATMENT WITH COLEY'S MIXTURE.

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According to a recent paper by H. Gideon Wells (*Jour. of Path. and Bact.*, June, 1901) only seventeen cases of the simultaneous appearance of sarcoma and carcinoma in the same individual have been reported. The case to be described below will add one more to this number, at the same time being of interest as having been treated with Coley's mixture of the toxins of erysipelas and bacillus prodigiosus, and because of the possible relation of certain of the pathological findings to this treatment. The case came from the surgical clinic of Dr. Nancrede, and the clinical features will be more fully presented in another paper by Dr. George, a member of the surgical staff. In this report I shall consider more especially the pathological aspects of the case.

History.—Mr. S. A. W., farmer, of the age of 73, was admitted to the University Hospital, December 13th, 1900, for treatment of a tumor on the inner side of right fore-arm. His family history was negative. He was born with congenital amputation of left hand at the metacarpophalangeal articulations. He had the usual diseases of childhood, an attack of gonorrhea at 20, and at 30 years of age a severe attack of 'erysipelas' by which he lost his right eye. In May, 1900, he noticed a small lump beneath the skin of his right fore-arm, about half way between elbow and wrist. This was freely movable over the underlying structures. The growth increased in size, at the time of admittance to the hospital being about the size of a hen's egg, slightly nodular, and hard and elastic. It was movable upon, but adherent to the deeper structures. The skin over the tumor was adherent, cyanotic and mottled reddish brown. There was infiltration of the neighboring tissues. No evidences of metastases were present, the axillary glands were not enlarged. The clinical diagnosis of sarcoma was confirmed by the examination made in the pathological laboratory of a small excised portion which showed the structure of a large spindle-cell sarcoma.

The case being considered hopeless, a radical operation being strongly contra-indicated, it was decided to try the effect of injections of Coley's mixture into the tumor. This treatment was begun on December 21st, by an injection of $\frac{1}{2}$ minim. This amount was increased $\frac{1}{2}$ minim

every day or every other day, according to the severity of the reaction. After each injection, usually within half an hour, the patient had a chill and a rise of temperature. At the point of injection there was a painful, reddened area; later a whitish discharge and slough. In spite of the large areas of necrosis produced in the growth by this treatment it grew with great rapidity, and soon infiltrated the entire fore-arm. The axillary glands also became enlarged and later showed fluctuation. An incision in the axilla permitted the escape of a large amount of creamy pus-like material. The utility of the treatment being very evident, it was discontinued on the 1st of February, 1901. The patient's general condition became rapidly worse, and death occurred on March 6th at 10 P. M. The autopsy was performed by me at 9 A. M. of the next day.

The laboratory protocol is condensed as follows:

Body well built; bones large. Thorax barrel shaped; abdomen below level of ribs. Congenital amputation of left hand at metacarpophalangeal articulation. Fingers represented by tubercles having calloused tips but no nails. Musculature good; rigor mortis is present throughout. Skin is pale. Large amount of panniculus; slight edema over the lower extremities. Body heat present over liver region.

On the outer aspect of right ulna there is a large fungoid tumor covering the lower two-thirds of the fore-arm. The growth is irregularly nodular. In its central portion there is a deep cavity $2\frac{1}{2}$ inches long by $1\frac{1}{2}$ broad. The floor of this deep ulcer is covered with a thick pus-like material. The remaining portion of the growth is covered with a dry scab; about this there is an area of deeply pigmented skin and many enlarged veins. The growth is firmly attached to the radius, moving only with the bone. Its consistence is fairly firm except around the ulcer. The skin over the remaining portion of fore-arm is tense, scaly and shining; in the subcutaneous tissue there are a number of small scattered nodules which are freely movable under the skin. On section the tumor is found to be attached to the periosteum of the radius, completely surrounding this bone and filling up the space between the ulna and radius. The muscles of the fore-arm are almost entirely replaced by the growth, the tendons are preserved and are completely surrounded by the tumor. The cut surface of the tumor is mottled white and red, its consistency rather firm, yielding but a small amount of cells on scraping. Soft cheesy areas are found all through the growth, most numerous about the ulcer. The small nodules beneath the skin present an appearance similar to that of the main tumor.

The meninges are thickened, and the subarchnoidal fluid greatly increased in amount. The circle of Willis shows an advanced stage of arterio-sclerosis; in the cerebral branches are a number of saccular aneurysmal dilations. The carotids, especially the left, are markedly sclerotic, and are widely dilated. Attached to the vessel wall at the point of division of the left anterior and middle cerebral arteries there is a recent mixed thrombus extending into the left middle cerebral but not completely obliterating it. The left occipital lobe is atrophic; on section shows areas of sclerosis and small cysts filled with clear fluid. The brain as a whole is very anemic and shows marked edema. (The spinal cord was not examined.)

The examination of the mouth, upper respiratory tract and neck organs is negative.

Pleurae of the left lung adherent all over; on the right adherent only posteriorly at the base. Both lungs are voluminous, mottled red in color, moderately anthracosed, and on section yield an abundant foamy exudate. A large tendinous spot is present on the posterior wall of right ventricle, a smaller one on the anterior wall of left auricle. Subpericardial fat is greatly increased. Heart muscle is pale yellowish brown in color, very soft and tears easily. The ventricular wall is 20-25 mms. thick; in it are a number of small fibroid areas. Papillary muscles are hypertrophic. Mitral flaps thickened; aortic orifice admits of index finger, its flaps are stiff and rigid, a ring of calcification extending around the orifice. The flaps are adequate. Tricuspid orifice admits four fingers, the right ventricle is dilated. The coronary arteries show advanced sclerosis, in the anterior branch of the left is a partly organized thrombus. The arch and descending aorta show advanced sclerosis and fatty degeneration of the intima.

The omentum is very rich in fat, and is rolled up, lying between the surface of the liver and the abdominal wall.

It is firmly adherent around the gall-bladder. The intestines are collapsed with the exception of the cecum. Between the coils are a number of old vascularized adhesions.

The spleen is small, pale bluish red, and of soft consistency.

The adrenals present no abnormal appearances.

Both kidneys present practically the same appearance. The fatty capsule is very thick. The fibrous capsule is also thickened but strips off very easily. The surface is granular, containing numerous small cysts filled with clear fluid. The kidney parenchyma is decreased in amount. The outlines of the medullary rays and labyrinth are distinct; the labyrinths are swollen, cloudy and yellowish in color. Pelvic fat is in great excess.

The examination of ureters and bladder is negative.

The stomach is dilated, filled with grayish yeasty-smelling fluid containing food remains. The mucosa is atrophic. Near the cardiac orifice there is a small polypoid growth in the mucosa. The pyloric opening is free. The mucosa in the pyloric portion is greatly thickened, presenting many polypoid growths which are largest just above the pyloric ring. These growths show no evidences of ulceration. In the serous coat of the stomach, both anteriorly and posteriorly there are a number of small whitish, firm nodules about the size of a pea to that of a cherry, apparently arising from the muscular coat.

The examination of small and large intestine and rectum is negative.

The liver is small, its capsule thickened. On section it is very pale and cloudy, the outlines of the lobules indistinct. The cut surface is very smooth, almost homogeneous, consistence firm. The gall-bladder is retracted beneath the liver edge, is hour-glass in shape. Its walls are greatly thickened. The small cavity contains 15 brown and black calculi, the largest the size of a cherry, and a small quantity of orange-colored fluid. The cystic duct is obliterated; the common duct is patent, its lumen greatly dilated containing golden-brown bile.

The pancreas is surrounded by a thick layer of fat. The section shows atrophic lobules with marked fatty infiltration. The blood-vessels are markedly sclerotic.

The mesenteric and retroperitoneal glands are apparently normal. The abdominal aorta shows a high degree of sclerosis and fatty degeneration of its intima. In the left iliac and femoral veins there are recent thrombi. In the right internal iliac artery there is an organizing thrombus partly obliterating its lumen.

Both testicles show advanced atrophy and fibroid change. The prostate is enlarged, on section shows numerous small nodules.

The voluntary muscles are yellowish, softened, tear very easily, and have a distinct fatty shine.

The glands in the right axilla are replaced by a nodular growth about the size of a normal kidney. On section this presents an appearance similar to the primary growth in the forearm, but of softer consistence.

Microscopical Examination.—Sections of the primary growth in the forearm show it to be a large spindle-cell sarcoma containing many large polymorphous cells and having but little intercellular substance. At the points of the injections into the growth there are large areas of soft cheesy necrosis. No leukocyte infiltration is found either about these or about the superficial ulcer. Remains of striped muscle and tendon occur throughout the growth. The axillary tumor has the same structure as the primary; in it there are also large areas of soft cheesy necrosis.

The polypoid growth in the pylorus has the structure of an adenoma infiltrating the submucosa and muscularis (adeno-carcinoma). The polyp from the cardiac end is an adenoma showing no infiltration of the stomach wall. The small nodules taken from the serous coat of the stomach are formed of irregular bundles of unstriped muscle and connective tissue (leiomyo-fibroma). The sections of the stomach mucosa show a chronic catarrhal gastritis.

The lung is atrophic, moderately emphysematous, its vessels congested and there is marked edema. The spleen is also atrophic, moderately congested and its small arteries very sclerotic. The kidneys show an early stage of arterio-sclerotic interstitial nephritis with a cloudy swelling and fatty degeneration of the cells of the convoluted tubules. The adrenals show no change.

The liver is atrophic, the central vein congested. The liver-cells show cloudy swelling and fatty degeneration.

Sections of the gall-bladder wall show a chronic cholecystitis. The pancreas shows an extensive atrophy with fatty infiltration. The capillaries of the areas of Langerhans shows a high degree of sclerosis, many of the areas resembling hyaline kidney glomeruli.

The heart muscle and also the voluntary muscles show extensive fatty infiltration and degeneration. The lymph-glands are atrophic and contain large masses of hyalin. No hemolymph glands were found in the retroperitoneal region, but two from the cervical region show atrophy and pigmentation. The parathyroids are larger than normal and show fatty infiltration. The prostate shows a granular hyperplasia.

Pathological Diagnosis.—Primary Spindle-cell Sarcoma of right forearm, metastasis in right axillary glands; Primary Adeno-carcinoma of Pylorus; Adenomatous Polyp of Cardiac Portion; Multiple Myomata of Stomach Wall; Thrombosis of Left Anterior and Middle Cerebral and Right Iliac Arteries and Left Iliac and Femoral Veins; Arterio-sclerosis and Fatty Degeneration of the Intima of Large Arteries; Aortic Stenosis; Cardiac Hypertrophy and Dilatation; Atrophy and Parenchymatous Degeneration of All Organs; Early Stage Interstitial Nephritis; Chronic Catarrhal Gastritis; Cholecystitis and Cholelithiasis; Sclerosis of the Areas of Langerhans; Atrophy of Right Optic Nerve and Left Occipital Lobe. Congenital Amputation.

The occurrence of multiple primary neoplasms is so rare that the case described above can be regarded only as an interesting pathological curiosity. The combination of carcinoma and sarcoma is so infrequent that it must be looked upon only as a mere coincidence. There is no evidence to explain this rarity of occurrence on the hypothesis that the presence of one malignant tumor is unfavorable to the development of another. If malignant growths are caused by parasites it would be expected that multiple growths would occur frequently; the rarity of such event has therefore been used as an argument against the parasitic nature of malignant neoplasms.

Of more immediate practical interest are the pathological changes in the sarcoma and in the organism as a whole which may have some connection with the toxin treatment. At the point of the injections there were large areas of necrosis. No leukocyte infiltration was present about any of these areas. The fatty degeneration of the intima of the blood-vessels, heart, voluntary muscles, and the parenchymatous changes in the liver and kidneys are to be explained as caused by systemic intoxication. This may have arisen either from the absorption of poisons from the necrotic portions of the sarcoma or from the injections of the toxins. The marked reaction after each injection gave evidence of the systemic effects produced by these. Coincident with this treatment arose the rapid development of general cachexia, involvement of the kidneys, multiple cachectic thrombosis, etc. The part which the stomach carcinoma played in the development of these conditions was probably very slight, as it gave rise to no symptoms. There was no obstruction of the pylorus, no ulceration, and the tumor could not have been diagnosed clinically.

The direct effect of the injections of the toxins into the sarcoma was the production of a large area of necrosis of the tumor-cells about the point of injection. After each injection there were evidences of systemic intoxication, as shown by the marked reaction following the treatments. The toxins act as protoplasmic poisons, killing the tumor-cells with which they come in contact. Any decrease in the size of a tumor so treated is due only to the death of portions of its substance, and its complete

disappearance would depend upon an excess of this destruction over that of the cell-growth of the tumor. There is no evidence that the toxins have any specific action upon the cells of tumors. The same phenomena of cell-destruction may be produced by many other protoplasmic poisons.

If the spontaneous necrosis and degeneration which occurs so frequently in malignant tumors is to be regarded as one of the factors in the production of tumor-cachexia, the excessive necrosis produced by injections of toxins must be favorable to the rapid development of cachexia. To the effects of the absorption of products from the dead tumor areas must be added also the systemic effects of the substances injected. These are undoubtedly absorbed, to a certain extent at least, and produce effects other than purely local ones. The destruction of a tumor by such means is therefore attended by the danger of systemic intoxication and the more rapid development of cachexia. There is also the possibility that injections of large size favor metastasis by mechanically loosening the cells of the tumor into the lymph stream. The autopsy findings in this case suggest the occurrence of such results of the toxin treatment.

From the Pathological Laboratory,
University of Michigan, Ann Arbor, Mich.

ARE THE SMALLER MEDICAL COLLEGES AN ESSENTIAL FACTOR IN MEDICAL EDUCATION.*

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The subject of medical instruction has been a fruitful theme for discussion from the earliest inception of medical colleges in America. That it has borne fruit of great value is a fact patent to all. During the past decade the improvement in medical teaching has been most marked, and has kept pace with the rapid improvement in medicine itself—indeed, the one has been the necessary sequence of the other.

Within the memory of all present, but few schools made any special requirements as to literary qualifications, a condition precedent to matriculation. As a result, many gained admission in such an unprepared condition as to reflect no credit on themselves, and less on the institution whose doors were open to them. The course of instruction was short in the extreme, but two terms of five months each, often less; and consisted almost entirely of didactic lectures upon what might be called the seven elementary branches; clinical and laboratory work being an unknown quantity. As a result, of constant agitation by the better educated portion of the profession at large, with, I am sure, the hearty approval of the teachers, in a vast majority of cases, in the different medical colleges in the country, a radical change has been brought about.

I am aware that critics upon this subject have been, and are yet, inclined to blame the colleges for lack of interest along these lines; unmindful of the fact that teachers lecture to just such stu-

dents as are furnished them and recommended by the physicians themselves. If the general practitioner had long ago insisted upon taking into his office as a student, only such as he was satisfied had, by preliminary education and fitness, qualified himself for the study of a profession, the change so slowly wrought would have come long ago. But slow as it may have been, by a process of evolution, the modern medical college has come into existence. To my mind the most important change, because the most far-reaching in its results, is the higher standard of literary qualifications required by all colleges that make any pretense to thoroughness. A high school diploma, representing four years of study, is alike creditable to the student and the college that receives him. True, a degree from a literary college, earned after four additional years of study, is better; and may at some time in the future be demanded by all.

The highest ideal of the physician is but too seldom reached, and then only by degrees and not at a single bound. New standards, brought about by the greater demands of the new century, make a higher degree of general culture and more exact technical knowledge in the physician absolutely imperative. Many of the states have enacted laws, stating in specific terms, the preliminary education which the would-be candidate for the degree of the doctorate shall possess. The course of instruction in medical colleges has been lengthened to four years of at least six months each, and I am of the opinion that in the near future all will demand four years of nine months each.

Laboratory work during the first two years is now compulsory and a prominent feature; reserving clinical and didactic lectures for the last two years of student work. I do not believe the former will ever entirely supersede the latter, nor do I deem such a course wise.

In a utilitarian age like the present, when concentration in every department of human endeavor seems to pervade the atmosphere as it has never done before, the question may well be asked in a meeting like this, is it to extend to the schools of learning and is the so-called smaller medical college to go, and give place to a limited number of larger ones connected with universities and located in the great centres of population?

In the discussion of this subject of medical education and training, there seems to be a spirit among certain of the profession decrying the smaller medical schools of the country; but the picture they draw of them is, in my opinion, of entirely too pessimistic a character. "By their fruits ye shall know them," and as often as not it has been the graduates of these same colleges in whom culture and attainment have been eventually developed in the highest degree. Many of them could be named who have become the great masters of American medicine, who have been the great pioneers. No country on earth has furnished the number of men who have entered and mapped out so many new fields of medicine into which men of other countries have followed and assisted in cultivating. It has been said with a great degree of truth, I think, that independent and original thought and investigation leading to discovery, are indigenous to American

*Read before the Pan American Medical Congress at its meeting in Havana.

soil. After all, as Carlyle has said: "It is not thy works which are all mortal, infinitely little, and the greatest no greater than the least, but only the spirit thou workest in that can have worth or continuance." Now this spirit of work and enthusiasm can be found developed in a small school as well as in a large one. Indeed, I am not sure but that it is as often found in the one as the other.

A great medical teacher and writer, whom all American physicians, and I think I may say, all wherever medicine is known, delight to honor, in a paper half apologetic for his American confreres and colleges, read at the recent International Medical Congress in Paris, uses the following language: "Medical teaching, however, will be better and more uniform, and more in accord with the requirements of the people, when our one hundred and fifty-six schools will have been reduced to twenty-five, and each of them will be connected with a university as its medical department." In other words, the medical colleges outside the cities of Boston, New York, Philadelphia, Baltimore, Buffalo, Chicago, San Francisco, and possibly New Orleans, which are not connected with a university, whose graduates in civil and military life have added lustre to American medicine and dignity to the commonwealth, are to have no part in the training of American youth who may seek admission to the ranks of our profession. I would not, were it in my power, detract in the least degree from the well-earned fame these great centres of learning have long enjoyed, because of the gathering together of such master intellects as have given them place and power; but, is it not possible for those, not members of these faculties, to do good work? Men make schools—schools do not make men. The time has long since gone by when a man's geographical location can be considered an index of his capabilities or qualifications. The college, large or small, but lays the foundation, the superstructure, whatever it may be, depends upon the individual himself. No medical college ever did or ever will, make a complete physician, nor can we really ever have a finished product, for one of the unalterable laws of nature decrees that man must grow or deteriorate: there is no standing still.

Many of the smaller schools are doing most excellent work. While there may not be that repetition or multiplicity of material that enters into the formation of a well-regulated and equipped laboratory, still all the essentials are there, all that can be used with profit, and those of the very best at that. In bacteriology, every step in the process of germ cultivation, from the preparation of the culture media, through every gradation of planting, growth, mounting and staining, together with careful examination with the best of microscopes, the student is thoroughly trained. Verification of the germ in the guinea pig follows, that nothing may be omitted. The work in chemistry, histology and pathology is carefully taught by teachers, who, enthusiastic themselves, inspire the same enthusiasm in their students. The same may be said of the work in the anatomical department.

To my mind, the subjects most neglected in all schools are *Materia Medica* and *Therapeutics*. The application of remedies to the treatment of dis-

eased conditions is a matter of prime importance:—it has a dual interest—one to patient, the other to physician. Teachers give with the most minute detail the etiology and pathology of a disease, and dismiss with a few glittering generalities the treatment. As a result, there is growing up among us a class of medical nihilists who think drugs well nigh useless. It has been said by some one that "it does not matter so much what you give as who gives it." From a commercial point of view this may be correct; but from the scientific standpoint it is lacking in every element of truth. From the latter view point it does matter who prescribes; it is easy to tell then what will be prescribed—it will be the remedy indicated at the particular time and in the concrete case. It will not be the physician who will turn to his shelves, where are arrayed an assortment of bottles variously labelled: "Rheumatic cure," "Cough mixture," "Heart tonic," "Mixed treatment" and the like. One may well ask the question: "Has prescribing become a lost art?"

In the matter of clinics it is not so much the amount of material, the multiplicity of cases seen, as the care and thoroughness given to each individual case. A few patients, carefully studied in every detail and phase of development, and watched from the inception of the disease to the final restoration of the individual to health, are of more practical value to the student than a dozen looked at through opera glasses from the top row of the amphitheatre.

Small schools, as well as large, take their students into the wards of the hospitals, where they are allowed to see and examine the patients, ask questions upon any or all phases or complications of the disease. Moreover, the case being constantly before the student, he becomes familiar with the appearance of the patient at different stages of the disease, and results of the various forms of treatment are noted and carefully weighed. In small schools each student receives a greater amount of individual attention and assistance in the formation of habits of self-reliance and investigation which are invaluable. Personal contact of pupil and teacher is a matter of no small importance.

In conclusion, my plea is not for the destruction of any of the schools of worth we now have, but for a recognition of merit wherever found, whether the college be large or small; for a higher standard of excellence in both, to the end that American Medical colleges and their graduates may be recognized as they can be and will be—the peers of any in the world.

Glandular Fever.—A. Guérin discusses glandular fever in the *Journal de Médecine de Bordeaux*, (June 30, 1901). Fever and enlarged glands exist for a few days only; then the fever disappeared, while the glands remained enlarged for a variable length of time. The submaxillary glands, those at the angle of the jaw, and the cervical glands may be involved, singly or all together. Guérin reports two brothers, in one of whom nephritis existed, in the other glandular fever, at the same time and from the same causes. He also reports two other cases, in a grandmother and her grandson. In the former typical glandular fever occurred. In the latter a tonsillitis. Other similar cases were found in the literature. Guérin believes that glandular fever is polymorphous. He suggests that it is but one of the many manifestations of influenza. [M. O.]

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The Plague Situation in California.—The State Board of Health of California has just gone on record again on the plague question. In a report issued by it the statement is made that "it is significant in this connection that the latest case of bubonic plague alleged to have been discovered in this city was on April 8th, the day before the State Board commenced its active investigations. After that date no case was discovered, although many were asserted to be such, until an autopsy disproved the assertion." This remarkable announcement comes unsupported by any statement as to who made the autopsies, and what the cause of death was in the cases alluded to; and in spite of the publication in the *Public Health Reports* of October 11th, of the cases of plague with attending fatalities from July 6th to September 27th inclusive. By reference to the table in that report it will be seen that in the period mentioned ten cases of plague occurred with a known mortality of seven, the termination of one case (September 20th) being unrecorded.

The whole controversy, from its beginning more than a year ago, would be amusing if less were at stake. It reminds one of the extravagances of opera bouffe. Just what the State Board hopes to accomplish by this extraordinary announcement is not easy to perceive. From the beginning its utterances have been discredited. They represented opinions and not views based upon actual investigation of those dead of the strange disease. That any one not immediately under the Board's influence will accept the equally gross misstatements in its latest report is beyond belief.

The matter of real moment to California is whether other States will be assured that State officers hostile to the truth will deal adequately with a grave situation and use every available means to prevent the spread of the pest outside the State's borders. What we urge again is that by intelligent and willing action the authorities of California use every endeavor to suppress a plague that menaces the public health of the country, and imposes a heavy international responsibility. What kind of altruism, we should like to inquire, is this

that assumes indifference to its own life—a fatalism difficult to accept—and an equal indifference for the lives of others? Moreover, can a purblind State be trusted to preserve the health of a community and to eradicate an existing pest center?

We may say, and we believe we have many sympathizers, that we are tired of the plague controversy. There is indeed no matter for disagreement; plague has existed for almost two years in San Francisco, and its prevalence has not only been demonstrated beyond dispute, but that it prevails in the Chinese quarter of the city is the conviction of every intelligent person who has taken the trouble to examine into the matter.

If the State of California persists in its foolish practice of prevarication it may suddenly discover that other States have wearied of the pastime. What its feelings will be, should the severe penalty of isolation by quarantine be invoked, can readily be conjectured. And yet, even so drastic a measure might not only be justifiable, but prove to be the only one capable of bringing the defiant and resistant State authorities to a full realization of the consequences of equivocation.

Some Successful Tumor Transplantations.—The subject of the transplantation of tumors is one that has excited the interest of clinicians and pathologists for several years. The number of positive results has been astonishingly small. In a few instances successful transplantations have been made in animals, and in two cases in human beings, but in these the subject of the experiment furnished both the tumors and the site of inoculation. Recently Loeb, of Chicago, has made a valuable contribution to this subject (*Journal of Medical Research*, July, 1901), commencing by transplanting the fragments of a carcinoma of a cow, and a carcinoma of a mouse into animals of the same species. His results were entirely negative. Later he commenced a series of consecutive transplantations of a sarcoma of the thyroid gland of a white rat. The original tumor was a cystic sarcoma, the cysts being produced by a gelatinous softening of the tumor cells, and, as the remaining cells arranged

themselves in a sort of epithelial-like line around the walls of the cyst, we may assume that it belonged to the group of angio-sarcomas, a tumor that by many is regarded as of endothelial origin. This tumor was extirpated, recurred locally, and gave a local metastasis. The animal died of an operation. Fragments of these tumors were transplanted in the subcutaneous tissue, or into the peritoneal cavities of other rats, and examined at varying periods in order to determine the changes that ensued. Usually the fragments became at first necrotic, many of the nuclei, however, remained vesicular; but in a short time it was possible to distinguish them from the nuclei of the connective tissue cells. Finally, some of the cells in the midst of the lesion began to show cario-kinetic figures, then most of the connective tissue gradually became transformed into a tumor mass that presented the same cystic arrangement that the original tumor had presented. Nearly always, however, the central portion of these tumor masses was necrotic. Efforts were made to transplant the tumors by feeding them to the animals, and by injecting fluid from the cysts into the peritoneal cavities of other animals. The former experiments were invariably unsuccessful; in a few of the latter positive results were attained. An interesting series of experiments consisted in permitting fragments of silk, cotton or agar to become penetrated by the tumor cells, by placing them in the tumorous tissue, and then transplanting them to other animals, when it was found that the tumors grew from them. Nearly always the tumor would continue to grow while the animal became more anemic and cachectic, and finally died. In some cases, however, the tumor ceased growing, when it was found that incision and transplantation of a portion renewed its activity. During fifteen months in which these experiments were continued, the tumor maintained its original histological character, and its virulence was not altered. It could not be transferred to any animals excepting rats and it was not affected by the action of iodide of potassium.

In considering this paper several points occur to us, some of which evidently occurred to the author also. He speaks of the analogy of some of the histological characteristics of the tumor to the changes produced by the tubercle bacillus. We cannot escape the conviction that in many cases these transmissible tumors, so called, which are found in the lower animals, are not really tumors at all, but are manifestations of some infectious agent that produces an infectious granuloma. It is not necessary to suppose that this is a hitherto undiscovered form of infectious agent, because we know

that certain tumor-like growths are produced by the tubercle bacillus, that do not resemble the ordinary necrotic cheesy area. In fact, in some cases the appearance is so atypical that it has been described as sarcoma, and only inoculation experiments, or staining sections for the tubercle bacilli, has revealed the true nature of the case. It must not be understood that we are attempting to instruct Loeb regarding his tumor. We have not the least doubt that his diagnosis of sarcoma was entirely justified according to the accepted criteria for the diagnosis of tumors. What we wish to suggest, however, is the possibility that many sarcomas are only infectious granulomas that for some reason or other fail to produce focal areas or necrosis. The whole subject of tumor formation is in such a miserably confused and unsatisfactory state, as a result of our inability to discover the cause, that dogmatic statements are entirely out of place.

Report of the Milk Commission of the New York Medical Society.—Considerable interest will be attached to the report just published of the summer work of the Milk Commission appointed by the Medical Society of the County of New York. When it is remembered how universal is the applicability of the results obtained by these scientific workers and how far reaching are the evils resulting from milk-contamination, some idea may be entertained of the value of such an undertaking. Done in the heat of our oppressive summers at much personal inconvenience, and at times in the face of more or less positive opposition, the Commission has arrived at certain data which must be taken as conclusive evidence. Thirty visits were made to farms and dairies, some located one hundred and eighty miles from New York City. Each of these visits consumed at least one day, and some several days, in order to afford thorough investigation of the premises and methods of working. In the work of the Commission the individual farm or dairy and not the milk-company has been regarded as the unit for study and investigation. One interesting and suggestive result obtained was that an elaborate and extensive plant is not necessary to produce a clean milk. The contamination of milk is most marked during the first forty-five minutes, and here is where the largest amount of precaution must be taken. This includes cleanliness in every sense of the word. The udder and adjoining parts must be thoroughly cleaned; the hands and dress of the milker should be sterile, as far as possible; the cans, pails, and strainer must be scrupulously clean; dust and insects from dirty lofts and ceilings must be avoided by the careful use of the brush and whitewash; and immediate immersion of the milk thus drawn in ice-

water at a temperature of 40 degrees F. is most essential to destroy the germs that will gain entrance notwithstanding the utmost care that may be observed.

An examination of the results shown in one specific case will be of interest here. The milking was done in a barn, the ceilings of which as well as the hay in the lofts were covered with dust; the windows were filthy and a southern exposure greatly increased the heat.

Added to these was a filthy manure-gutter, and an accumulation of farming utensils and clothing, full rations for the cows, the presence of swarms of flies necessitating the constant use of the tail and restless moving of the animals, and water of 60 degrees F. in the aerator. Under such adverse conditions the milk tested on the spot showed a bacterial count of 455,000 to the cc. After whitewashing and cleansing the ceiling, washing the windows and floors, and placing green shades to screen the sunlight, thorough disinfection of the manure gutter, the removal of clothing and other material stored in the room, and cleansing of the cows, which were receiving scant rations, and straining of the milk in the dairy and not in the barn, the count showed only 3600 bacteria to the cc.

The suggestions of the Commission are comprised under three heads as follows: 1. Strict cleanliness, which refers to the barn, yards, cows, milkers, and all the utensils. Bacteria which get into the milk by means of dirt are thus thoroughly excluded. 2. Rapid and sufficient cooling of the milk to prevent the development of the germs that do get in. 3. Thorough icing around the milk until it reaches the consumer in order to arrest the production of toxins.

There has probably not been undertaken in recent months a more valuable series of observations than those here noted. The dissemination of disease by contaminated milk is a well-recognized factor in pathology, not only through the direct transmission of germs, but through the action of their toxins as well. The summer complaint of children no doubt could be very materially diminished because of lessened toxin-formations, if milk primarily but weakly infected could be used as a working-basis for the production of infant foods. It is to be sincerely hoped that the work of the Commission so ably begun will be carried on in New York and that similar Commissions will be established in other States. There will thereby be disseminated a better appreciation among farmers and milk-dealers of the value and absolute necessity of sterile methods in the preparation of milk, and from a financial standpoint it will undoubtedly well repay those producers who will assume the small additional cost and labor

that must be incurred in the adoption of such methods.

No Border-Line in Medicine.—International prejudice is never more inappropriately shown or more ungraciously expressed than when it resents the good offices of foreign friends in a time of need. The fact that one of President McKinley's nurses happened to be a citizen of Canada probably did not suggest in the remotest degree to the vast majority of American people a thought of criticism. The prejudice is too microscopically small to be worth even now a moment's notice were it not that it unfortunately found expression in an American medical journal—the last place in which it should have been seen. We print elsewhere the dignified reply of the *Canada Lancet*, and we assure our Canadian contemporary that we are in full accord with the sentiments which it has itself expressed. The American medical profession, moreover, does not regard the Canadian medical profession as "alien." The science of medicine is too cosmopolitan, and the relations between the United States and Canada are too many and close, to tolerate the exhibition of such a petty sectional spirit—a spirit, however, which only harms him by whom it is expressed.

Medicine at the Yale Bi-Centennial.—A celebrated American university, in point of foundation the third oldest in this country, has recently celebrated its bi-centennial. At this celebration, statesmen, jurists and scientists gathered to do honor to their alma mater. Men successful in business and commercial life were there in multitudes. The medical profession was represented by great numbers of alumni, many of them men of the utmost distinction, and medical science was not unrepresented in the ceremony. Professor Welsh's address may be taken as a mark of Yale's recognition of a great profession. At Yale there has been for many years a medical department in the university which has made an honorable record, although it cannot be said that it has impressed itself profoundly upon the university as a whole. The world does not turn naturally to New Haven as to a great medical centre. This is not necessarily because—as is so frequently alleged—Yale is situated in a comparatively small city, for in Germany and Scotland there are most distinguished medical schools, thronged with students, and imparting the best instruction, in towns of a few thousand inhabitants. It is not because the other courses of the university at New Haven overshadow the medical department, for we have the examples of Harvard, of Columbia, of Chicago, and of Pennsylvania, in which medical

schools, parts of the universities they represent, work side by side with the other departments, holding rank of equal eminence. Rather, we think, the fault lies in the tendencies of the medical profession of America. The academic career, so-called, seems to offer insufficient inducements to the ambitious American medical student. He wishes for the glory of a great practice, the power of accumulated wealth, for the amusements of a great city, and particularly for the glamour lent by association with riches or social distinction. And some of these he thinks he cannot obtain in the environment of a single university, or in a small town of which the university forms the most important part. Therefore let the inducement be ever so great from a financial standpoint; let the opportunities for enduring scientific work be ever so alluring, the small towns cannot, or at least do not, attract medical students in America.

It must not be overlooked, however, that the supreme disadvantage under which small university towns labor in this respect lies in the absence of hospital and clinical facilities. The great majority of medical students will instinctively go to the big cities in which are situated the great hospitals, the fame of which has gone abroad. America is a country of big cities, and these have a centripetal power that is well-nigh irresistible for medical students. Cornell University has recognized this fact, and has established her medical school in New York. It is said that Princeton also has been contemplating such a college in some neighboring large city—but this is only rumor.

If we have missed the note of a full medical participation in the Yale Bi-centennial, it may have been because as medical men we naturally were expecting too much. The all-round university idea must include a full recognition of the faculty of physic. While wishing Yale the best of everything, we hope especially that when another hundred years have rolled around, and she is celebrating with increased glory, influence and wealth her tri-centennial, her medical school may not be the least part of the whole.

Peril by Fire.—The disastrous conflagration in this city last week, by which more than twenty persons met death in its most terrifying form, illustrated once more a problem which seems as though it were destined never to be satisfactorily solved. That an eight story building can be erected in the very midst of Philadelphia's most crowded marts, in such a fashion that it can become a mass of flames from cellar to roof in five or six minutes, is a demonstrated fact. The disquieting reflection after

all is that many other just such buildings are still standing, in this and every large city. To the medical mind, intent everywhere upon meeting and controlling all the possible causes of death, this seems to be a mere mechanical problem, and one that does not compare in complexity with the kindred problem presented by the infectious diseases. And yet it is one which is not yet solved by architects, builders and, above all, building inspectors. One might suppose that with all the strictly fire proof material now available for constructing tall buildings, such as steel framework, brickwork, and patent floors, buildings could be put up that would not catch fire so ruthlessly that people would not be able to escape from the fourth story of them with their lives. It will not do to blame the elevator shaft entirely. This shaft acts like a chimney, to be sure, but chimneys do not necessarily set fire to houses, and in a genuinely fire proof building even an elevator-chimney would have nothing to burn. At the recent fire the ambulance and hospital service was conducted perfectly, as is the rule in Philadelphia.

The Psychology of Hereditary Suicide.—An extraordinary family history is recalled by the recent suicide of a farmer named Briggs, in Connecticut. According to the report of the case, as published in the *New York Sun*, this was the twenty-second case of suicide in this family in four generations during a period of fifty years. Lying in suicides' graves in the village cemetery are the great-grandfather, the grandfather, father, brother and two sisters of this latest victim of this remarkable family craze. A curious and significant fact is that the contagion has not been confined in this family to relatives by blood, but in one case at least one of the women who married into the family made away with herself. The report published in the *Sun* gives many gruesome details of the gradual wiping out of this extraordinary family by suicide—but we are not concerned here with details, which, after all, are only a commonplace list of hangings, drownings and shootings. What interests us is the scientific problem involved, for few persons will question that here is a nice problem in heredity, or at least in mental contagion.

We doubt whether there is another record in the world that equals this of the Briggs family. Instances, however, have been reported of epidemic suicide and of suicide among near relatives. The story is well known of the ancient tyrant of Miletus who, in order to stay an epidemic of suicide among the young women of that city, ordered that the body of the next offender should be exposed naked in the market place. This broke the charm, whatever it was, and the self-slaughter ceased. Mabille,

a French writer, reported in 1891 the case of three sisters, who committed suicide within three years. Some years ago we commented in these columns on a case of double suicide, in which two young women, who were close friends, threw themselves from a ferry boat into the Delaware river. These cases of family suicide, or epidemic suicide, or double suicide, or suicide in common, can all be classed under one head; that of *suggestive* suicide. Herein lies the psychological problem; for it seems indubitable that when one person commits suicide from the force of example set by another person, that person is very profoundly under suggestive influence to commit an act which is against the strongest instinct in human nature.

The initiative in such a case has not come from within, but from without; it is not spontaneous, but communicated; not original, but derived. This is the very essence of hypnotic suggestion. In the case of the two young women there was a mutual suggestive influence; in the case of the Briggs family there has been an hereditary one. In medical jurisprudence a fine but critical point occurs as to the degree of guilt that attaches to a survivor in a case of attempted double suicide in which only one of the parties perishes. Some lawyers maintain that this survivor can be held for homicide, in having compassed the death of the other.

Lorin L. Lewis, Esq., of Buffalo, N. Y., one of the counsel appointed by the court to conduct the defence of the assassin, Czolgosz, writes us that the alleged interview, a report of which was published in some of the daily newspapers, in which he was represented as stating his belief in the prisoner's insanity, was erroneous. We referred, in a recent editorial, to this alleged statement, and are glad to be able to chronicle the fact that such statement did not convey the counsel's opinion.

Current Comment.

THE PRESIDENT'S "ALIEN" NURSE.

In an editorial reference to the lamented death of President McKinley, *The Detroit Medical Journal*, in criticising the management of the case, mentions that "not only was Mrs. McKinley very carefully excluded from the sick room, but her spouse was left to the 'rule of thumb' care of an alien 'trained' nurse." Of the many criticisms of the case which we have noticed, this appears to us to be the most unhappy, unjust and uncalled for. In the profession of medicine, so cosmopolitan, so wide in its sympathies, so little influenced by the jealousies, narrowness and bigotry that divide people politically or religiously, it is fortunately rare that such an example of petty prejudice and intolerance appears as is displayed by the writer in question. It is not necessary, nor do we pretend to offer any defence for either the Canadian nurse who attended the President nor for the doctors who recommended her services. They, no doubt, had no other object to serve than their patient's welfare, and they were in the best position to judge of the fitness of the nurse in whose charge they left him.

That the Canadian Training Schools maintain as high an

educational standard and graduate nurses who are as thoroughly qualified for their professional duties, as any country in the world, is a fact that should be well known among our American friends, since a considerable proportion of the highest appointments in their best hospitals are held by Canadian graduates. During the President's illness it was no alien sympathy and interest which Canadians felt, and we doubt if his death was more deeply deplored or caused more sincere sorrow in the great republic itself than throughout the Dominion of Canada. The general sympathy displayed seemed to draw closer the two great branches of the English speaking people on this continent and its effect will not be lessened by any such exhibitions as we have referred to. It may possibly interest the writer of the editorial to learn that Miss Maud Mohan, of Brockville, the nurse in question, was alien only in birth, not in training, as she was trained in the Buffalo General Hospital, graduating from that institution in 1898, after which time she continued her professional services under Dr. Roswell Park.—*Canada Lancet*.

THE INTERNATIONAL CONGRESS OF NURSES.

The Nurses' Congress at Buffalo, U. S. A., was distinctly a success; it was well organized, and included some of the most distinguished women from the old and the new country. The subjects set forth for discussion dealt with hospital administration, the training of nurses, and their future spheres of work, remuneration and control, services under the State, and the duties of nurses as citizens or municipal officers. The discussions showed that the American women are much more apt in the public meeting than their English sisters, and also gave evidence that they are confronted with similar difficulties in organization. The American nurses are organized in a federation of two groups, "the Associated Alumnae," and the Society of Superintendents of Training Schools, and they work as one body in all matters of general interest to the profession. Three resolutions were passed as representing the results of the discussions, (a) in favor of higher education for nurses, (b) in favor of State registration and legislation, (c) condemnatory of the practice of sending out as private nurses pupils still in training at their schools. The Congress met with much sympathy and support from the public generally, and judging from the reception given to the nurses at the general meeting they are looked on as valuable workers in the interest of the community.—*The British Medical Journal*.

THE PSYCHOLOGY OF CROWDS.

M. Tarde, not long since, published a suggestive and important volume on the "Psychology of Crowds." He has now issued a new volume (not yet translated from the French, it is believed), under the title "L'Opinion et la Foule," says the New York Sun. The public is something different from the crowd. In a theatre or in the street the public and the crowd are the same thing. But printing and other modern devices have created a public which has an opinion independently of propinquity. Opinion is action at a distance.

The book in question studies the public, how it is born and developed, what its relations are with those who direct its opinions, its relation to the newspaper press, to crowds, to church and to state, its manners of action, its powers for good and evil. All these matters are fit subject for a strictly scientific treatment, which, in fact, they receive. The first printed book with a great public was the Bible; the Reformation was the result. It was, however, a long time before books were widely read. In the seventeenth century there was only a literary public, in the eighteenth a philosophic public arose.

Journalism came in with the Revolution. Public opinion in older times was formed only by conversation; with the advent of the press a new factor was introduced. The journal acts on the individual and the public reacts on the journal. In the last analysis, a public has the press it deserves. Points like the foregoing are treated in this book in an acute, original and suggestive fashion.

Philadelphia Press.

INSURING AGAINST SMALLPOX.

It's an ill wind that blows nobody any good, and the various insurances are reaping a tangible benefit from the smallpox epidemic. Several companies issue policies covering sickness not only from

smallpox, but from many other infectious diseases, enabling the insurer to draw a sum weekly during disablement, and in one case a company shows its firm faith in vaccination by offering to vaccinate its policy holders free of charge. *The Sunday Record.*

ALIEN—AN EXPLANATION.

Some of our Canadian friends are inclined to take umbrage at the employment of the word *alien* as it appeared in the September issue of this journal, and in connection with the nurse in attendance upon the late President. They seem to forget there may be another definition of *alien* aside from "a foreigner" or "citizen of a foreign country." It also signifies:

Pertaining to another; Not native; Estranged; Different in nature and tendency; Not a denizen or native.—*Worcesters' Unabridged Dictionary.*

Unsuitable; Strange; Hostile; Belonging to another person, place or thing.—*Encyclopædic Dictionary.*

One not having the rights of citizenship in his or her place of residence.—*Century Dictionary.*

The latter was the sense in which the term was used, the nurse being *alien* to Buffalo—as was necessarily the case when she was imported from Washington, D. C.

Detroit Medical Journal.

Reviews.

Handbook of Diseases of the Nose and Pharynx. By James B. Ball, M. D., (Lond.), Physician to the Department for Diseases of the Throat, Nose and Ear, West London Hospital; Lecturer on Diseases of the Throat, Nose and Ear, West London Post Graduate College; Formerly Physician to the West London Hospital. Fourth Edition. New York. William Wood & Company, 1901.

This volume, although not a big book, is just twice as large as that of the first edition, published in 1890. The increase is due chiefly to the addition of an article upon the pharynx and its diseases. If the author had included the larynx also and in the chapter upon General Diagnosis had illustrated and described instruments such as are more generally in use in this country, we should not hesitate to recommend it as one of the best of the text-books extant.

The chapters upon anatomy and physiology are especially good. The reputation that the book earned long ago depended largely upon this feature. The teaching in regard to pathology, diagnosis and treatment is conservative and yet entirely up to date. The author has no fads to exploit; he is careful to explain the technique of operations and gives full warning of dangers to be avoided. He does not dwell especially upon the histology of pathological conditions, for he has not wanted to make a big book, but where subjects, such as adenoid vegetations, reflex neuroses, hay fever, deformities of the septum, etc., subjects of great importance to the average physician, are treated, nothing is omitted that can give a clear understanding of the subject.

We are surprised to find that 10% to 20% solutions of cocaine are recommended for use in the nose. The author states that he has never seen any ill effects follow their use when applied on a swab, and ascribes all evil results to the use of cocaine in spray form. In the treatment of fetid atrophic rhinitis he favors the Gottstein method of tamponing the nostril with cotton wool soaked in iodo-glycerine, leaving some space in the inferior meatus for breathing. The specialist will find it a book well worth looking over. [W. G. B. H.]

Electricity in Medicine and Surgery. By William Harvey King, M. D., of New York; with a Section on Electro-Physiology, by W. Y. Cowl, M. D., of Berlin, Germany, and a Section on the Hottini Operation, by Alfred Freudenberg, M. D., of Berlin, Germany. Price \$3.50 net. Boericke & Runyon Company, New York, Publishers.

This work goes over well beaten ground of the employment of electricity in medicine and surgery. The Röntgen

rays receive special consideration in one chapter. Dr. W. Y. Cowl has contributed a section upon electro-physiology, while Alfred Freudenberg lends strength to the work by a chapter devoted to the Hottini operation. In our reading of the work, we were impressed with the many errors of typography, indicating great carelessness of proof reading, which seems almost inexcusable. [T. L. C.]

Thornton's Dose-Book and Prescription Writing.—Dose-Book and Manual of Prescription-Writing; with a List of the Official Drugs and Preparations, and the more important Newer Remedies. By E. Q. Thornton, M. D., Demonstrator of Therapeutics, Jefferson Medical College, Philadelphia. Second Edition, Revised and Enlarged. Octavo, 362 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Bound in flexible leather, \$2.00 net.

This is the second edition, thoroughly revised and enlarged, of Dr. E. Q. Thornton's excellent manual of prescription writing. The work is written for the student of medicine, and every feature has received the careful consideration of the author. We have not observed any inaccurate statements glossed over, and that part devoted to the explanation of the metric system is expressed with rare clearness. Prescription writing is a field in which the average graduate is sadly deficient when he starts out in his hospital career, and the careful reading of a little book such as this, in which the subject is handled with commendable simplicity and yet briefly, would do much to make prescribing a simpler task. The chapter upon the incompatibilities is entirely satisfactory, and this section contains references to the newer curative sera, organic extracts, synthetic compounds and vegetable drugs. Typographically, the book is all that can be desired.

[T. L. C.]

The Diagnosis and Treatment of Diseases of the Rectum. By William Allingham, F. R. C. S., Eng., and Herbert W. Allingham, F. R. C. S., Eng. Seventh Edition. 8 vo. pp. 471, New York, William Wood & Co. 1901.

This well known work preserves in the latest edition its essentially practical character. It has been subjected to revision and alteration, with a view, as the preface states, to condensation, and in order to keep it in accord with the recent advances in rectal surgery. The topics considered are treated in a satisfactory manner, without any attempt to go deeply into pathological investigations. Indeed its title shows that such studies should not be expected within its covers. It is this fact, perhaps, that makes the reader almost feel that there is something lacking in the volume. Its tone is that of conservatism; but its teaching is good in the main, even if its authors' views are not those of all surgeons. [J. B. R.]

The Influenza Bacillus Not the Cause of "La Grippe":—In *La Presse Medicale* (1901, No. 35) Rosenthal publishes more of his researches and experiments to show that influenza is not due to the Pfeiffer bacillus. For it cannot be found in many typical cases of influenza; and it is found in cases where there can be no suspicion of influenza. Rosenthal found the influenza bacillus in four adult cases, out of eight studied. Of these, only one was typical influenza. The others were cirrhosis of the liver with erysipelas, when no epidemic of "grippe" existed; acute croupous pneumonia following pneumococcal otitis media; and prolonged bronchopneumonia, almost typical of tuberculosis, yet with no traces of tubercle bacilli. It was not found, on the other hand, in two cases typical of influenza, a bronchitis due to enterococci, and a pneumonia due to pneumococci. It was also absent in an alcoholic pneumonia, and another non-tuberculous bronchopneumonia. Rosenthal's mixed inoculation experiments show that the influenza bacillus is rarely found, because, being aerobic, it will only grow upon blood-containing media. When it is methodically sought, it is found, like the enterococcus, pneumococcus, and streptococcus, "an ordinary microbe of the pathogenic flora of the lung." He hopes by mixed inoculation to find a serum treatment for these bacteria.

[M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Professor Waldeyer Honored.—A dinner was given at the University Club Monday evening, October 28, by the Medical Faculty of the University of Pennsylvania, in honor of Dr. William H. G. Waldeyer, professor of anatomy and director of the Anatomical Institute in the University of Berlin, who recently received the degree of LL. D. at the Yale Bicentennial. Dr. Waldeyer, who is an authority upon the microscopic anatomy of the neuron, ovarian cysts, carcinoma, the sclera, conjunctiva, etc., is 65 years old.

An Outing Given the Philadelphia Hospital Physicians.—On Sunday, October 27th, the City of Philadelphia invited the chief visiting physicians of the Philadelphia Hospital upon a tour for the inspection of the islands, to which it is proposed in the future to remove several departments of the Philadelphia Hospital. The visitors were taken up the river on the tug, Samuel H. Ashbridge, and stops were made at Burlington Island and Petty's Island, both of which were inspected. The guests enjoyed the bountiful hospitality of the city and all returned feeling satisfied that they had spent a thoroughly profitable day. The hosts upon this occasion were Mayor Samuel H. Ashbridge, Director of Public Safety English, and Dr. John V. Shoemaker, President of the Board of Charities.

The South Branch of the County Medical Society.—On Friday evening, October 25, a Southern branch of the County Medical Society was organized at Broad and Federal streets. Dr. W. S. Higsbee was elected chairman, and Dr. C. J. Hoban, clerk, for the ensuing year. A large number of representative physicians from the lower section of the city attended the meeting.

Society Meetings.—The following societies will hold meetings next week in the College of Physicians, at 8.15 P. M. Monday evening, November 4, Academy of Surgery; Wednesday evening, November 6, College of Physicians, and Thursday evening, November 7, Obstetrical Society.

Smallpox in Norristown.—Four houses are quarantined in the city of Norristown, and one in Norriton township. In one family four persons have been stricken with the disease. The Board of Health has decided that a municipal hospital is necessary, and steps are being taken to secure the old Globe Park Hotel at Oakview for this purpose.

Smallpox in Philadelphia.—The number of smallpox cases reported this week has slightly decreased, when compared with those of last week. The number of deaths remains about the same. Two school houses have been closed for disinfection during the week. Since March, when this epidemic began, over 400 cases have been reported, with 58 deaths. Most people have been revaccinated, in spite of the remedies now in use to prevent variola. It is reported that a Sister of Charity daily gives away thousands of bottles of a mixture of digitalis and zinc phosphate, which, after twelve drachms have been taken, is supposed to confer immunity to smallpox.

The Chief of the Bureau of Health has been notified by the Union Traction Company, that all its cars are nightly disinfected by being washed with a carbolic acid solution.

Vital Statistics of Philadelphia for the week ending October 26, 1901:

Total mortality	358	Cases.	Deaths.
Inflammation of the brain 10, bronchi 4, heart 1, kidneys 18, larynx 1, liver 2, lungs 37, pericardium 1, peritoneum 6, stomach and bowels 18			98
Marasmus 11, inanition 15, debility 4			30
Tuberculosis of the lungs			47
Heart-disease of 28, dropsy of 2, fatty degeneration of 3, neuralgia of 2			35
Uremia 11, Bright's disease 8, diabetes 1			20
Carcinoma of the liver 2, breast 1,			

	Cases.	Death.
stomach 5, uterus 2, pancreas 1 ..		11
Convulsions		6
Diphtheria	65	7
Brain-disease of 1, softening of 1, tumor of 1		3
Typhoid fever	56	4
Old age		11
Smallpox	59	19
Abscess, pelvic 1, alcoholism 1, apoplexy 16, asthma 2, burns and scalds 5, casualties 6, chorea 1, cirrhosis of the liver 7, child birth 1, croup 2, croup membranous 5, cyanosis 2, diarrhea 1, drowned 1, gangrene, leg 1, hemorrhage from stomach 2, hemorrhage from uterus 1, leukemia 1, obstruction of the bowels 1, paralysis 2, rheumatism 1, sclerosis, liver 1, shock, surgical 2, septicemia 2, sarcoma, stomach 1, stricture 1, suicide 2, teething 1, tetanus 1, tumor, uterus 1, unknown coroner case 1, whooping cough 2		76

NEW YORK AND NEW JERSEY.

To Test Koch's Theory.—Dr. George D. Barney, a specialist on tuberculosis, and Dr. Walter Lincoln Bell, veterinarian, of Brooklyn, N. Y., have secured a cow which they inoculated with human tubercular bacilli. By this experiment they expect to show conclusively the truth or falsity of Dr. Koch's proposition.

Dinner to Dr. Waldeyer.—On Saturday evening, October 26, a banquet was given at Delmonico's, by the Deutsche Medizinische Gesellschaft of New York, in honor of Professor Waldeyer, of Berlin. Among the speakers were Drs. W. H. Welch of Baltimore, A. Jacoby and Carl Beck of New York.

Dr. Charles Henry Brown, who died on October 15, 1901, in New York City, aged 45 years, was for years Managing Editor of the *Journal of Nervous and Mental Diseases*.

The New Hackensack Hospital.—The new building of the Hackensack Hospital, N. J., was opened to the public Saturday, October 26. The building accommodates 60 patients and has a fine operating room, the gift of the late Dr. E. E. Poor. The cost of erection was \$30,000.

New York State Medical Association.—At the annual meeting of the New York State Medical Association held in New York, October 21, the following officers were elected: President, A. A. Hubbell, of Buffalo; vice president, William H. Biggan, of Brooklyn; secretary, Guy Lombard; treasurer, E. H. Squibb.

A Remarkable Baby.—William Munion, of Pennsgrove, N. J., claims to have the prize baby in South Jersey. The child was ten months old on the 10th of October, weighs 41 pounds, has ten teeth, having been born with two teeth, and can walk anywhere about the house.

Smallpox in Camden, N. J.—The new Municipal Hospital is fast nearing completion, in spite of the protest of the residents of Woodlynne borough, adjoining the New Camden Cemetery property, upon which the hospital is being erected. Free vaccination is being given at the City Dispensary. No new cases have developed in the last few days.

NEW ENGLAND.

Yale Bicentennial Celebration.—Among those upon whom the degree of LL. D. was conferred by Yale at its Bicentennial, October 23, 1901, were Drs. William Osler, professor of medicine at Johns Hopkins; David White Finlay, professor of medicine at Aberdeen; Wilhelm H. G. Waldeyer, professor of anatomy and director of the Anatomical Institute at Berlin, and John S. Billings, of New York.

Smallpox in Newport, R. I.—Eight cases of smallpox have already been reported in Newport, all but one of them being traced to the first case, a Captain Evans, of the Salvation Army, who became ill two weeks ago. As the pest-house is overcrowded, the authorities have put immune carpenters at work upon an addition. The cases are all mild in character.

East Boston Ambulance Station.—For ten or twelve

years the residents of East Boston have been trying to secure a hospital or an ambulance station. It is expected at last that an order recently proposed, for an appropriation of \$18,000 for an ambulance station, will pass the Boston Common Council. A little building will be built in a few months, should this pass, near the docks along Marginal street and the great iron works and lumber yards along Border street, where most of the accidents occur.

Smallpox in Cambridge, Mass.—A case of smallpox was discovered in Cambridge, October 24, in a man of 20, who came to Cambridge about ten days before, from St. John, N. H., where six cases have developed in two days. The Board of Health seized a vacant house on New street, off Concord avenue, and the patient has been taken there. Three families in the vicinity left the neighborhood for the present.

WESTERN STATES.

New Laboratory in St. Louis.—Dr. R. Meade Bolton, of Johns Hopkins University, has been elected director of the newly opened laboratory of the Marion-Sims-Beaumont Medical College.

SOUTHERN STATES.

Dr. Rixey's Report on the President's Case.—Dr. Presley M. Rixey has just published his report of the wounding, illness, and death of the late President McKinley. The report is remarkable for its exhibition, in the closest possible detail, of the exact state of the patient during his illness. It is in the shape of a ship's log, showing at intervals of a very few minutes, sometimes a single minute, rarely more than an hour, the patient's progress toward the end. But perhaps the most valuable datum contained, from a medical point of view, is the accurate registering of the medication of the case—not a single morsel of food, a dose of medicine, or a bath is omitted in this account. Included in the running story, at the proper intervals, are the bulletins which were given to the public as the case progressed. The report begins with an account of the first operation at the emergency hospital, September 6, the two wounds being described exactly as they have been treated in the preceding medical reports. On the eighth and last day of the President's life, September 13, Dr. Rixey's report opened with this entry at 12.20 A. M., "restless, and complains of headache." Whiskey and water was given, and a perspiration was induced, but at 1 A. M. is this entry "very restless and wants to get up; tired." The same medical treatment was continued, involving a plentiful use of oxygen, digitalis, strychnine and morphia and peptonoids. Still at 4.55 o'clock the patient's condition is reported as grave. The oxygen was continued. There was no response to stimulants. Atropine and morphia were injected; the patient was almost pulseless. The last entry was made at 9 P. M., and there was a gap of five hours between that and the end. It read, "heart sounds very feeble. Oxygen continued. Slight reflex movements, and at 2.15 A. M., September 14, 1901, the President died." The cause of death is thus stated: "Gangrene of both walls of stomach and pancreas, following gunshot wounds." Attached to the report are the results of the autopsies and the chemical and bacteriological examinations, which have already been published in the medical journals.

The Clinical Society of Washington, D. C.—At a meeting of the Clinical Society of Washington, D. C., held October 11th, the following officers were elected for the ensuing year: Dr. Walter A. Wells, president; Dr. Monte Griffith, vice president, and Dr. J. Carlisle De Vries, secretary and treasurer.

Diphtheria in Baltimore.—Since the opening of the public schools, a marked increase in diphtheria has been noted. During September 60 houses, in which there had been cases of the disease, were fumigated. So far this month, 102 houses have been fumigated by the Health Department. Since January 1, 701 houses have been fumigated. The statistics of the Health Department show that since January 1 the city has handled 802 dead bodies, 137 of which were buried by friends.

Maryland University Hospital, Baltimore.—Nitrous oxide gas is being tried as an anesthetic in the Maryland University Hospital. After beginning narcosis with nitrous oxide, the rest of the operation is performed under ether. Good results have been secured.

Johns Hopkins University.—A large bronze tablet has

been placed in the hall of the Biological Laboratory of Johns Hopkins University in memory of Prof. Henry Newell Martin, first professor of biology and physiology in that institution. A meeting in memory of the late Prof. Henry A. Rowland was held October 6th in the physiological laboratory. Dr. T. C. Mendenhall, formerly president of the Worcester Polytechnic Institute, delivered an address. Dr. Sidney Cone, of the surgical dispensary of Johns Hopkins Hospital, has been appointed lecturer on orthopedic surgery in the Baltimore Medical College.

St. Joseph's Hospital Annex, Baltimore.—The new annex of St. Joseph's Hospital, the erection of which cost \$30,000, will be opened to the public November 5th.

Northeastern Dispensary, Baltimore.—The Northeastern Dispensary, on Monument street, which was opened in 1853, is erecting another new building, to cost about \$5000. Its equipment will probably cost another thousand dollars. The Dispensary treats about 7000 patients a year, filling 30,000 prescriptions. There are three resident physicians and three consulting physicians. The latter will soon be increased to twelve in number, and a board of lady managers will be selected.

The State Medical Society of Virginia will hold its thirty-second annual meeting in Lynchburg, November 5 to 8, 1901. Dr. J. R. Gildersleeve, of Tazewell, is president of the society.

Smallpox on the Eastern Shore.—The smallpox situation in Dorchester and Carolina counties, Maryland, has recently become serious, thirty new cases having been reported last week.

Precocious Maternity.—Dr. Allen reports the pregnancy and parturition of a colored girl aged eleven years, eight months, in the *Maryland Medical Journal*. Menstruation began at ten years three months. Her child, of normal size, was born at term without complications. Both mother and child are now perfectly well.

Maryland Medical College.—Dr. W. McLean Yost has been appointed associate professor of materia medica and clinical diagnosis, and Dr. P. E. Craig, associate professor of pediatrics.

Scarlet Fever in Putnam County, Georgia.—So prevalent has scarlet fever become in Eatonton and Rome, Georgia, that the public schools of Putnam County have been ordered closed for a month.

MISCELLANY.

Obituary.—Dr. A. A. McCain, New York City, October 19—Dr. G. M. Bartlett, Maryville, Tenn., October 22, aged 81 years—Dr. Leonard Latter, Monument Beach, Mass., October 22, aged 60 years—Dr. John D. White, Whiton, Md., October 23—Dr. G. G. Roy, Atlanta, Ga., October 24—Dr. Charles E. Stoner, Des Moines, Iowa, October 25—Dr. Charles Henry Brown, New York City, October 15, aged 28 years—Dr. George W. Burke, New Castle, Ind., October 18, aged 59 years—Dr. Charles H. Brown, New York City, October 15, aged 45 years—Dr. Joseph H. Wythe, Oakland, Cal., October 14, aged 79 years—Dr. Robert Henry Nesbitt, New York City, October 10—Dr. Hiram P. Tuttle, Tacoma, Wash., October 9—Dr. Ernest H. Hoffmann, Omaha, Neb., October 15, aged 65 years—Dr. Alfred C. Kemberger, Louisville, K. Y., October 10, aged 34 years—Dr. Melville D. Peck, Washington, D. C., October 25, aged 60 years.

Havana Health Report.—The report of the vital statistics for Havana shows 339 deaths during the month of September, 1901. There were only two deaths from yellow fever, seven from typhoid fever and three from diphtheria. No smallpox or scarlet fever was reported. During the six months from April to October, there were but five deaths from yellow fever. This condition has not been approximated at any time during the past 150 years. Since the first of March, 100 men have been engaged daily killing mosquitoes. The deaths from malaria have also decreased, being but eleven during the month of September. For September 1901 the death rate in Havana was 15.64 per thousand, while that of London was 16.57 per thousand. The most marked decrease among the infectious diseases was noted in yellow fever, malaria and tuberculosis. This was probably due to the improvement in interior hygiene and general sanitation. The streets of Havana are now kept in excellent condition. The sanitary officers believe that with their present disinfection methods they will be

able to stamp out any infection from yellow fever that may be introduced into the city.

The Expenses of President McKinley's Illness.—In the case of President Garfield, who lingered 80 days, a board of audit finally agreed to compensate the surgeons and physicians in the following proportions: Dr. Bliss, \$6500; Drs. Agnew and Hamilton, \$5000 each; Drs. Keyburn and Boynton, \$4000 each; and Dr. Susan B. Edson, \$3000. The board also allowed different parties \$5929 for services and supplies, including \$1500 to the Central Railroad of New Jersey, and \$1162 to C. Jones, of Elberon. Extra compensation was allowed certain Government employes, and the total expenditure was \$57,000. It is estimated that an appropriation of more than \$100,000 will soon be asked from Congress to pay the physicians and surgeons of the late President. Dr. McBurney's bill is expected to be at least \$25,000, and the other physicians will file claims in proportion.

Glycosuria from Cigars.—The occurrence of glycosuria has been noted following the excessive smoking of cigars, and is probably due to the carbon monoxide resulting from imperfect combustion. This may explain the glycosuria found among the beer drinking students of Jena. Only those who smoke cigars, not those smoking pipes or cigarettes, show glycosuria. Now that the smoking of cigars has become almost universal, this cause of temporary glycosuria should not be overlooked.

The Total Consumption of Sugar in the United States last year was 2,219,847 tons, and based on the average increase of 6.34 per cent during the past 19 years, the consumption this year should be 2,360,585. Of this quantity 1,000,000 tons in round figures will come from American sources, Louisiana being able to produce 350,000 tons. United States beet sugar factories 150,000, Hawaii 350,000 and Porto Rico 150,000, all being free of duty, leaving 1,360,585 tons to come from other sources on which duty is paid. The average duty assessed is \$36 per ton, or a total of \$48,981,060. The price of all the sugar consumed, however, being enhanced to the extent of the duty of \$36 per ton, or a total of \$84,981,060, it is evident that \$36,000,000 additional is paid by the people in order to provide the Government with 49 millions for revenue.—*Weekly Statistical Sugar Trade Journal*.

Leprosy in Crete.—Leprosy has existed in Crete from time immemorial. In spite of all the measures taken during the past centuries for its repression, the disease persists. The people who have always lived among the mountains have remained exempt. There are no rivers on the island, but the supply of fruit is ample, and there is excellent pasturage. Yet a large part of the population live chiefly on olives and bread dipped in oil. Snails, mussels, fish, and wine are also used as food. Out of the 200,000 inhabitants, there are almost 900 lepers, from Brunelli's report. Isolation was attempted years ago, but the disease persisted.—*Polielinic*.

Statistics show that in three hundred years the average length of human life has been doubled. In the sixteenth century it was between eighteen and twenty years; at the close of the eighteenth century it was a little over thirty years, and to-day it is over forty years.

Disease Transmitted by Ants.—An English doctor residing in Cyprus has encountered remarkable cases of disease being transmitted in the sting of the solitary ant. In one instance a woman was stung in her sleep by one of these insects, and the wound showed active signs of anthrax infection. It was then found that in the field adjoining her cottage there was a dead sheep, which had lain there for a week since it succumbed to that disease. Here, then, is yet another insect to be added to the growing list of those that, while not dangerous in themselves, are capable of great mischief owing to their transmission of malignant bacilli.—*Medical Press and Circular*.

The Stupidity of Eldest Sons.—The Japanese saying, *Soryo no jinroku* (a foolish eldest son), is certainly very old, but that it embeds a national belief there is little doubt. There are three causes for the intellectual inferiority of eldest sons among the better classes, they are the offspring of early marriages, begotten before the powers of their parents are fully matured; they are regarded from the first as the future inheritors of property and hence no pains are taken to teach them how to get a living for themselves; the first-born child is apt to be spoiled by its

parents. In reference to early marriages in Japan the following statistics are given bearing on the time of contracting marriage in various countries:

Countries.	Men.	Women.
Japan	22 yrs., 10 mos.	19 yrs., 4 mos.
Russia	25 " 2 "	21 " 5 "
England	28 " 2 "	25 " 5 "
America	30 " 9 "	28 " "
Switzerland	31 " 1 "	28 " "

Female education is progressing and early marriages are being discouraged, so that it is likely that the old saying given above will lose all its significance.—*Japan Daily Mail*.

The Vitality of Women.—Contrary to general opinion, women possess greater vitality than men. According to the statistics gathered by Dr. Brandreth Symonds, a study of the comparative mortality of the sexes at different ages demonstrates that in the first year of life the mortality of the female is much below that of the male, being 9.25% against 11.24%, and at the end of the first year 3.18% against 3.51%. This difference continues up to the fourth year. From five to twelve years of age, the female mortality is greater than that of the male, being .356% for males and .428% for females. At the age of 46, the male mortality equals that of the female, the latter having up to this time kept slightly in excess. During the years from 46 to 56, the period of the menopause, the male mortality gains rapidly, being .632% against .347% in the female per annum. Hence the period of the menopause is really a more serious age for men than for women. After fifty-six the female mortality increases, but is always slightly below that of the male. Women have not only a less mortality and a greater longevity than men, but there is also a plurality of female births.

GREAT BRITAIN.

King Edward's Illness.—*Reynold's Weekly Newspaper* of October 27th asserts that King Edward is suffering from cancer of the throat. It states that three operations have been performed for the removal of papillomata of the vocal cords since his accession to the throne. First the left vocal cord was affected, but last week a papilloma was removed from the right vocal cord. This operation was performed hastily, as there was great dyspnea. But it was regarded as only a temporary relief, the injured epithelium now having become cancerous, and serious developments are expected.

How Diphtheria is Spread.—In London it is the custom for children to see the body of a playmate who has died of diphtheria, in fact, these visits to infected houses seem to be the active causes of an outbreak of diphtheria. Sometimes a prayer meeting is held in the house, but this custom is being gradually abandoned. Dr. Thomas, the Merthyr Medical Officer of Health, mentions the fact that the children of neighbors have actually been allowed to kiss the body. He believes, and most medical men will agree with him, that it is unwise to kiss anyone suffering with, or lately recovered from, a sore throat of any kind.

Surgeon-General William Arthur Thomson, M. B., K. H. P., physician to the King, died October 6th at Camberley, Surrey, aged 71 years. He was graduated from Aberdeen University, and entered the army in 1851. He attained the rank of Surgeon-Major-General (afterwards Surgeon-General) in 1886, and retired in 1892. He was for a period Surgeon-General in India.

Dr. Edward H. Dickinson, F. R. C. P., died in Liverpool, October 10, 1901, aged 59 years. He was formerly lecturer upon comparative anatomy and zoology at University College, Liverpool.

CONTINENTAL EUROPE.

German Society for Orthopedic Surgery.—At the seventy-third meeting of German naturalists and physicians, recently held in Hamburg, a German Society for Orthopedic Surgery was formed. A committee of organization was appointed, consisting of Drs. Mikulicz of Breslau, Wolff of Berlin, Höftmann of Königsberg, Hoffa of Würzburg, Lorenz of Vienna, Joachimsthal of Berlin and Schanz of Dresden.

The Anniversary of Pasteur's Death.—On September 29, the sixth anniversary of the death of Louis Pasteur, a monument of Pasteur by the French sculptor, H. Dailhon, was unveiled at Arbois, where the savant was born. In Paris, at his tomb in the Pasteur Institute, services were held under the direction of Drs. Roux and Metchnikoff.

Obituary.—The death is announced of Dr. König, the French physician, who devoted so much time to physics, whose discoveries in acoustics, light, heat, and phonation brought him an enviable reputation, at his home in Paris. He was 69 years old.

Obituary.—Dr. Faure Miller, a well-known physician and member of the Anglo American Medical Society, died in Paris, October 28, aged 60 years.

Appointments.—Nantes: Dr. Malherbe, professor of anatomy, has been made director of the Nantes Medical School. Bremen: Dr. Herman Tjaden has been elected director of the State Bacteriological Laboratory, replacing the late Dr. Kurth. Vienna: Dr. K. A. Herzfeld has been appointed professor of gynecology. Tomsk: Dr. Smirnow has been appointed professor of histology and embryology.

The Virchow Celebration.—On Saturday, October 12, the day before the eightieth birthday of Rudolf Virchow, the first ceremonies in his honor were held in the Pathological Institute, Berlin. Besides the Berlin professors and many distinguished German statesmen, deputations of medical men from universities of the entire world were present. Welchelbaum, Toldt, and Chrobak, of Vienna; Chiari of Prague, and Escherich of Graz, represented Austria; Lister, Muir, and Pye-Smith, England; Baccelli and Maragliano, Italy; Lannelongue and Cornil, France; Ernst, Switzerland; Stokvis, Holland; Salomonson, Denmark; Hansen, Norway; Sundberg, Sweden; Schervinsky, Russia; Karamitzas, Greece; and Jacoby, the United States. When Virchow entered, he received an ovation. He spoke for nearly two hours, mainly upon the development of pathology. Surgeon-General Schaper then congratulated him, referring to the "gratitude of humanity for the blessings bestowed on the world at large by him whose motto had always been 'Let the safety of the people be the supreme law.'" In the evening a banquet was held in the lobby of the Lower House of the Prussian Parliament, which was prolonged into Sunday morning. The sum of \$12,500, subscribed by the medical men of Germany to increase the endowment fund of the Virchow Institute, was presented to Professor Virchow. Emperor William conferred upon Dr. Virchow the great gold medal for science, possessed by no living physician, and by only three members of the philosophical faculty of Berlin, one of whom is Mommsen, the historian. The King of Italy sent Virchow a gold medal bearing a portrait of himself. The German University of Prague conferred the honorary degree of M. D. upon Virchow, while the Berlin Ophthalmological Society elected him an honorary member. Addresses were presented from many American Medical Societies. Speeches were made in all languages, Baccelli speaking in classic Latin. Welchelbaum described the development of pathological anatomy, public health, and anthropology in Austria, commenting upon the influence of Virchow. Cornil, Pye-Smith, Stokvis, Schervinsky, Sundberg, Salomonson, Karamitzas, Jacoby, and others referred to the effects of Virchow's teaching in their respective countries. The students celebrated in their own way, with a "kommers" and a torchlight procession. The *Deutsche medicinische Wochenschrift* of October 10 appeared as a "Festnummer" in Virchow's honor; a "Festschrift" has been published containing a number of Virchow's best writings; and the *Wiener klinische Wochenschrift* and *Berliner klinische Wochenschrift* also published a Virchow number. It is further rumored that the Czar of Russia will confer the Order of the White Eagle upon Professor Virchow. Later an exhibition of the addresses, memorials, medals, pictures, statuettes, etc., presented to Dr. Virchow, was opened in the Kunstgewerbe Museum, Berlin.

Glanders in St. Petersburg.—Glanders is prevalent in St. Petersburg and several of the surrounding villages. About 700 horses suffering from the disease were destroyed since 1900. Two cases of glanders are reported in human beings.

The European Age for Marriage.—In Germany a man, in order to marry, must be at least eighteen years of age. In Portugal a boy of fourteen and a girl of twelve are con-

sidered marriageable; and at the same ages they may marry in Greece. In France, as in Belgium, the man must not be under eighteen and the "woman" sixteen. In Spain the intended husband must have passed his fourteenth year and the "woman" her twelfth, and this is also the case in Switzerland and Austria, with the exception that an Austrian girl must not be younger than fourteen, the possible age of her husband.

A Sanitary Bureau in St. Petersburg.—A central sanito-epidemiological bureau is being established by the Sanitary Commission of that city. This bureau will be connected by telephone with the city health offices and will have charge of all the information concerning infectious diseases. A number of rooms in connection with this bureau will serve for the temporary detention of people whose homes are subjected to disinfection. The bureau will also be equipped with special disinfecting apparatus and laundries. Special ambulances for the transportation of the sick are being prepared.

Medical Inspection of Factories.—The Medical Department is framing a law compelling the owners of mills and factories to hold a medical inspection at least once a week. Where women are employed, specialists in gynecology are to be called in.

Poisoning with Paris Green.—The workmen of a sugar-beet plantation in the village of Bogatoo, government of Kieff, suffered from wholesale arsenical poisoning as a result of working on beets which had been sprayed with Paris green. The latter is generally used on fruit trees as an insecticide, and as a rule there is no danger of poisoning, as long as several months are allowed for the arsenic to be washed off the fruits before they are handled or consumed.

Physicians in Germany.—In Germany there is one physician to every 2,058 persons, but only one drug-store to every 10,363 persons.

Prof. Koch Honored.—Emperor William has conferred upon Surgeon General Koch, the noted physician, the rank of major general in the Reserves.

A Diabolic Monster.—In Aragona, Sicily, a young woman recently gave birth to her first infant, a tiny, seven months child, with an oddly developed head. Above each eye projected a straight horn, as long as the mouth, and behind the ears, which were very large, other horns were visible. They were of cartilaginous material. The child's body was curved, shaped like that of the molluscae. To the body four tentacles were attached, bearing embryonal hands. The spine was prolonged into a tail, resembling that of a rat. It died a few minutes after birth. The Italian papers state that the mother went daily, during her pregnancy, to church, where she used to stare at the portrait of a child exactly like the one which she afterward brought into the world.

Open-Air Sanatoria.—Open-air sanatoria, now becoming so generally popular in Europe, are said to owe their origin to Miss Florence Nightingale. This notable woman first cured M. Benet, of Mentone, by advising him to pass the better part of his time out of doors, to reject medicines, and to apply himself to a liberal diet. The first establishment devoted to the open-air cure was founded at Görbersdorf in 1859 by Herman Brehmer, though it was left to his disciple and pupil Dettweiler to perfect the theory in the course adopted in 1875 at the sanatorium of Falkenstein. There are now in the Valley of Davos about 3,000 patients and sixteen physicians. The open air treatment for tuberculosis is astonishingly successful in Germany. Out of 142 attested cases in Hanover 121 are pronounced cured; in Saxony out of 98 patients 60 are cured, while in Baden, where the treatment is given in the pine woods of the Black Forest, 205 cases have been cured out of 240 under observation.

French Vacation Colonies.—The public schools of the eleventh district of Paris purchased a large place in the country three years ago, where over a thousand of the poorest and most delicate children of that part of Paris are sent each summer. The long vacation in France rarely exceeds eight weeks. An effort is now being made to have the rest of the twenty-two districts of Paris follow this example.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

1. The Value of Research in Medicine and Therapeutics. E. T. WILSON.
2. Discussion on Chronic Diseases of Joints Commonly included in the terms "Chronic Rheumatism," "Osteo-Arthritis," and "Rheumatic Gout." E. A. GARLUD, W. OSLER, W. ARMSTRONG, A. P. LUFF, W. P. HERRINGHAM, C. O. HAWTHORNE, W. CALDWELL, E. W. DUNBAR, E. J. CAVE, S. WEST, R. SAUNDBY, S. K. MULLICK, and P. KING.
3. A Case of Cerebro-spinal Rhinorrhea. P. W. WILLIAMS, and E. G. STOCKER.
4. The Composition and Therapeutic Uses of the Cheltenham Waters. A. P. LUFF.
5. A Discussion on Peripheral Neuritis in Beer Drinkers; Its Precise Causation and Diagnosis. E. S. REYNOLDS, J. D. MANN, A. P. LUFF, T. N. KELYNACK, W. OSLER, N. RAW, H. WALDO, F. M. POPE, F. ORMROD, R. CATON and W. T. GAIRDNER.
6. The Means of Arresting Acute Endocarditis. R. CATON.
7. A Case of Indigouria. A. McPHERDAN and W. GOLDIE.
8. New Methods and New Results in the Bacteriological Investigation of Fetid and Gangrenous Suppuration. EDWARD RIST.
9. On the Abortive and Curative Treatment of Acute Diseases, and Particularly Enteric Fever and Appendicitis, by a Judicious Use of Calomel, Water, Heat, and Quinine. J. A. RIVIERE.
10. The Treatment of Phthisis by Means of Electrical Currents of High Frequency and High Potential. CHISHOLM WILLIAMS.
11. The Treatment of Cardio-Arterial Diseases. H. J. CAMPBELL.
12. The Diagnostic Value of Tubercle Bacilli in Relation to Phthisis. D. J. A. CHOWRY-MUTHU.
13. A Case of Rheumatic Endocarditis. C. G. WILKIN.
14. Meat Albumin Dietary in the Treatment of Tuberculosis. F. W. F. ROSS.
15. The Treatment of Chronic Bronchitis in the Elderly and Aged. HARRY CAMPBELL.
16. The Anatomy Aet and the Teaching of Anatomy. A. MACALISTER.
17. A Discussion on the Topographical Anatomy of the Thoracic and Abdominal Viscera from a Systematic and Clinical Standpoint. C. ADDISON, T. S. ELLIS, and ALEXANDER MACALISTER.
18. The Physiology of the Lower Limb and the Military March. (Illustrated). T. S. ELLIS.
19. Rotation of the Forearm. R. J. ANDERSON.
20. Socia Thymi Cervicis. N. B. HARMAN.
21. Experimental Glycosuria. F. W. PAVY, W. H. THOMPSON, VAUGHAN HARLEY, and W. BROADBENT.
22. Observations on the State of the Vascular System in Death by Asphyxia. J. A. MacWILLIAM.
23. The Functions of the Rods and Cones of the Retina. F. W. EDRIDGE-GREEN.
24. The Human Body as an Analytical Laboratory. ALEXANDER HAIG.
25. Was Luigi Cornaro Right? E. V. VAN SOMEREN.

2.—The nature of those articular lesions that run a chronic course has most important bearings upon their treatment. There is a group of cases commonly met with among female patients in early or middle life. In which the disease is characterized by the frequent implication of the small joints of the hands and feet, by the symmetrical distribution of the lesions, and by the conspicuous degree of accompanying secondary muscular atrophy. The large joints suffer as well as the small, and those of the spinal column and the temporo-maxillary articulations are implicated in a large proportion of the cases. In a second group of cases, the majority of the sufferers are also females. In this variety the articular lesions tend to be symmetrically distributed, and the small joints of the hands are usually attacked. The patients are usually more advanced in life. The terminal joints of the fingers

are specially liable to be attacked, and with peculiar frequency the carpometacarpal joints of the thumbs are among the earliest articulations to be involved. Muscular atrophy is less conspicuous. If it should be eventually established that the conditions described really constitute two distinct diseases, the term *rheumatoid arthritis* should be used to designate the former, and the term *osteoarthritis* to indicate the latter malady, in which the bony changes are so early and conspicuously manifested. No one will contend that the nodular disease of elderly people is rheumatic in its origin; but this origin must be seriously considered in the etiology of the fusiform cases. The articular changes in rheumatoid arthritis are so obviously progressive that one cannot regard the condition as one of simple damage to the joints left behind from a rheumatic attack. An alternative possibility is that the rheumatoid changes may develop upon the top of a rheumatic attack, owing to secondary infection. In the great majority of cases, although there may be short prodromal periods of pain and stiffness without obvious swelling, rheumatoid arthritis has its characteristic features from the start and is not preceded by any attack which can be, with good reason, regarded as rheumatic. Nor does one expect the visceral lesions of acute rheumatism, and especially those of the cardiac valves, to be developed in its course. If there is any relationship between osteo-arthritis and gout, it is with the nodular or osteophytic form; but no single pathological theory will suffice to cover all cases. In the treatment of these cases, any debilitating influence that is constantly present should be relieved; if any unhealthy condition of the mouth or gums is present, it also should be attended to; the diet should be as nutritious as the condition of the patient allows, and meat should by no means be restricted. Stimulants, in some cases, appear to be beneficial. In order to keep up the patient's strength, tonic drugs, such as cod-liver oil, iron, and arsenic should be used, always provided that the drugs do not upset the digestion. Massage and passive movements of the joints themselves do more harm than good. Osler approved of the division of the chronic lesions of the joints, suggested by Dr. Garrod, namely: (1) an infectious group, comprising the spindle form in adults and the variety in children with enlarged spleen and enlarged lymph glands; and (2) the dystrophic variety, in which there were osteophytes, etc. An attempt has been made lately to separate as distinct maladies varieties of arthritis deformans characterized by rigidity of the spine without involvement of the joints of the limbs; and that with ankylosis of the vertebræ plus arthritis of the hips and shoulders. They were only varieties of arthritis deformans with special localization in the spine and not separate diseases. Armstrong believes that in all cases of arthritis there is more or less interference with the nerve nutrition of the affected joint or joints. In many cases of the rheumatic or gouty forms of arthritis the trophic factor is present in a small degree only, and these cases are readily amenable to well directed treatment. When the trophic factor predominates, the cases prove much more refractory. Cave said that since we know so little of the infective agent we can do little to destroy it by direct and specific remedies. But in every case, and especially in the early stages, let us search for a possible source of infection. The cavities of the nose and ear and their accessory sinuses, the buccal cavity, the whole extent of the alimentary canal and its diverticula, the skin, the respiratory tract, and the genital and urinary organs, should be inquired into, and, if necessary, scrutinized. West referred to a patient who was the victim of chronic joint trouble called rheumatic. Although he searched carefully for a source of infection, he could only find a slight degree of cystitis. The cystitis was treated on general principles and as it improved, the symptoms became relieved and, with its cure, disappeared. [J. M. S.]

3.—Williams and Stocker report a case of *cerebrospinal rhinorrhea* in a female patient, aged 40 years. The disease followed an attack of influenza. Running from the right nostril has continued night and day, without intermission, ever since. No cause for the disease is discoverable. [J. M. S.]

4.—Luff contributes a paper on the composition and therapeutic uses of the Cheltenham waters. [J. M. S.]

5.—Alcoholic neuritis is a peripheral neuritis associated with paresthesia and numbness in the limbs, atrophic para-

lysis of the arms and legs, and, in severe cases, of the trunk muscles, with great pain on pressure of the muscular masses of the limbs; there is hardly ever any paralysis of the cranial nerves or of the bladder or rectum. In addition there is frequently a dilated left heart with cardiac muscle failure and marked edema of the trunk and legs, and often albuminuria. At the Manchester Royal Infirmary the neuritis cases almost invariably occurred in men who took either beer only or beer in combination with spirits; while pure spirit drinkers seldom showed neuritic symptoms, but suffered more from delirium, mania and gastric or hepatic disturbance. During May and June, 1900, a considerable number of cases was seen, presenting unusual skin eruptions. Many patients had the characteristic signs of erythromelalgia, with great pains in the soles of the feet and palms of the hands; paresthesie, with marked erythema and profuse sweating of these surfaces; suffused running eyes, vomiting and diarrhea; and, at the same time, there was a much greater number of cases of herpes zoster than usual. A few weeks later Reynolds found that there was a veritable epidemic of alcoholic paralysis, and that these patients were also suffering or had suffered from some of the initial symptoms just mentioned. The occurrence of herpes suggested the possibility that arsenic was present in the beer, for every one of these numerous patients was a beer drinker. On November 17, some beer commonly taken by these patients, on chemical examination, yielded numerous crystals of arsenous oxide in a reduction tube by Reinch's test. The author traced the source of the arsenic to certain brewing sugars that were manufactured by the action of sulphuric acid on starches and cane sugar. It was also found that the sulphuric acid was very highly contaminated with arsenic. He obtained arsenic from the urine of one of the beer-drinking patients, and since then he has found it not only in the scales coming from the hands and feet, in the nails, and in the hair, but also in many internal parts of the body, including the brain. He has, in fact, clearly shown that arsenic, instead of being rapidly eliminated from the body, will accumulate to a considerable extent. The cases of neuritis seen during the outbreak of arsenical beer poisoning were characterized by their severity and by the tediousness of recovery. Perhaps the most prominent symptom was extreme tenderness of the affected muscles. The innervation of the heart was most profoundly affected, a condition which often led to unexpected death. In Manns' opinion the outbreak was entirely due to arsenic; although he admitted that alcohol probably played the part of a subcausal agent. He failed to obtain any chemical evidence that the arsenic existed in the beer in organic combination. There seems to be a strong affinity between keratin tissues and arsenic. Neurokeratin, which enters into the composition of nerves, forming a sheath round the axis cylinder and the white substance of Schwann, besides giving off numerous transverse fibrils, is closely allied to keratin. Neurokeratin also exists in the substance of the brain, the white matter of which contains about 10 times as much as the gray matter. A number of brains from cases of arsenical beer poisoning were divided into 2 portions, one consisting chiefly of white matter and the other chiefly of gray matter. Equal weights of the 2 portions of each brain were taken and submitted to analysis, with the result that the white matter invariably yielded more arsenic than the gray. It is probable that the immediate action of the toxic agent is not limited to the parts of the nerve which are undergoing degeneration. It is more than likely that the trophic centers in the brain are primarily affected, and that the nutrition of the peripheral neurons is thus interfered with. The storing up of arsenic in the neurokeratin, in close juxtaposition with the nerve elements, will keep them under its influence during the period of elimination as well as of absorption. He is disposed to regard the action of arsenic on the cells as interfering with their power of taking up oxygen and storing it in their protoplasm. Osler said that the cases of alcoholic neuritis seen in America were accompanied by the vasomotor paralysis leading to cyanosis of the extremities, a vivid erythema, sometimes with pain, and a glossy state of the skin. Pigmentation, keratosis, bullous lesions, and herpes he had never seen, although he had for many years been well acquainted with the skin lesions of chronic arsenical poisoning. Caton said that some cases

of neuritis in beer drinkers were due to the presence of lead, the lead being derived from the lead pipe which connected the beer engine in public houses with the cask in the cellar. [J. M. S.]

6.—Cases of rheumatism in which actual inflammation of the endocardium has commenced, should be treated with absolute physiological rest for at least 6 weeks, salicylates, small blisters to the wall of the chest between the clavicle and the nipple, each about the size of a florin followed by a poultice and one of those drugs that are believed to absorb effusions, such as sodium iodide. During the past 16 years, Caton has treated in hospital 92 cases of acute endocarditis by this method. Out of 61 cases in which a murmur was present at the time of the patient's admission to the hospital, 41 left it with apparently sound hearts, while in 20 the signs of valvular disease persisted. In 31 cases, on the other hand, the bruit and other signs of valvulitis came on while the patient was in the hospital; of these 28 left it with an apparently sound heart and 3 with permanent valvular disease. Osler said that he had tried for several years to carry out Dr. Caton's plan of treatment, but he had not been able to determine whether it had a distinctly beneficial action. The difficulty was to get at the subsequent history of the patients, and he would like to know the cardiac condition in the 69 cases, 2 or 3 years subsequent to the treatment. A patient might leave the hospital without a murmur, and yet several years subsequently signs of valvular disease might be discovered. It is not the vegetations in themselves that are serious, but the disturbance of nutrition started by their presence, a disturbance leading to show stenosis of the valve, and to progressive insufficiency. [J. M. S.]

7.—McPhedran and Goldie report the case of a man, aged 24 years, who complained of general weakness, heaviness of the limbs, palpitation, dull headaches, and an inaptitude for work. On examination few or no objective signs were to be found. He passed urine that was turbid and of an extremely bluish color. The pigment was readily extracted from the urine by chloroform and was believed to be indigo blue. [J. M. S.]

8.—The methods generally used for bacteriological analysis of pus are, as a rule, very imperfect. Cultivating the pus of appendicitis and other fetid processes in artificial media totally deprived of oxygen, Rist found that the germs seen in coverglass preparations of the pus that failed to grow on ordinary agar grew very well. By this method he has investigated cases of mastoiditis and he has found that such lesions caused by streptococcus or pneumococcus are very rare. In the greater majority of cases, mastoiditis has been preceded by chronic fetid otorrhea, and is itself of a very fetid character. These cases are generally severe, and liable to be complicated by either fetid or gangrenous suppuration, especially by disseminated metastatic gangrene in the lungs. They are caused by anaërobic germs, which are capable of mortifying and destroying the tissues by a process of putrefaction, as may be proved by inoculation of pure cultures in animals. The author has been able to find the same anaërobic microorganisms in the disseminated gangrene of the lungs caused by otitic septicæmia. He has described several new species of anaërobic germs, some of which seem to play a very important part in human pathology. These germs are extremely virulent and kill animals when inoculated into the peritoneal cavity under the skin, in a short time, after having caused putrid, gangrenous, and often gaseous inflammations. Some are morphologically very like the ordinary pyogenic organisms, but they are quite different biologically. *Bacillus racemosus* and *bacillus fragilis* seem to be the most active agents in appendicitis and pulmonary gangrene and are to be found in putrid pleurisy and otitic infections. *Staphylococcus parvulus* and *micrococcus fetidus* are also met with. Often aerobic germs, such as streptococcus or bacillus coli communis are associated with the anaërobic microorganisms, but their number is always comparatively small. Whenever there is a fetid suppuration or an active gangrenous process, anaërobic germs are at the bottom of it. It would be premature to draw from these facts therapeutic conclusions. But still, one is entitled to suppose that such antiseptics as potassium permanganate or superoxidized hydrogen, which possess a considerable oxidizing power, are to be preferred whenever there exists a fetid or gangrenous process. [J. M. S.]

9.—Rivière believes that enteric fever, dysentery, appendicitis, children's diseases, and acute illnesses in general are speedily cured by judiciously given calomel, which disintoxicates the whole organism and assures intestinal antiseptics. He also believes that typhoid and dysenteric lesions are produced by insufficiency and disturbance of the biliary function. He gives systematically to all his fever patients calomel and sodium bicarbonate, aa 0.25 cg. (4 grains) put directly on the tongue at midnight, followed next morning by castor oil beaten up with hot water or 8 grams of magnesia (for an adult). The fever always subsides by the next evening, sometimes on the very morning of the aperient draught. When fever is present he orders at his first visit, a few hours before the calomel, a large dose of sodium salicylate, 2 grams, as an antipyretic; this has, as everybody knows, a special elective action on the liver. To prevent the return of fever he always employs quinine, which favors the biliary function, but which requires the action of purgatives to eliminate the bile.

[J. M. S.]

10.—Williams contributes a paper on the treatment of phthisis by means of electrical currents of high frequency and high potential. After a few applications the temperature also in a severe case may be to 103°, but in from 12 to 24 hours it will come down, as a rule, to below the patient's lowest point. Later on, a stage is reached where even prolonged exposure to the high frequency currents will produce no rise and the patient is to all intents and purposes well. Cough after a few days is relieved, and after a few weeks is greatly lessened; though a dry cough without expectoration may persist for many months. Sputum, in a month or two, becomes *nil*. The bacilli, after a week or so, greatly increase in numbers; then they gradually decrease, and have a tendency to form "clumps." Perspiration subsides after a few weeks treatment. Body weight, as a rule, steadily increases with the improved digestion. The pulse rate is increased 20 or 30 beats during the actual application of the currents, but in a few hours or less it regains its usual rate. Anemia disappears and menstruation becomes normal. Tuberculous laryngitis seems particularly amenable to this form of treatment. Breathing becomes longer and easier. Of 43 cases, 42 put on weight, and lost all symptoms except in a few where a slight cough remained and a few bacilli were found occasionally. Physical signs generally remained long after the patient was at his maximum weight. [J. M. S.]

11.—The two commonest forms of cardioarterial disease are those in which there is diffuse arteriosclerosis and an hypertrophied heart, and those in which the vessels are less involved than the heart. The object of the treatment in these cases is so to affect either the heart or the vessels, or both, that a normal balance of work to resistance may be restored. In a case in which the arterial condition is chiefly one of slight loss of resiliency, whilst the heart is hypertrophied and its muscle is beginning to fail, the main indication is undoubtedly to save the work of the heart as much as possible. The regular administration of small doses of nitroglycerine is beneficial; but massage and restricted movements are strongly contraindicated as is also the use of digitalis, strychnine, or other heart tonics. Attention to the bowels, as in all cases of cardioarterial disease, is of the first importance. In those cases in which the disease has commenced in the vessels, the hypertrophy of the heart having only come on in response to the increased resistance which it has permanently to overcome, the object of the treatment is to increase the compensatory hypertrophy of the heart to a limited extent and, at the same time, as far as possible, permanently to lessen the resistance it has to overcome. In such cases the occasional exhibition of strephanthus, with at the same time the regular use of potassium iodide in small doses, resisted movements, carbonic acid baths and regular exercise slowly taken up gentle gradients are indicated. If gout is present it must be treated also. [J. M. S.]

12.—A patient presents himself with a history of emaciation, cough, and muco-purulent expectoration; there is a rise of temperature and night sweats. On examination there is found dullness over a portion of the lung, prolonged expiration, bronchial breathing, crepitation and moist rales. Are we justified in concluding from these symptoms and physical signs that the patient is suffering from pulmonary tuberculosis? The presence of tubercle bacilli in

two sputum proves conclusively the existence of tuberculous disease; but the difficulty arises when the examination of the sputum of the patient with above symptoms presents no bacilli. Muthu gave notes of 5 illustrative cases. He concludes: (1) That lesions and symptoms usually associated with consumption do not necessarily mean tuberculous disease of the lung; (2) that in every case presenting ordinary symptoms of consumption it is highly important that the sputum should be carefully and periodically examined; this will prevent error and insure more or less correct diagnosis; (3) that the terms phthisis, consumption, pseudo-tuberculosis, etc., are misleading and are loosely applied to denote pulmonary disease; (4) that failure to find bacilli in the sputum of a case of so-called consumption does not always mean absence of tuberculous disease. [J. M. S.]

13.—Wilkins reports a case of a woman, aged 65 years, who was suffering from what appeared to be rheumatic pains affecting the muscles of the arms and shoulders. She was treated with sodium salicylate, but the treatment did not relieve the pains, which became worse, especially at night. After the administration of 2½ minims of a 1 in 12 solution of morphine, hypodermically, she was found breathing noisily and, for a time, could not be roused. For several days after this the patient went on without any return of rheumatism. On the third day, the left lung became affected with pneumonia, which ran an ordinary course. When the patient was thoroughly convalescent from the pneumonia, she was allowed to go down stairs, after which she became much worse. At this time, she had a marked systolic murmur at the apex, and it was feared that an embolus had lodged in one of the small arteries of the brain. With the progress of the case the cardiac symptoms altered considerably. The murmur, which was audible at the apex, remained for 2 months or so and then gradually disappeared, leaving a murmur audible at the base. This basic murmur has now disappeared. A diagnosis of rheumatic endocarditis was made. [J. M. S.]

14.—Ross recommends a meat albumin dietary in the treatment of tuberculosis. [J. M. S.]

15.—In treating chronic bronchitis in those past middle life the toxicity of the blood should be kept as low as possible. The air breathed should be pure and nasal breathing insisted on. The diet should be a bare sufficiency, and alcohol and malt indulged in sparingly, or not at all. Every ounce of superfluous fat should be got rid of. The general health should be maintained at the highest possible level. A vigorous circulation should be maintained. Every precaution should be taken against breathlessness. Breathing exercises should be resorted to in order to preserve the mobility of the thorax. [J. M. S.]

LANCET.

October 12, 1901.

1. Introductory Address. SIR WM. S. CHURCH.
2. Introductory Address on Occultism and Quackery.
WILLIAM HILL.
3. An Address on the Present Treatment of Inoperable Cancer. ALFRED COOPER.
4. Recent Discoveries in Central America Proving the Pre-Columbian Existence of Syphilis in the New World. THOMAS GANN.
5. A Remarkable Case of Foreign Body Impacted in the Rectum. A. MARMADUKE SHEILD.
6. A Case of Laparotomy for Multiple Septic Abscesses and Intestinal Adhesions, etc.
A. ERNEST MAYLARD.
7. Mucin in Desiccation, Irritation, and Ulceration of the Mucous Membranes. W. STUART-LOW.
8. Cancer, its Nature and its Treatment.
JOHN HOLDEN WEBB.
9. A Complicated Case of Placenta Previa.
JOHN HOOLE.
10. The Late Amir of Afghanistan.
JOHN ALFRED GRAY.

3.—Alfred Cooper in discussing the present treatment of inoperable cancer urges upon the surgeon the careful study of these cases and the wisdom of trying various remedies suggested for their relief. He concludes by say-

ing: First, that in cases of inoperable sarcoma, particularly the spindle-celled variety, Coley's fluid should be employed since a certain number of cases have undoubtedly been cured in this way. Second, that in cases of inoperable cancer of the breast in women beyond 40 years of age and in whom the menopause has not occurred oophorectomy should be performed and followed by a course of thyroid extract. Third, that in cases of inoperable rodent ulcer and in other forms of malignant ulceration the Röntgen rays should be given a trial. Fourth, that in cases where the foregoing treatments are declined or are inadvisable the internal administration of celandine should be tried. When the cases are beyond doubt hopeless, morphia should be pushed without hesitation. These forms of treatment of inoperable malignant disease should only be suggested to the patient and their dangers and discomforts thoroughly explained. [J. H. G.]

4.—Gann through some recent discoveries in Central America proves the pre-Columbian existence of syphilis in the New World. The author writes that irresistible proof of this is evident, as it has been shown that the individual who was buried in a mound situated in the northern district of the colony of British Honduras, near the village of San Andres, died from syphilis. A number of clay figures have been discovered which lend support to the view that they represent individuals who suffered from syphilis. He concludes his article with a recapitulation of the main facts in the chain of evidence which we quote in substance: "1. The clay figures, indicating that the persons whom they were meant to represent suffered from some disease of the penis, confined apparently to the glans, a supposition which the life-sized penis tends to confirm. It is of course conceivable that, as these figures were dressed as priests, they may have been performing some ritual act of self-mutilation, a common occurrence, as we know from contemporary writers, amongst the Maya priests, but these acts were, as far as it is known, confined to cutting and slashing the limbs and drawing twigs and small ropes interwoven with thorns through a recently made slit in the tongue, no author having mentioned mutilation of the penis. 2. The condition of the tibiae which may, of course, have been due to caries or other morbid changes unconnected with syphilis; but when we remember that both bones were affected, that the tibiae are favorite sites for syphilitic morbid changes, and that the owner had evidently been afflicted with some disease of the glans penis, from which he presumably died, the evidence in favor of syphilis is overwhelming. 3. The peculiar and unique method of burial. We know from the accounts handed down by Sahagun, Torquemada, and other Spanish historians that amongst the aboriginal tribes persons who died from syphilis were not cremated (as was customary), but had a special mode of burial accorded them, and here, the author thinks, we have it before us." [F. J. K.]

5.—Marmaduke Shield reports a case in which a man, 60 years of age, forced into his rectum a gallipot which measured $2\frac{1}{2}$ inches in diameter and $2\frac{3}{4}$ inches in height. The patient made frantic attempts to remove it, but only managed to remove some pieces which he had broken off. The foreign body was so large and its edges so dangerous that Shield decided it could only be removed with safety through an incision of the rectum. A free incision was made into the rectum from behind and the foreign body removed with a pair of obstetric forceps. The wound was closed but subsequently had to be opened because of septic infection. Reference is made to many interesting cases of a like nature which have been reported. [J. H. G.]

6.—A. E. Maylard reports a case of laparotomy in which multiple abscesses and extensive intestinal adhesions together with an enlarged Fallopian tube were present. The patient was operated upon for symptoms of acute intestinal obstruction. After emptying the various pockets of pus, extensive packing was employed. The patient's condition upon the table became very alarming and the exact

source of the infection could not be learned. The patient made good progress until the ninth day after the operation, when symptoms of acute intestinal obstruction again appeared. When the abdomen was opened, a localized abscess was found encircled by loops of matted intestine. The pelvic contents were so matted together that it was impossible to separate them. At the upper part of the involved area a tense fibrous band was found extending transversely across the gut, producing complete occlusion. Another portion of intestine was found completely twisted upon its mesentery. These lesions were corrected with the greatest difficulty and only after an enterotomy had been performed. The abdomen was again packed with gauze, and the patient returned to bed. A fecal fistula persisted after this operation for some time, but it ultimately closed and the patient made a satisfactory recovery.

[J. H. G.]

7.—Stuart-Low states that mucin possesses most valuable therapeutic properties in certain gastric and nasopharyngeal affections. He has given mucin a thorough trial in a number of selected cases during the past 12 months and finds that it is a most valuable agent, often affording relief when other treatments fail. He recommends a tabloid composed of five grains each of mucin and sodium bicarbonate. In the treatment of nasopharyngeal affection he combines menthol with the tabloid mucin compound—dissolves these in water and uses this mixture as a douche. He mentions that a leading indication for the administration of mucin is the presence of a clean, red, angry or dry tongue, frequently a fissured tongue indicating a deficiency of gastric protective coating. Mucin also acts as a laxative. Mucin has been used with marked success in the treatment of gastric ulcers. [F. J. K.]

9.—Hoole reports a complicated case of placenta previa occurring in a woman 38 years of age. Forceps were applied, after separation of the placenta from the uterine wall as far as the fingers would reach, but failed to accomplish delivery. A leg was then drawn down and after severe traction a dead fetus was delivered. The patient made an uninterrupted recovery. [W. A. N. D.]

MEDICAL RECORD.

October 26, 1901.

1. The Prevention of Yellow Fever. WALTER REED and JAMES CARROLL.
2. On the Mode of Transmission of the Infectious Agent in Yellow Fever and its Bearing upon Quarantine Regulations. A. H. DOTY.
3. Arteriosclerosis, etc. CHARLES E. NANMACK.
4. Cinchonism and its Effect upon Articulation and Vocalization. CARL SEILER.

1.—Walter Reed and James Carroll published a paper recently read by them, on the prevention of yellow fever. They give some attention to the study of the mortality of this affection, and the study of its etiology. They were able to establish in the most conclusive manner that the mosquito serves as the intermediate host for the parasite of yellow fever. The doctrine of the spread of this disease by fomites must be cast aside to the great simplification of the problem how to prevent yellow fever, which they believe may be reduced to measures which shall prevent the propagation of this disease by mosquitoes. Although the specific agent of yellow fever has not yet been discovered, this must remain largely a matter of scientific interest rather than practical importance in its prevention. That variety of mosquito, which has recently been designated by Theobald, as a *stegomyia fasciata*, was formerly known as the *culex fasciatus*, and has become known as a prominent factor in the spread of yellow fever. They give a careful description of this insect, its habitat, its breeding places, the manner of deposition of the eggs, the length of generation. As to this point, they state that the impregnated female, having obtained a meal of blood, proceeds to deposit her eggs, in captivity, after an interval varying in their experience from two to thirty days; as a rule, the eggs are laid within seven days; sometimes a second or third meal of blood is taken before any eggs

are laid. The eggs begin to hatch, as a rule, on the third day, the period extending to about a week. The larval stage requires seven to eight days, and the pupal stage about two days. They discuss the influence of temperature on propagation, biting, and the interval after contamination before the mosquito becomes dangerous. The first special measure of prevention should be to protect the sick individual against the bites of mosquitoes, and they state that this can best be accomplished by thorough screening and with immovable screens. As it is possible that mosquitoes, that have already bitten the sick individual, may have escaped into other apartments of the house, they recommend that these should be closed tightly and subjected either to sulphur or to formaldehyde disinfection, or to the fumes of pyrethrum. They regard sulphur as the best agent. They state that in a well closed room, one to one and a half hours of sulphur fumigation, in a proportion of one pound to 1,000 cubic feet of air space, will suffice to destroy all mosquitoes. They close this important paper with the discussion of the measures to prevent the importation of yellow fever into the United States.

[T. L. C.]

2.—A. H. Doty presents a paper on the mode of transmission of the infectious agent in yellow fever and its bearing upon quarantine regulations. He gives a history of many of the methods adopted, and concludes by stating that the treatment of incoming vessels from ports infected with yellow fever is a very important matter. If they are five or more days in transit, and all on board are found to be well after a careful inspection, the vessel, its passengers, and crew shall be released. If the vessel has been less than five days in transit, all on board who cannot present satisfactory evidence of immunity should be removed and held for observation until the completion of a period of five days from the time of departure from the infected port, and then released only after a careful inspection. When yellow fever is found on incoming vessels, the procedure should differ only so far as it concerns the removal of the patient to a properly constructed hospital or apartment for treatment. He believes that the disease is not contracted by personal contagion or through the medium of clothing, bedding, cargoes of vessels, etc., and states that we are justified in changing our quarantine regulations to conform to these views. [T. L. C.]

3.—Charles E. Nammack discusses arterio-sclerosis; its importance, definition, etiology and symptomatology. The paper is a résumé of the opinions held on these points by Pepper, Tyson, Osler, Whittaker, Allbutt and others.

[T. L. C.]

4.—Carl Seiler discusses cinchonism and its effects upon articulation and vocalization. He states that the ordinary tinnitus aurium due to middle ear disease never transgressed the limits of pitch from 297 vibrations to 704 vibrations as the highest point, and that these subjective noises, although variable in quality or timber of the sound, had no appreciable effect upon vocalization or articulation; but they would invariably and very materially affect the perception of sounds which had the same, or nearly the same, number of vibrations per second. The subjective noises of so-called cinchonism as produced by the systemic toxic effects of various drugs, he found to be invariably of a very high pitch, varying from 1,584 to 3,960, and often higher. He states the interesting fact that among a few cases of musically educated persons whom he had the opportunity to examine and who were familiar with aural analysis of sound, inquiry elicited the fact that the noise was composite in character, being made up of a variable number of individual sounds. These were sometimes harmoniously blended, thus forming a chord, the fundamental tone of which, however, was always constant in pitch, but varied in its pitch with the drug producing the cinchonismal noise, and found this to be lowest when quinine, highest when salicylate of sodium was the cause. He also found that a combination such as is produced by the hissing of escaping steam or the noise of rapidly revolving grindstones, etc., not only interferes with the pronunciation of those consonants by which they are usually accompanied in articulate speech, such as the "th," "s," "sh," "z," but also caused them to be the most easily obliterated and consequently most difficult to be appreciated and recognized by the ear. [T. L. C.]

MEDICAL NEWS.

October 26, 1901. (Vol. LXXIX, No. 17).

1. Giant Sacrococcygeal Tumors. An Account of One Which Pursued an Atrophic Course.

CHARLES M. POWERS.

2. Four Cases of Tumors. JAMES E. NEWCOMB.
3. Biopsy—the Histological Diagnosis of Dermatoses and Tumors of the Skin of Doubtful Character.

JEAN DARIER.

4. Report of Two Interesting Cases of Appendicitis. WILLIAM D. YOUNG and WILLIAM M. JOHNSON.
5. The Physician in Relation to the Dispensing of Medicine. J. TRACY MELVIN.
6. Anchylostoma Duodenale in Texas.

M. CHARLOTTE SCHAEFER.

1.—C. A. Powers reports a case of giant sacrococcygeal tumor which pursued an atrophic course. He states that some of these malformations are very common, and the most frequent seen is the simple dimple or groove, the so-called fovea coccygea. Beyond this there is the true epidermoid fistula or pilo-nodal sinus, and a step further brings the true dermoid. Sacculization of the cord connected with vertebral fissures and spina bifida occulta may also be placed in this class. There is also a class of complex growths, complete or incomplete double formations, and parasitic mixed tumors (teratomata-embryoid tumors). These tumors present the greatest diversities of tissues. They are generally mixed, and in addition to the structure of dermoids, they may and often do present cysts lined with ciliated, flat or columnar epithelium, muscle fiber, nerve tissue, intestinal remnants, bone and cartilage. The case reported belonged to the latter class.

[T. M. T.]

3.—J. Darier defines biopsy as a sort of autopsy upon the living. It is the excision of an eruptive lesion, or a fragment of tumor, for the purpose of establishing the diagnostic histology of a malady. The instruments required are a von Graefe knife, anatomical forceps, histological scissors, either straight or curved, with blunt ends: these are sterilized. The operator's hands are washed; the field is disinfected. If the patient is timorous, anesthesia is obtained by means of an ethyl-chloride spray; a disadvantage of this method is that when the tissues are congealed, it becomes difficult to distinguish the element chosen for incision. To overcome this obstacle the part may be previously marked with ink; another method is to postpone the operation until the blanching of the skin disappears—anesthesia is not complete at this moment, but there remains a sort of stupefaction of sensibility. Subcutaneous injections of cocaine must be rejected absolutely in this operation, because of the local edema which they produce, and the interstitial hemorrhage provoked by the needle, and the alteration in the tissues which results from contact with an aqueous liquid. But in ulcerations and erosions of mucous membranes one may apply locally a cotton sponge soaked in solution of cocaine, 1 to 10. Practically local anesthesia may generally be dispensed with. It is well to remember that the best analgesic is an exceedingly sharp instrument. In making the incision the operator picks up the selected part with the thumb and forefinger of the left hand; this fold is transfixed at the desired depth by the Graefe knife, which is plunged beneath the portion destined for excision; the knife cuts a flap which includes the desired piece. The flap is picked up with forceps, is detached at the base by the scissors, and the section is immediately plunged in the fixing fluid. Hemorrhage is usually insignificant, but is somewhat more abundant where an anesthetic is employed. A good local hemostatic is a fine powder of juniper wood, sterilized by heat and impregnated with vapor of creosote. This is superior to antipyrin and more practical than gelatin, which must be softened by heat. Sutures may be resorted to after deep and wide excision of healthy tissue—a rare condition in biopsy. A simple dressing of iodoform gauze held with collodion suffices. There are two distinct classes of cases in which we can use biopsy. (1) Those in which the indication is absolute and pressing, including tumors and ulcers of doubtful character which tend to invade surrounding

tissues, such as tumors of the tongue, lips and face; (2) In the case of multiple tumors, annoying to the patient, but unquestionably benign, or of a persistent eruption of indeterminate character. [T. M. T.]

5.—J. T. Melvin concludes his article by saying he would only enter a plea for a thoughtful recognition of the changed conditions of to-day, and for a return to that accurate, well-trained clinical observation of the actual effects of every remedy administered by the physician in each case that he treats, to the end that the vast mass of therapeutic trash which now confuses and misleads practitioners may be wholly swept away, and that the physicians of the present and future may be so trained and educated as to give to this most important branch of our profession that same skilled attention, born of scientific laboratory methods, which they now give to differential bacteriological diagnosis or to blood examinations.

[T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

October 24, 1901.

1. The Case of President McKinley. P. M. RIXEY, MATTHEW D. MANN, HERMAN MYNTER, ROSWELL PARK, EUGENE WASDIN, CHARLES McBURNEY and CHARLES G. STOCKTON.

2. Association of Anemia with Chronic Enlargement of the Spleen. (Continued).

ARTHUR H. WENTWORTH.

3. A Brief Résumé of the Life and Works of Ambroise Paré, etc. (Concluded).

4. Tubercular Peritonitis. (Concluded).

HENRI T. FONTAINE.

- 1.—See Philadelphia Medical Journal, Vol. viii, No. 16, p. 639.

- 2.—Will be abstracted when finished.

4.—In cases of tuberculous peritonitis with ascites and encystment, if the kidneys are diseased or if the lungs are extensively involved, laparotomy is contraindicated. In the uncomplicated cases it would seem the part of wisdom to give medical treatment a thorough trial. If the patient does not quickly improve, then laparotomy should be resorted to, before the stage of encystment has progressed too far. The nodular form of tuberculous peritonitis is also regarded as a most favorable one for operation. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

October 26, 1901.

1. Removal of Foreign Bodies from the Air-Passages.

DEFOREST WILLARD.

2. The Treatment of Empyema. JAMES H. DUNN.

3. The Treatment of Strabismus other than Operative.

EDWARD JACKSON.

4. The Strabismus Operation. C. F. CLARK.

5. Artificially Prepared Foods, etc. L. BREISACHER.

6. The Somatic Signs of Brain Syphilis.

HUGH T. PATRICK.

7. The Psychoses in Cerebral Syphilis.

RICHARD DEWEY.

8. Syphilis of the Nervous System, etc. F. W. LANGDON.

9. Preventable Diseases in the Army of the United States, etc. MAJOR W. O. OWEN.

1.—DeForest Willard concludes an article on the removal of foreign bodies from the air passages as follows: 1. Coughing should be encouraged; forcible inspiration restrained. 2. Inversion in the prone position as a domestic practice is advisable. 3. Laryngoscopy is helpful if the body is lodged at the vocal bands. It may be extracted by forceps or by laryngotomy. 4. If time permits the X-ray may be brought into serviceable use for diagnosis. 5. Careful diagnostic investigation is important to determine the actual presence of a foreign body, and its location. 6. Tracheotomy under local anesthesia should be the rule if the object is lodged at the bifurcation or in the bronchi. Tracheoscopy, suction and forceps' manipulation must be cautiously employed. Prolonged instrumentation adds greatly to the danger of pneumonia. 7. If extraction is not

secured through the tracheotomy wound, the chest wall should not be invaded, unless an artificial respiratory apparatus like the Fell-O'Dwyer is at hand and oxygen available. With the assistance of these appliances, however, the bronchus may be reached either anteriorly or posteriorly, since by their use, rythmical movements can be maintained. 8. Resultant abscess of the lung should be treated by incision and drainage. [F. T. S.]

2.—Dunn deplores the present unsatisfactory treatment of empyema; this is due to tardy diagnosis, inefficient drainage and slovenly after treatment. He usually resects 6 cm. of the 8th rib, just outside the angle of the scapula, thus insuring adequate drainage because of the low position of the opening, and allowing careful examination of the cavity because of its size. Whenever possible the fluid drawn off by the exploring needle should be examined bacteriologically before operation is decided upon. If a pure pneumococcus infection be found, or the fluid be a sterile serous exudate such as is found in tubercular empyemas, repeated aspirations may be tried before incision and drainage. In large and double effusions gradual evacuation by paracentesis is advisable several hours before rib resection. Light chloroform anesthesia should be employed or, if there be contraindications to this, the operation may be performed under Schleich solution; ether should never be used. Wiping the cavity with gauze is less objectionable and more efficacious than irrigation. The indications usually given for lavage, abundant discharge, fetor, and fever, do not demand irrigation but a free opening. For drainage gauze is preferred as the opening early contracts around a rubber tube. Attention to respiratory gymnastics is of great importance in the after treatment. The contraction of the cavity comes to a standstill in several months and this is due, not to the ribs, but to the thickened and rigid pleura, hence the operation of choice is the Schede. [F. T. S.]

3.—Edward Jackson presents an article on the treatment of strabismus, other than operative. He states that a large number of cases may be cured without operation. The non-operative treatment for strabismus includes: 1. The bringing about of normal innervation of the muscles concerned in ocular movements, by the removal and exclusion of abnormal requirements, and abnormal overflow impulses; 2. To place and keep the eye, so far as possible, upon the best plane of visual acuteness and an equality of required effort; 3. To eradicate abnormal methods of using the eyes, especially dependence of one eye to the practical exclusion of the other; 4. To develop normal binocular vision—the method of combining the visual sensations produced by the two eyes; and the habit of employing them both in all ordinary seeing. He takes up the questions of the use of the previously deviating eye, the use of cycloplegics, and exercise for the development of binocular vision; the reflecting stereoscope, the ordinary stereoscope, and the reading bar.

[F. J. K.]

4.—C. F. Clark describes the strabismus operation. The various operations resorted to for the correction of strabismus may be classified under the following heads: Tenotomy.—1. Partial division of the tendon (graduated tenotomy). 2. Complete division of the tendon. 3. Complete division of the tendon, with division of the lateral fibres of the capsule. Advancement.—1. Partial advancement of the tendon (graduated advancement). 2. Complete advancement of the tendon. 3. Complete advancement of the tendon with advancement of the capsule. 4. Resection of the tendon. 5. Resection of the tendon and capsule. After fully discussing the various measures of treatment, he concludes that in the correction of strabismus, advancement, or resection combined with a very little tenotomy, should, as a rule, be substituted for simple tenotomy. [F. J. K.]

5.—L. Breisacher presents a paper on artificially prepared foods, their nutritive value and dietetic application. He discusses the caloric value of food stuffs and their relation to body weight. The fundamental principles, by which it is necessary to be guided in both health and disease, empha-

size the fact that of the three chief nutrients—albumin, fat and carbohydrates, to which a fourth, gelatin, may be added—albumin is the substance which requires the foremost consideration in the selection of a diet. This is true, because it can not be replaced by any other known nutrient, whether it belongs to the nitrogenous or non-nitrogenous group of chemicals or food-stuffs. He discusses the question of artificially prepared or pre-digested foods, and states that, on the whole, artificially prepared starches given alone or mixed with especially prepared milk foods have given good results in his hands. When used with judgment and discretion they often render valuable service. When they are indiscriminately prescribed, they give correspondingly bad results. [F. J. K.]

6.—Patrick lays down the following postulates relating to **cerebral syphilis**: That 50% of all cases occur within the first three years after infection and after ten years it is rare; that in reaching a diagnosis the absence of a history of chancre should have no weight in women, and but little weight in men; that brain syphilis most frequently means arteritis, next meningitis and infiltration of the cranial nerves, while gumma is the least frequent; that paralysis from cerebral syphilis, excluding paralysis of the cranial nerves is more frequently caused, neither by gumma nor hemorrhage, but by thrombosis due to arteritis; that the condition is more amenable to treatment than cerebral thrombosis due to other forms of arteriosclerosis; and that syphilis does not involve systems. The condition lacks type in its manifestations and conforms to no rule. Headache is present in about 75% and frequently some part of the head is tender to percussion. Various forms of fits occur. Epilepsy or apoplexy between 20 and 40 should always awaken suspicion of specific disease. None of the cranial nerves is exempt from involvement, the muscles supplying the eye suffer most often, next the fifth, seventh and eighth nerves. Beyond the eighth they are infrequently affected. The addition of spinal cord symptoms, increase of deep reflexes, and incoordination contribute to the formation of a diagnosis. The peculiar stupor which has been likened to the drunken state, when combined with other signs, is almost pathognomonic. Fever is rare unless the pons or medulla is invaded. Vomiting occurs in many cases, especially when the posterior fossa is involved. Polydipsia, polyuria, and polyphagia are not unusual, the last being the least frequent. Insomnia, aside from the inability to sleep on account of pain, is not rare. [F. T. S.]

7.—Richard Dewey thinks that there is possibly nothing distinctive of **syphilitic psychoses**. The bizarre and irregular character, the tendency to remissions and to return to apparent sanity, etc., are seen in other forms of insanity. The fact that the anterior portions of the brain are more open to specific infection gives some significance to the frequency of dullness and stupor. [F. T. S.]

8.—F. W. Langdon presents a paper on **syphilis of the nervous system**—its general pathology, with remarks on treatment. The initial lesion of syphilis must be viewed, in the light of our present knowledge, as a wound plus infection, the infecting material being probably of bacterial origin. The conditions found in the nerves are described as, 1, obliteration of lymph spaces; 2, disappearance of axons; 3, a "glassy" degenerated appearance of the myelin. Syphilitic multiple neuritis has also been reported. The second evidence we have of the invasion of the nervous system by the disease or its products, is in the production of fever—"syphilitic fever"—often overlooked and sometimes misinterpreted. The third group of processes to be considered, and by far the most important, is the inflammatory group whose characteristic lesion we call a "gumma." Remedies of value in syphilis may act in three ways: (a), the most usual, by promoting necrosis in the embryonic cells of the exudate, thus permitting their removal in large part by the lymph channels; (b), by stimulating the excretory organs generally, thus favoring removal of "toxins" produced by the disease; (c), possibly by the promotion of leukocytosis

and other tissue changes, which set free an increase of the natural amount of antitoxin. The discovery of a means of producing artificially an antitoxin which shall arrest the disease in an early stage, must be conceded as a possibility.

[F. J. K.]

9.—Major W. C. Owen discusses the **preventable disease in the army of the United States**, its causes, effects and remedy. He believes that the day has come when all sanitary matters of the army should be placed under the control of the Army Medical Department. He discusses the various measures by the following out of which the mortality of the troops may be reduced. The question of transportation is taken up, and the articles of the Geneva Convention are quoted and discussed, as well as the question of the responsibility of commanding officers. He includes in this paper a copy of a bill presented on December 6, 1900, by Mr. Hay in the House of Representatives, defining the duties of the Medical Department of the Army of the United States. [F. J. K.]

AMERICAN MEDICINE.

October 26, 1901.

1. Transmission of Tuberculosis Through Meat and Milk. (Continued.) JOHN J. REPP.
2. Symptoms, Diagnosis and Treatment of Enlarged Prostate Gland. CHARLES J. WHALEN.
3. Report of a Case of *Filaria medinensis*, Guinea-Worm Disease. EDWARD FRANCIS.
4. Analgesia from the Spinal Subarachnoid Injection of Cocain. J. GARLAND SHERRILL.
5. The Use of Ethyl-Bromid as a Primary Anesthetic to Ether or Chloroform. EMERY MARVEL.
6. Chorea With Partial Paralysis Secondary to Rhinitis. C. FONTAINE-MAURY LEIDY.
7. The Lane Lectures on the Social Aspects of Dermatology VII. MALCOLM MORRIS.

1.—John J. Rapp contributes an article on the **transmission of tuberculosis through meat and milk**. He gives a résumé of the literature and the opinions held by many authorities on this subject. He treats the subject under two general subdivisions. (1) The transmission to animals, and (2) transmission to man. Under the transmission to animals he discusses infection by meat and by milk. He mentions the great lessening of tuberculosis in calves of tuberculous cows which have been separated at birth and fed on sterilized milk or the milk from sound cows, and refers to the numerous observations of veterinarians pointing to the transmission of tuberculosis from cows through their milk to calves and swine. He states that it is proven that tuberculosis may be transmitted through the milk and the food structures of tuberculous animals to the animals that consume these products or are inoculated with them, but that this does not decide the important question at issue, whether or not tuberculosis is transmissible from animal to man. Under the head of transmission to man, he discusses transmission by meat and by milk. He mentions the statistics collected by Thorne from physicians in Ohio, as especially valuable. He states that there is no evidence that tuberculosis is not to some extent transmitted from animal to man through ingestion of meat. The article is continued. [T. L. C.]

2.—Charles Whalen discusses the **symptoms, diagnosis, and treatment of enlarged prostate gland**. He gives a résumé of the subject and presents his conclusions that **prostatectomy** and **Bottini's galvano-cautery treatment** are the only ones to be considered at the present time. The indications that will decide upon which operation should be performed are: The age of the patient; the size of the prostate; the condition of the kidneys and bladder. He advises that spinal anesthesia be used in place of the usual anesthetics. [T. L. C.]

3.—Edward Francis reports a case of **filaria medinensis, guinea-worm disease**. It is a tropical affection, due to the *filaria medinensis*, an animal parasite inhabiting the human connective tissue, and belonging to the nematodes. The patient in whom this condition was present had been only 40 days from Guinea. The life history of the worm is given with cuts, and a photograph is presented of the patient's feet, showing four worms protruding. [T. L. C.]

4.—J. G. Sherrill discusses **analgesia from the spinal sub-**

arachnoid injection of cocain. He deals with the probable dangers from the injections into the spinal cord, including the shock of tapping the cord and injecting cocain; the danger to the cord and centers in the medulla; the action of cocain upon the heart; the immediate danger of infection through the puncture. He concludes that cocain is not likely to prove satisfactory in operations above the level of the diaphragm; that probably it will not be much used in abdominal cases which are not clear, and are likely to prove tedious or difficult; that its special field will be found in operations upon the lower extremities, including amputations and resections, and upon the perineum, bladder and rectum; also that it is useful in operations on old persons and those suffering from disease of the heart, lungs, or kidneys, from cirrhosis of the liver, and from abdominal dropsy; and that it can be successfully employed when a patient fears general anesthesia. He gives his experience with the method in 27 cases. [T. L. C.]

5.—Emery Marvel presents a paper on the use of ethylbromid as a primary anesthetic to ether or chloroform. He records 36 operations in which the method was successfully employed with no disadvantages, unless it be the odor of garlic of the patient's breath. [T. L. C.]

6.—C. F. M. Leidy reports a case of chorea with partial paralysis secondary to rhinitis. He attributes the condition to septic infection from the nasopharynx with improper oxygen of the blood due to the obstructed air passages. He has found no similar case reported. [T. L. C.]

UNIVERSITY OF PENNSYLVANIA BULLETIN.

July, 1901.

1. Memoir of William Pepper. JAMES TYSON.
2. A Report of the Nasal Septum as Found in the Skulls of Forty Mound-builders. GEORGE B. WOOD.
3. Report of the More Interesting Obstetric Operations and Cases in the University Maternity, from September to January, 1900. A. H. REMINGTON.
4. A Statistical Digest of Epithelioma of the Penis.

FRANCIS DENISON PATTERSON.

5. A Series of Twelve Articles on Medical Men Prominent in the Civil and Military Affairs of Revolutionary Times—V. FRANCIS R. PACKARD.

1.—Prof. James Tyson contributes a memoir of the late Dr. William Pepper, which is an admirable and just estimate of one whose attainments covered far more than the field of medicine in which he was so eminent. No mere abstract of this paper could give an adequate idea of Dr. Tyson's just tribute. [T. L. C.]

2.—George B. Wood presents a report of the nasal septum as found in the skulls of forty mound-builders. He has classified his findings into three groups: those in which the deviation was only four-tenths centimetre or less; and those in which the deviation exceeded four-tenths centimetre. In three cases the septum was apparently straight except for a spur or ridge; this equals $7\frac{1}{2}$ per cent. of the septums examined. The septums were found straight and in the median line in 13 cases, i. e., $32\frac{1}{2}$ per cent. In nine cases, or $22\frac{1}{2}$ per cent., the deviation was only four-tenths centimetre or under, and in 15 cases, or $37\frac{1}{2}$ per cent., the deviation exceeded that amount. Thus, it will be seen that a perfectly straight condition of the bony portion of the septum existed in only $32\frac{1}{2}$ per cent.; and this does not exclude any possible deviation of the cartilage which might have existed during life. Of course the lesser deviations and spurs, which probably would not cause any inconvenience to the person in which they were found, would raise this per cent. up to $62\frac{1}{2}$. These results correspond closely with those of Price-Brown, and tend to disprove the theory that the commixture of races is accountable for the great majority of those septal deformities which develop during the growth of the child. [T. L. C.]

3.—A. H. Remington reports the more interesting obstetric operations and cases in the University maternity from September to January, 1900, with notes of cases of abdominal section for ovarian cyst stimulating pregnancy; a case of abdominal section for an extra-uterine pregnancy, or pyosalpinx; a case of ruptured symphysis pubis; one of septic salpingitis after a missed abortion, and one of ventrosuspension during the puerperium for prolapsed uterus with the repair of cystocele and rectocele. Three cases are also detailed of complete tear through the sphincter.

There is given an account of a small sloughing submucous uterine fibroid at the fundus, causing sepsis after labor, a case of mitral disease and induced labor, and one of pregnancy complicated by a previous ventrosuspension of the uterus. [T. L. C.]

4.—Francis D. Patterson contributes an extremely exhaustive, searching, statistical digest of epithelioma of the penis in which 359 cases are collected. The etiology, symptoms, pathology and method of extension of the disease and complications are discussed, as well as the diagnosis, prognosis and treatment. In conclusion, Patterson states: 1. That epithelioma is by far the most frequent form of carcinoma of the penis, and that its frequency is about 2 per cent. of all cancers. 2. That phimosis is a strong predisposing factor by causing chronic irritation. 3. That, as a rule, epithelioma is more frequent after middle life, though, like every other rule, this has its exceptions. 4. That the syphilitic virus has absolutely nothing to do with epithelioma, the scar of the old specific lesion being nothing more than an area of decreased resistance or a cause of chronic irritation. 5. That traumatism is a predisposing factor by causing an area of decreased resistance. 6. That the question of the contagiousness of epithelioma is still to be decided. 7. That epithelioma more commonly begins in the glans or prepuce, and that origin in the urethra is very rare. 8. That visceral metastasis is very rare. 9. That the prognosis in the precancerous stage is favorable if radical treatment be at once instituted; later it is only guardedly so. 10. That the only safe treatment in any stage consists in the thorough eradication of the area of disease and of all lymphatic glands that are involved. [T. L. C.]

5.—Francis R. Packard continues his series of articles on medical men prominent in the civil and military affairs of revolutionary times. In this paper a brief sketch is given of Dr. Cadwallader Colden, a Royalist Governor of New York. [T. L. C.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

September, 1901.

1. Filarial Lymphatic Varix. EUGENE OPIE.
2. Granular Degeneration of the Erythrocyte.
C. Y. WHITE and WILLIAM PEPPER.
3. Report of an Interesting Case of Aneurysm of the Internal Carotid Artery.
WALTER B. JOHNSON.
4. Hydatid Disease of the Breast. ROBERT LE CONTE.
5. Contribution to the Pathological Anatomy of Sporadic Cretinism.
FREDERICK PACKARD and ALFRED HAND.
6. Pseudomembranous Inflammation of the Mucous Membranes, Caused by the Pneumococcus.
CHARLES CAREY and PHILLIPS LYON.
7. Acute Splenic Miliary Tuberculosis.
D. D. STEWART.
8. Note Upon a Case of Cardia Duplex in a Turkey.
ALLEN J. SMITH.

1.—Opie reports an interesting case of filarial infection. The patient, a man of 24, had been born in the Island of St. Thomas. A few days before admission to the hospital he had a severe chill and went to bed. There was high fever, leukocytosis, and a tumor in the right groin which was found to consist of a mass of dilated blood channels and spongy tissue, and there were symptoms of peritonitis. The abdomen was opened and pus and fibrin were found in the peritoneal cavity, but no cause was found for their presence. The patient died, and at the autopsy a huge lymphatic varix was found in the abdominal cavity surrounding the aorta and its branches, and extending along the spermatic cords. The vessels contained a dark thrombotic material. A portion was excised from the left epididymis and in it a mature filarial worm was discovered. Lanceolate diplocoeli were found in the fluid from the pleura and the peritoneal cavity. Among the interesting features of the disease is the fact, that the lower lymph vessels are usually filled with blood. He gives a careful discussion of the literature. [J. S.]

2.—White and Pepper report the results of their studies upon the blood of persons suffering from lead-poisoning or exposed to lead intoxication, in heat cases, and in animals subjected to experimental poisoning with lead. In 4 cases of chronic lead poisoning basophilic granules were

found in the blood of all. In 21 cases of lead workers without subjective symptoms, whose period of exposure varied from 4 days to 24 years, all showed more or less basophilic degeneration. In none of the cases exposed to heat were they able to discover any signs of this peculiar change in the erythrocyte. In animals slowly poisoned with acetate of lead basophilic degeneration appeared after the initial dose, and the cells were more frequent in the blood taken from the abdominal veins than in that from the periphery. The granules were not found in preparations of the bone marrow. They conclude that these basophilic granules are constant in lead poisoning; disappear during convalescence; that immunity to lead never occurs; that basophilic degeneration may be produced experimentally by poisoning with lead, and that it always represents a true degeneration of the erythrocyte. [J. S.]

3.—Johnson reports a case occurring in a child of 4, who had a severe inflammation in the throat. Subsequently there was a swollen mass in this region, the patient had a profuse hemorrhage from the left ear, and finally symptoms of pressure upon the trachea. Tracheotomy was performed, and the patient did well for a time. He then developed bronchitis, and had a severe hemorrhage from the mouth and nose causing death. A diagnosis was made of dissecting aneurysm of the internal carotid. [J. S.]

4.—Lo Conte reports the case of a mulatto woman 27 years of age, who had an enlargement of the left axillary region. Subsequently there was a tumor of the mamma, which, together with the glands, was excised and in the fluid from this tumor numerous *echinococcus* hooklets were found. The author comes to the following conclusions. The disease is found only in women; occurs in early adult life; is much more common in married women; is more frequent, apparently, on the right side, and in the upper, outer quadrant. The tumor is at first small, hard, movable, not tender or painful; is rarely multiple; is associated with enlargement of the axillary glands. Occasionally in the late stages the tumor may become large and painful and even fluctuate. The cyst is very apt to undergo degeneration. The diagnosis is difficult, but can be confirmed by means of the exploring needle. Treatment consists in excision, and may necessitate partial amputation of the breast. It is not clearly known how the parasite gains access to the glandular tissue. [J. S.]

5.—Packard and Hand report a case of cretinism which improved rapidly upon thyroid extract. The patient subsequently acquired typhoid fever that ran a rapid and malignant course, terminating in death. At the autopsy, in addition to the changes in the intestines, the thyroid body was found to be present, although greatly reduced in size; the thymus was very large, and the hypophysis cerebri was moderately enlarged considering the age and size of the child. Microscopically the thyroid gland showed a considerable amount of fibrous change; the other tissues were apparently normal. The authors discuss the possibility that cretins are much less susceptible to infectious processes than other children, and in the event of recovery they become much more susceptible than other children. The enlargement of the hypophysis is apparently extremely rare. The persistence of the thyroid gland in cretinism is uncommon. The presence of calcareous infiltration of the wall of the blood vessels in the thyroid is unique. [J. S.]

6.—Carey and Lyon report a case of pneumonia in the course of which the patient developed a pseudomembranous deposit upon all the accessible mucous membranes of the body, extending also into the intestinal tract, but not into the urethra. This was white, rough, and adhered closely to the surface. When torn off it left a raw bleeding surface. Cultures showed nothing but the diplococcus of pneumonia, but in a few cases there was contamination with the staphylococcus pyogenes aureus. They give a very complete analysis of the literature on the subject. Usually these cases are mild and soon recover. The process appears to have been conveyed from one part to the other by the patient's hands. The local treatment is usually rather unsuccessful. Curiously enough in this case, the administration of teaspoonful doses of fresh brewer's yeast caused amelioration, and rather prompt disappearance of all the lesions. This may have been merely coincidental. [J. S.]

7.—Stewart reports the case of a woman of 24, a nurse

by occupation, who after attending a patient with typhoid fever, took charge of one of tuberculosis of the lungs, that lived under very unfavorable hygienic conditions. She developed chills and fever, and enlargement of the spleen. There was no leukocytosis, no Widal reaction; the malarial organism could not be found in the blood, and a diagnosis of tuberculosis was therefore made by exclusion. The patient died after a prolonged illness as a result of progressive emaciation. Towards the end there were some symptoms of meningeal involvement. At the autopsy there was marked tuberculosis of the spleen, and recent acute miliary tuberculosis of the other organs. Stewart regards the case as one of primary splenic tuberculosis. [J. S.]

8.—Smith describes the heart of a turkey which was apparently duplex, consisting of two left auricles and a common right auricle, with parts containing two ventricles each. One of these was very much smaller than the other. Unfortunately the vascular system could not be studied. [J. S.]

VRATCH.

July 14, 1901. (Vol. XXII, No. 25).

1. On the Susceptibility of Domesticated Pigeons to Avian Tuberculosis. B. V. MURZAJEFF.
2. Vasiljeff's Method of Quantitative Determination of Albumin in Urine, and its Shortcomings. A. PH. DRZSEVETSKI.
3. On the Diagnosis of Renal Affections. N. A. MICHAILOFF.
4. A Contribution to the Study of Drug Eruptions. A Case of Diffuse Dermatitis Caused by the Inunction of Mercury (Behrend's Medicamentous Scarlatina). E. A. ARKIN.

1.—Murzajeff gives the following conclusions from a large number of experiments: 1. Domestic pigeons show the highest susceptibility to tuberculosis of fowls, less so to tuberculosis of pheasants, and are insusceptible to tuberculosis of parrots and other birds. 2. Experiments with cultures of tubercle bacilli, irrespective of their source, showed that the susceptibility of pigeons in general is not very great (25%), at all events less than that of guinea pigs. 3. Comparing the susceptibility to avian tuberculosis (25%) with that to human tuberculosis (24%), the difference is practically nil. 4. The virulence of Koch's bacillus is extremely inconstant, and so far we have no data by which we could judge of the possibility of increasing it. [A. R.]

2.—Drzsevetski performed a number of experiments with the view of verifying Vasiljeff's method of determining albumin volumetrically. This method, he claims, received no attention from the medical press, although published in 1896. (The method is given in *Simon's Clinical Diagnosis*. A. R.) By making comparative determinations gravimetrically as well as by the use of Vasiljeff's method, he found that the latter gives results far below those obtained by the former (error from 0.4 to 3 grms. per liter). In looking for the cause of the error, the author found that the fault lies not in the salicyl-sulphonic acid, which precipitates the albumin completely, but in the indicator. The true-yellow (echt-gelb) of commerce is not a pure product, and therefore does not give the characteristic reaction with the free acid after all the albumin has been precipitated. [A. R.]

3.—Michailoff reports two cases of renal disease in which phloridzin was employed for diagnostic purposes. In one there was a renal calculus in the right kidney. Subcutaneous injection of 1 c.c. of 0.5% solution of phloridzin in the gluteal region was made and the right ureter catheterized by means of Casper's instrument. Only 2 hours after the injection did a trace of glucose appear in the urine. In the urine from the left kidney glucose appeared 30 minutes after the injection of phloridzin. In the second case, one of a tumor of the left kidney, no glucose appeared in the urine from the left kidney after the injection of phloridzin, while in the urine from the right kidney glucose was found 1 hour later. In comparing phloridzin with methylene blue, the author remarks that the latter has been employed for some years past, and therefore more thoroughly studied, while the former has only been used since 1900, when it was first employed in Casper's clinic. Methylene blue is eliminated

very slowly, the reaction being evident up to the sixth day, while phloridzin disappears from the urine, normally, within 3 hours after the injection. [A. R.]

4.—Arkin reports the case of a man who showed a marked idiosyncrasy towards mercury. After the inoculation, during a course of specific treatment, he developed a high temperature, vomiting and erythema, the clinical picture closely resembling that of scarlet fever, except for the absence of the characteristic tongue and pharyngitis. The age of the patient was also against scarlet fever. Subsequent developments in the case showed it to be one of a dermatitis due to the mercury. The patient had no stomatitis or affection of the kidneys, the usual signs of mercurial poisoning. [A. R.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

July 2, 1901. (No. 27).

1. A Case of Severe Fragmentation of the Thorax, Terminating in Recovery. HEINEKE.
2. The Treatment of Syphilis by Injections. MAX STERN.
3. Casuistic Contribution to the Knowledge of the Ectogenic and Endogenic Intoxication According to Senator. TIPPEL.
4. Syphilitic Sciatica and Its Treatment. F. MENDEL.
5. A Case of Chronic Ileocecal Invagination. QUADFLIEG.
6. Constipation for 35 Days With Smooth Occlusion of the Intestine. P. OSTERMAIER.
7. A Case of Poisoning by Extract of Felix Max. W. GOTTHILF.
8. The Treatment of Chronic Chorea by Hypnotic Influence. SCHILLING.
9. Twenty-Seven Intra-Cranial Resections of the Trigeminal, and Their Results. F. KRAUSE.

1.—Heineke reports a very extraordinary case. The patient, a man of 39, fell while lifting a barrel weighing 180 lbs., and this rolled upon him. When he recovered consciousness there was severe dyspnea and the respiratory movements were exceedingly painful. The hand placed upon the thorax felt a rough grating, and a harsh crepitation could be heard a short distance from the side. The patient developed pneumonia, the heart grew very weak, and the prognosis appeared to be hopeless. But he gradually improved. On the 27th day of the disease a Röntgen picture was made of the thorax, and 29 fractures of the ribs discovered. These involved both sides, and many of the ribs were fractured in two places. Five and one half months after the accident, with the exception of a slight flattening of the right side, a thickening of the ribs posteriorly on the right side, and some pain on coughing the condition of the patient was very satisfactory. [J. S.]

2.—Stern does not agree with Neumann that relapses almost invariably occur within eight months after the treatment of syphilis with injections of corrosive sublimate. He is in the habit of using the following formula. Corrosive sublimate 1 part (2 parts for men). Boiling water 100 parts. To this is added sodium chloride 3 parts. The mixture is then again boiled and filtered. He reports several cases in which the patients, after the injections, recovered apparently permanently. Injections were always made with very careful antiseptic precautions. They are to be preferred to all other methods of treatment when there is any disease of the skin or the digestive organs that interferes with the administration of mercury in the usual way, and in cases of severe syphilis in which it is important to produce a very rapid effect, and where it is necessary to determine the diagnosis by therapeutic measures. They may also be used in cases where other therapeutic measures have failed, or where variation in treatment is desired. [J. S.]

3.—Tippel reports 2 interesting cases. The first, a woman, during the first puerperal period ate some spoiled liver sausage and had immediately severe pains, discoloration of the skin and vomiting. The stomach contents had a peculiar fatty gangrenous odor. This he regards as exogenous intoxication. In the second case, a child of 6, suddenly became unconscious. There was vigorous spasm of the sphincter ani, but repeated washing of the intestine brought forth a very fetid fluid material, after which the child was relieved. A few days later she was taken sick with measles, and the case is regarded as one of endogen-

ous intoxication, due to the presence of the poison of measles in the system. [J. S.]

4.—Mendel reports three interesting cases of sciatica. The first occurred in a man of 23, three years after infection. He developed severe pain in the left leg, and a tumor upon the right parietal bone which was somewhat elastic. The diagnosis was made of a gumma and syphilitic sciatica. Intra-muscular injections of mercury were made in the region of the sciatic nerve, and the patient rapidly recovered. The second case, a man of 52 had some wasting of the left leg and severe pain in the region of the sciatic nerve; there was also a syphilitic periostitis of the tibia. The same treatment produced rapid cure. The third case, a man of 34, also had severe pain in the left leg 10 years after infection. The treatment was again successful. Mendel calls attention to the frequency with which this form of sciatica occurs, and particularly to the rapidity with which it yields to treatment. The injections are very effective and are less liable to produce any disagreeable complications such as stomatitis. [J. S.]

5.—Quadflieg reports the following curious case. The patient, a man of 28, suddenly developed pain in the abdomen during sleep. On careful diet and treatment the pain disappeared, and in a short time the patient began to eat a full diet. The pains immediately reappeared, and there were signs of intestinal obstruction. These attacks occurred frequently and on each occasion the physician was able to determine the existence of a tumor in the abdomen. He finally decided to operate, and it was found that the ileum and the cecum had become invaginated into the transverse colon. Part could be replaced, but the rest required resection. The patient recovered without complications. This condition occurs most frequently in young persons. The symptoms are usually those of intestinal colic. The course is usually sub-acute or chronic. [J. S.]

6.—Ostermaier reports the case of a girl of 14 who had always suffered from chronic constipation. Finally one attack became very severe, and after eight days, vigorous treatment was employed. This had no effect. The patient gradually developed complete anorexia, and a huge tumor gradually appeared in the left iliac region, reaching to a point above the umbilicus. On the 25th day prolonged lavage of the colon was undertaken. Sixty litres of warm water was used on each occasion. Very profuse evacuations of the bowels occurred, the feces usually being very hard, and finally on the 35th day normal movements were secured. Altogether 1500 litres of warm water were employed. The apparatus consisted of an intestinal catheter of hard rubber, 12 cm. long, with a calibre of about 1 cm. The anterior end was olive-shaped, and had 2 openings each 2 cm. long and 1 cm. broad. The water was poured from a height of 1½ meters, through rubber tubing. A small piece of felt was pressed closely around the anus to prevent the re-flow of water. The duration of each lavage varied considerably. After about ¾ of an hour the colon was usually so distended with water and air that it apparently became paralyzed. [J. S.]

7.—Gotthilf reports the case of a man who had severe headache, then vomiting, and on the second day of the attack suddenly fell unconscious to the ground. When the physician reached his side the pulse was almost imperceptible, the heart sounds feeble, the pupils wide, and the reflexes greatly exaggerated. The patient gradually reacted to stimulation, the cramps disappeared, consciousness was restored, and it was then found that there was no paralysis. It was also discovered that just before the commencement of the attack the patient had taken a remedy for tapeworm. A portion of this was still obtainable and found to consist of the extract of male fern which had evidently produced the poisoning. [J. S.]

8.—Schilling reports a rather interesting case, which he believes indicates that the chorea of Sydenham is really a neurosis. The patient, a girl of 7 years, had been attacked with the disease at the age of 2 as a result of great excitement in the family. The disease showed considerable variation in intensity, always increasing whenever any excitement occurred. The girl was moderately well nourished and developed; there was no anemia; the movements involved particularly, the right side of the face and the left arm. As arsenic had previously been given with little effect, the patient was placed upon antipyrin, and on the first day was hypnotized. As a result of the latter procedure, for the antipyrin was soon discontinued, the patient rapidly improved. All the objective signs disap-

peared entirely, including a slight wasting of the muscles of the right side, and some sensory disturbances. Schilling warmly recommends this treatment in similar cases. [J. S.]

9.—Krause, in continuation of his article, reports the third case death as a result of resection of the trigeminus. The patient, a woman of 60, had the right Gasserian ganglion removed with preservation of the bone in the flap. She recovered rapidly and for 10 days the temperature was normal and the appetite very satisfactory. On the 11th day there were slight mental symptoms and a tendency to sleep, together with a slight elevation of temperature. The wound was opened and found to be entirely normal. However, the cerebrospinal fluid was apparently under considerable pressure. The condition continued to alternate between consciousness, and somnolence; the pulse became more rapid, and death occurred on the 29th day after the operation. No further symptoms of focal brain disease had appeared. Nothing was found in the brain to account for death. Krause also reports some other cases in which death occurred as a result of complications such as influenza or pneumonia. In discussing the operation he mentions several details in the after treatment; among these are the protection of the eye on the side of the operation, which can best be accomplished by washing thoroughly before the operation with boric acid, then protecting it with a watch glass, so that all pressure from bandages is avoided. He does not believe in sewing the lids together, and is not sure that atropine is necessary. Under these circumstances decubitus does not often occur. In one case in which the eye became affected it was cured in spite of the absence of the trophic influence of the trigeminus. The fact that the eye has previously been exposed to injury—as for example, in the case of a miller's wife—seems to make the prognosis somewhat graver. Injuries to other parts of the face, in the anesthetic region often lead to ulceration, but this seems to heal without any apparent difficulty. In a few cases severe mental symptoms occurred. In one, apparently hemorrhage into the right hemisphere had taken place. In conclusion Krause warns against performing the operation in those cases in which the neuralgia was the result of neurasthenia, or other nervous conditions. In one such case in which he permitted himself to be tempted into performing the operation, absolutely no benefit ensued as far as the cessation of complaints on the part of the patient was concerned. On the other hand, it had no bad effects. The paper is still unfinished. [J. S.]

July 9, 1901.

1. Septic Endocarditis. H. LENHARTZ.
2. The Economy of Albumen That can be Obtained by Alcohol. New Investigations Upon Human Metabolism. O. NEUMANN.
3. Rheumatism and Exanthema. BEHREND.
4. Is "Sana" a Really Valuable Substitute that does not Contain Tubercle Bacilli, for Butter?
A. MOELLER.
5. The Simplification and Cheapening of Aseptic Apparatus and Its Installation in Small Hospitals.
A. HAMMESFAHR.
6. The Technique of the Removal of Fish-Bones from the Throat. M. BREITUNG.
7. Maximal Thermometer for the Sterilization of the Dressings. C. STICH.
8. A New Syringe for Schleich's Anesthesia. HAMMER.
9. Twenty-seven Intra-Cranial Resections of the Trigemini and Their Results. F. KRAUSE.
10. The Seventieth Birthday of Wilhelm His.
W. SPALTHOLZ.

1.—Lenhartz discusses septic endocarditis, of which he has observed 38 cases, with rather chronic symptoms. He believes that all forms of septic endocarditis naturally fall into 2 groups. The first, in which the lesion is merely one of a number of manifestations of the septic process, and the second in which it dominates the whole course of the disease. Of his 38 cases of the latter type, 4 improved; one is still under treatment, and the remaining 33 died. They were, about equally divided between men and women; the majority of cases occurred in early adult life. The distribution of the lesions is rather interesting. The mitral valve was involved in 18 cases; the aortic in 11; the tricuspid in 4; the pulmonary in 2, and in 2 cases there

were aortic and mitral lesions, and in one other case aortic, mitral and tricuspid lesions, that is to say, in 18% of all cases the right heart was involved. In the more acute forms the course of the disease lasted from 4 days to 8 weeks. In the chronic, from 3 to 7 months. In 12 of the cases, valvular disease of the heart had existed previously. The causes of the infection were rather varied. In 7 cases it was injury to the urethra; in 5 cases it followed the puerperium; in 4 cases, specific urethritis; in 5 cases, croupous pneumonia; in 2 cases, sore throat; and in 2 cases disease of the gall bladder. He reports one case, apparently following gonococcus infection, in which complete cure occurred. He also observed a case in which the gonococcus was found post mortem. In an interesting case of endocarditis following pneumonia it was possible to obtain the pneumococci in pure culture from the blood every time it was examined, and the number of colonies increased very rapidly. In 28 of the cases careful bacteriological examination was made. During life the staphylococcus aureus was found 4 times, and the albus once, the lanceolatus 3 times, and the streptococcus 8 times. At the autopsy the staphylococcus aureus was found 3 times, the lanceolatus 3 times, the streptococcus twice, and the gonococcus once. In addition, in all cases in which specific microorganisms had been found in the blood during life, the same microorganisms were found in the body after death. In the chronic cases, bacteriological examinations of the blood were made every 14 days. As the case progressed it was observed that the colonies also increased. Several illustrative cases are given. He also calls attention to the fact that the streptococcus parvus, a particularly small variety, is found more frequently than the ordinary form; Litten, indeed, regards it as the cause of malignant rheumatic endocarditis. Lenhartz, however, does not believe this, because it is not found in rheumatic exudates, and would certainly be easily recognized if it were a causal factor in the production of rheumatism. With regard to the clinical manifestations of the condition, chills, which by many observers are considered a characteristic symptom, do not always occur. [J. S.]

2.—Neumann has performed the concluding series of experiments upon himself, in order to determine to what extent alcohol is capable of replacing nitrogen, or rather of preventing nitrogenous waste. After 40 days of total abstinence, during which he brought himself into a condition of nitrogenous equilibrium, he commenced to accustom himself to alcohol by taking at first very small quantities, which he gradually increased. Smaller quantities of alcohol had no effect upon the nitrogenous elimination. Larger quantities, however, that is, 500 grams or more per day, produced a considerable reduction in the amount of nitrogen excreted, and at the same time there was a very marked excess of nitrogen retained in the system. When the amount of fat in the diet was decreased, while the quantity of alcohol was continued, it was found that the nitrogenous balance was altered unfavorably, showing that fat is more valuable than alcohol in the metabolic processes. Finally the alcohol was discontinued, and an excessive quantity of fat administered, when the nitrogenous balance became again favorable. The figures are as follows: In the first period there was +.06; in the second period, in which small doses of alcohol were given, these figures gradually increased; in the third period in which 500 grms. and more of alcohol were taken the balance was +2.02; in the fourth period in which the fat was reduced the balance was —.21, and in the fifth period when the normal quantity of fat was restored and an additional quantity to replace the alcohol, the figures were 2.42. In conclusion Neumann calls attention to the work of Cloppatt, who has completely confirmed his results. [J. S.]

3.—Behrend records the case of a boy, 15 years of age, suffering from mitral regurgitation. He developed an erythematous eruption on various parts of the body, involving also the mucous membranes. He regards both processes as probably the result of a rheumatic intoxication. Also the case of a man suffering from exudative erythema, and at the same time swelling of the right wrist. The latter was apparently the result of an injury. Finally a third case of the same disease in which there was associated hemorrhagic eruption upon the legs, and the signs of mitral regurgitation—a condition that somewhat resembled purpura rheumatica. [J. S.]

4.—Moeller having found "sana," a mixture of suet and

almond oil, a very inadequate substitute for butter as regards its gastronomic qualities, was impelled to test the statements of its manufacturer regarding its absolute freedom from tubercle bacilli. He obtained 3 positive results in a series of cases, which was more than he obtained from natural butter. He therefore concludes, in view of similar results obtained by other observers, that sana is not free from tubercle bacilli. [J. S.]

5.—Hammesfahr suggests the following installation for operations. The operating room is to be arranged as follows: A cabinet with glass shelves, in the upper part the necessary instruments in the lower part the apparatus for producing anesthesia, and the non-sterilized material for bandages. A long table with a metal top contains a large sterilizer for the instruments, and a gas stove with three tops. Below it contains the sterilized and sterilizable bandaging material. In addition the room should contain an operating table, a steam sterilizer, and several small simple tables of iron for holding various utensils and objects. All the materials that are brought into contact with the work must be boiled just before the operation. Sponges and cat-gut should be discarded altogether and the latter can be replaced by celloidin threads. Ligatures should be employed as little as possible, crushing of the vessels by Peon's instrument being preferable. For the skin sutures a wire of aluminum bronze is most satisfactory. In all septic operations the hands must be protected with rubber gloves. [J. S.]

6.—Breitung reports the case of a fish-bone that penetrated one of the tonsils for a distance of 2 cm. It caused slight discomfort, but could not be detected by inspection. Careful palpation of the tonsil, however, enabled him to detect a slightly projecting end, and the bone was withdrawn with little difficulty. He considers palpation of the throat exceedingly important as a diagnostic measure. [J. S.]

7.—Stieh describes a small apparatus consisting of 2 small bulbs of glass united by a narrow opening in which a small stopper of an alloy with a fixed melting point is placed. A platinum wire runs through the bulbs and the alloy. The upper bulb is filled with water, and as soon as the temperature reaches a sufficient degree, the alloy melts and allows the water to flow into the lower bulb. It can then be determined whether the materials that are being sterilized have been heated to a sufficiently high temperature. [J. S.]

8.—Hammer has devised a small hypodermic syringe with an opening in the upper portion of the barrel. Through this opening, the syringe when the plunger is pulled out to its furthest extent, can be readily filled from a dropping bottle, and when the plunger is pushed in a little way it is again closed. This is of great advantage for the injection of various fluids, when greater quantities must be employed than can be contained in the barrel of an ordinary syringe. It is especially practical in the use of Schleich's method of producing local anesthesia. [J. S.]

9.—Krause, in the concluding portion of his article, gives the clinical histories of 27 cases. In regard to the results, these may be briefly summarized as follows:

1. Woman, 47, returned in 8 months.
2. Man, 62, slight return in a year; pain still bearable after 2 years.
3. Woman, 68, 7 years later slight paresthesia, but no pain.
4. Woman, 48, free until death, 17 months after operation.
5. Man, 55, no relapse after 7 years.
6. Man, 72, death on 6th day.
7. Woman, 70, no relapse after 7 years.
8. Woman, 47, no relapse on the side of operation after 6 years. Slight pain on left side.
9. Woman, 37, no relapse after 5½ years. Slight pain on other side.
10. Woman, 67, no relapse.
11. Woman, 45.
12. Woman, 46, hysterical relapse in one year.
13. Man, 42, no relapse until death in 3 years.
14. Woman, 71.
15. Man, 54, no relapse after 3 years.
16. Man, 30, no relapse after 3 years.
17. Woman, 55, no relapse after 2½ years.
18. Woman, 41, no relapse after 2 years, slight attack of pain on left side.

19. Man, 63.
20. Woman, 59.
21. Woman, 44, no relapse in 7 months.
22. Woman, 58, death 6 years after operation.
23. Woman, 30, no relapse after 7 months.
24. Man, 46, no relapse after 10 months.
25. Woman, 50, no relapse after 7 months.
26. Woman, 65, recent case; so far favorable.
27. Woman, 60, recent case; so far favorable.

In an appendix 2 additional cases are reported, both operated upon in June of this year. Neither case was complicated. [J. S.]

VIRCHOW'S ARCHIV FUER PATHOLOGISCHE ANATOMIE.

(Band 163. Heft 2).

13. Mechanical Disturbances of the Growth of Bone. H. MAASS.
14. Adhesive Glomerulitis. H. ENGEL.
15. Contribution to the Casuistry and Etiology of the Degenerative Defects of the Tibia, in Connection with Some Other Deformities. F. STEINHAUS.
16. Contribution to the Knowledge of the True Muscle Tumors of the Testicle. PH. BECKER.
17. The Destruction of the Hyaline, Joint and Epiphyseal Cartilage in Tuberculosis and Suppuration, Especially the Immigration of Leukocytes that Occurs in Connection with it. HEILE.
18. Experiments upon the Inflammation of Bones. KURPJUWEIT.
19. Contribution to the Comparative Morphology of Leukocytes. GRUENBERG.
20. The So-Called White Spots on the Anterior Leaflet of the Mitral Valve. N. BEITZKE.
21. Brief Communications. Glomerulo-Nephritis in Abdominal Typhus. HOWLAND.

13.—Maass has performed a number of experiments in order to determine the degree to which pressure and tension influence the growth of the bones. For this purpose he selected rabbits, and forced the limbs to grow in an abnormal manner by enclosing them in plaster casts. These were left in position for from 4 to 6 weeks, the animal then killed, and the bones examined. He found that in no case did either hypertrophy or atrophy of the bones occur. A normal tendency to growth was manifested, but the growth occurred in the directions of least resistance. All the changes discovered were readily explained as the results of purely mechanical action. In view of these results he has studied human skeletons that have suffered rachitic alterations in the bones, and he reaches the conclusion that these alterations are also due to mechanical influences interfering with their normal growth and development, such as external agencies, and, particularly in rachitis, an insufficient supply of material necessary for the bone construction. [J. S.]

14.—Engel has studied 5 cases of adhesive glomerulitis, in which he has observed the following interesting results: Cellular infiltration in the capsule is due to epithelial proliferation. It usually assumes the characteristic glandular structure. The source of the proliferation of the connective tissue is difficult to determine. It does not seem to arise from the connective tissue of the capsule itself, but seems to be the result of conversion of the fibrinous exudate of the early stages into true fibrous connective tissue, and is therefore to be regarded as secondary. Whether the glomerulitis is a primary inflammation of the vascular apparatus, or of the epithelial tissue is still an open question, but from the fact that one of the primary changes is a fibrinous exudate in the capsule, and that there is a fibrinous degeneration of the capsular epithelium, there is reason to believe that it is primarily epithelial. [J. S.]

15.—Steinhaus has carefully studied a 5 months' fetus which showed the following deformities: The right forearm was considerably shortened, and attached to the upper arm by a firm web. The forearm contains only one bone, corresponding to the ulnar, which is considerably thickened. The lower end of the humerus is also modified and the olecranon is absent. The thighs are of equal length; the tibiae are entirely rudimentary, and represented only by a small cartilaginous mass. The feet are in an extreme varus position. There is typical rachischisis.

Steinhaus believes that we must consider that the deformities occurred very early in the course of the case, and that they are due to intrauterine pressure. This is rendered more likely by the deformity in the right arm and the presence of rachischisis. [J. L.]

16.—Hecker describes a **paratesticular tumor** which consisted essentially of a mass of nonstriated muscular fibres, very irregularly arranged. He discusses the **liomyomata** of the testicle hitherto described in literature, and reaches the conclusion, that, in some of these cases at least, the process is inflammatory, and characterized by a proliferation of the smooth muscle fibres. The fact that there was extreme proliferation of the blood vessels leads him to suspect that this is not a true tumor formation, especially as the patient had chronic epididymitis. Certain arguments appear to be in favor of the existence of a tumor; it was bilateral, situated at the lower end of the *cavum vaginale* at the left of the vesicle, and the absence of inflammatory processes in the tumor itself. [J. S.]

17.—Hello has studied a number of cases of various forms of **tuberculosis of the joints**. Many of these were studied by serial microscopical sections. He reaches the following conclusions: That beginning inflammation causes increased activity in the growth of the cartilage; more severe inflammation causes destruction of the cartilage, either as a result of injury, contact with the inflammatory focus, or by the immigration of cellular elements. The active agent in the destruction of the cartilage is probably the toxin. The cartilaginous cells and the intracellular substances only act as a result of their disintegration and degenerative proliferation. No transformation of cartilaginous cells into other forms can occur. [J. S.]

18.—Kürpjuweit has performed a number of experiments upon the bones of rats and rabbits, which consist in exposing the bone and irritating it with the cautery or nitrate of silver. After periods the animals are killed and the bones examined. The results show that first there is necrosis, then an active and reactive inflammation with enlargement and proliferation of the cells of the bones, and sometimes these unite, giving rise to cells with 2 and 3 nuclei. After 5 or 6 days there is an active proliferation of tissue and Haversian canals, and the formation of giant cells. The granulation tissue seems to absorb the surrounding bone, and sometimes the cavities open into larger normal cavities. Finally new formation of bone occurs, extending from the medullary cavity. [J. S.]

19.—Grünberg has examined the blood of numerous animals in order to determine the characteristics of the leukocytes found in each. We give the separate results briefly.

FISH.

1. *Scyllium Catulus*:

- (1) Small and large leukocytes with large nucleus, sometimes with, sometimes without, acidophilic granules.
- (2) Large leukocytes with simple, medium-sized nucleus, with or without acidophilic granules.
- (3) Similar leukocytes with irregular and fragmented nucleus and acidophilic granules.
- (4) Multinuclear leukocytes, with granules.
- (5) Degenerated cells. The granules varied in shape in the different cells.

2. *Sirenon Pisciformis*:

- (1) Small leukocytes with large nucleus; without granules.
- (2) Mast cells with 2 nuclei and eosinophilic granules.
- (3) Large leukocytes with medium small fragmented nuclei, without granules.
- (4) Mononuclear leukocytes of various sizes with eosinophilic granules.

AMPHIBIA.

3. *Triton Cristatus*:

- (1) Small mononuclear leukocytes, with large nuclei. Without granules.
- (2) Mononuclear mast cells with basophilic granules.
- (3) Large mononuclear transitional cells, without granules.
- (4) Large leukocytes with fragmented or multiple nuclei, with and without eosinophilic granules.

4. *Rana Temporaria*:

- (1) Mononuclear leukocytes with large nuclei, without granules.

- (2) Mononuclear mast cells with basophilic granules.
- (3) Large mononuclear transitional cells, without granules.
- (4) Mononuclear cells, without granules.

SNAKES.

5. *Lacerta Muralis*:

- (1) Small mononuclear leukocytes without granules.
- (2) Mast cells with one nucleus and basophilic granules.
- (3) Large mononuclear leukocytes and transitional cells without granules.
- (4) Large leukocytes with fragmented or with crystalline and eosinophilic granules.

6. *Typhis Fragilis*:

- (1) Small and large mononuclear leukocytes with very large nuclei and small cell bodies. Without granules.
- (2) Mononuclear leukocytes, with eosinophilic granules.
- (3) Large leukocytes with one or two nuclei; sometimes with, sometimes without, neutrophilic granules.
- (4) Very large mononuclear leukocytes with eosinophilic granules.

7. *Tropidonotus Natrix*:

- (1) Small leukocytes with large nuclei, without granules.
- (2) Mononuclear mast cells with basophilic granules.
- (3) Large mononuclear leukocytes with relatively large nuclei, with or without minute neutrophilic granules.
- (4) Large leukocytes with small nuclei and eosinophilic granules.

8. *Chicken*:

- (1) Small leukocytes with large nuclei, without granules.
- (2) Mast cells with basophilic granules.
- (3) Large leukocytes with large nuclei, without granules.
- (4) Large leukocytes with fragmented or multiple nuclei, and eosinophilic granules.

9. *Sparrow*:

- (1) Small leukocytes with large nuclei, without granules.
- (2) Leukocytes with multiple mast cells, with granules.
- (3) Transitional forms with large round nucleus and without granules.
- (4) Large leukocytes with fragmented or multiple nuclei, and with eosinophilic granules, either crystalline, round, or angular.

In considering these results Grünberg notes that leukocytes with large nucleus and small body are invariably present. They correspond probably to the lymphocytes of the human blood. The transitional forms, and polymorphonuclear cells are also almost invariably present. Cells with multiple nuclei are found in all forms excepting one of the snakes. Cells with true spindle-formed nuclei are exceedingly rare, having been found in only one of the fishes. True basophilic granules are never found. The Gamma granules of the mast cells are, of course, frequently present. Neutrophilic granules are only found among the snakes. The acidophilic granules vary considerably in form, and in their reaction to the various acid stains. It is interesting to note that in one of the fish acidophilic granules were found in the lymphocytes—a hitherto undescribed phenomenon. [J. S.]

20.—Beitzke has found the small spots in the anterior mitral leaflet in 51 out of 72 hearts, and in cases as young as 6 months of age. They always occur upon the ventricular side of the leaflet, at the point of junction of the ventricular wall with the septum. They are usually round, oval or irregular. Occasionally they send projections towards the end of the valve. They apparently never occur in the small leaflet. They are hard, sometimes calcified, resist acids and alkalis, stain black with osmic acid, and often contain calcium salts. Microscopically they show some degeneration of connective tissue fibres, no marked change in the elastic fibres, and in the fresh cases some prolifera-

tion of the cells. The cause appears to be chiefly mechanical injuries due to the situation of the leadlet, and in the majority of cases some alteration in the heart itself. [J. S.]

THE SCOTTISH MEDICAL AND SURGICAL.

August, 1901. (Vol. IX, No. 2).

1. Presidential Address on Modern Advances in the Treatment of the Insane. J. G. HAVELOCK.
2. Clinical Lectures on a Case of Heart Disease and Its Treatment. ALEXANDER JAMES.
3. Notes on Five Years' Medical Work in Lower Bengal. MARY H. SIMSON.
4. Discussion on Alcohol. PROFESSORS WOODHEAD and T. R. FRASER; DRs. CLOUSTON, AFFLECK, W. LESLIE MACKENZIE, JAMES RITCHIE, P. A. YOUNG, FOULIS, WELSH, CHURCH, KERR, BALLANTYNE.

2.—A. James in his article on a Clinical Lecture on a Case of Heart Disease, gives his experience in the use of digitalis and strophanthus: (1) In the compensation failure of aortic regurgitation, and arterial sclerosis and chronic Bright's disease, he usually begins with strophanthus; but if this does not seem to be having a distinctly good effect, he has no hesitation in turning to digitalis. In either case he ordinarily combines those drugs with liq. trinitrinae, or potassium iodide, as being likely to ward off high tension effects. In other valvular lesions and in fatty heart cases, he begins with digitalis; but he has no hesitation in changing to strophanthus, if the effects of digitalis are not satisfactory; (2) When the valve lesion has been due to acute endocarditic processes, he inclines to digitalis; when, on the other hand, it has been due to slow atheromatous changes, he inclines to strophanthus. As a rule, therefore, he begins with digitalis in the young, with strophanthus in the old; (3) When with symptoms of compensation failure the heart's action is rapid, he inclines to digitalis; when it is not rapid or slow, he inclines to strophanthus. Two questions may be asked—first, how long may those drugs be continued; and, second, how do we know if the patient is getting an over-dose? First, as to how long they may be continued with advantage. Here must be remembered the common but rather unphilosophical assertion, that digitalis is cumulative and strophanthus is not. Beyond observing that in nature, with all poisons, as with all nerve irritants, a somewhat cumulative or summing effect can be discerned, the author does not further refer to the pros and cons of this assertion as regards digitalis, because in the doses, in which we employ it for prolonged periods, the risks of any evil cumulative effect are slight. Balfour states that half a liquid ounce of the infusion, or ten minims of the tincture, may be safely administered to an adult every twelve hours without fear of cumulative action, and there is no doubt that patients have taken doses for months, or even years, with advantage, and similarly with strophanthus in corresponding doses. It is, of course, different when large doses are being employed, as, for example, when for a few days, in an urgent heart case, fifteen or twenty minims of the digitalis tincture are given every few hours. This leads, however, to the other question, viz., how do we know if the patient is getting too much of the drug? The main indications of this are believed to be diminution in the quantity of urine, increasing rapidity and irregularity of the pulse, sickness and nausea. [T. M. T.]

WIENER KLINISCHE WOCHENSCHRIFT

July 11, 1901. (XIV Jahrgang, No. 28).

1. Lightning Stroke and Electrical High Tension. S. JELIANEK.
2. The Results of Migraine. MORIZ INFELD.
3. Therapeutic Notes. KONRAD STICHL.
 - 1.—Will be abstracted when concluded.
 - 2.—Infeld reports the case of a woman of 29, who had severe headache since her twelfth year with menstruation, pregnancy, excitement, etc. They begin in the tem-

ples, and as they increase in severity, they move toward the occiput. The attacks last a day, and show no aura, vomiting or other prodromal symptoms. Her mother and sister have migraine. She has borne five children. Right-sided hemiplegia came on suddenly in one of these attacks, but she recovered complete use of the side in two weeks. A month after the hemiplegia, cramps developed in the muscles of the right arm, with exacerbations, ceasing only during sleep. Since this, the headache has appeared less, and the attacks are much less severe. Now the cramps in the arm have disappeared, and the attacks of migraine have returned with all their former severity. Infeld explains the occurrence of the hemiplegia as the effect of thrombosis in the left optic thalamus, near the posterior portion of the internal capsule, due to increased hyperemia and pressure during the attack of migraine. [M. O.]

3.—Stich reports that all cat-gut and silk employed in the Leipzig Surgical Clinic is tested. The diameter, number, and strength are ascertained with the raw thread, the sterilized thread and the sterilized, knotted thread. He explains the preparation of adhesive plaster in strips for surgical dressings and for keeping in hospitals. Finally he describes two maximum thermometers for controlling sterilization, one hour-glass shaped, the other of glass tubes, each of which contains the alloy which melts at the sterilizing temperature. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

June 27, 1901. (Vol. XII, No. 26).

1. The Stimuli to the Secretion of the Intestinal Ferment. V. SAVITCH.
2. On the Passage of the Gastric Contents into the Intestine. S. I. LINTVAREFF.
3. The Connection Between Diabetes Mellitus and Insipidus and the Female Generative Organs and Pregnancy. K. K. SCROBANSKI.

1.—Savitch, working under the direction of Prof. Pavloff, observed the conditions which determine the accumulation in the intestine of the ferment described about 1½ years ago by Sehepovalski. This ferment has no action on albumins or fats, its only function being to convert the ferments of the pancreatic juice from an inactive into an active state. The author found that the secretion of this ferment is excited by the pancreatic juice. [A. R.]

2.—Lintvareff found by a series of experiments on dogs that the presence of fat or fat containing substances in the duodenum closes by reflex action the pyloric sphincter for a period varying from 1 to 2½ hours. If the fat is introduced into the stomach it remains indifferent as long as it is there, but begins to exert its inhibitory influence as soon as it enters the duodenum. The rationale of this inhibition is explained as follows: The duodenum permits the passage from the stomach only of as much food as it can digest. The presence of fat, therefore, by subjecting the duodenum to an extra strain, requires that no more food enter as long as the fat is being digested. [A. R.]

3.—Scrobanski draws the following conclusions from an analysis of his own case as well as a number of others recorded in the literature: (1) Diabetes insipidus may in some cases progress without affecting the female generative organs. The patient may become pregnant several times during the course of the disease and be delivered at term of healthy children. (2) In the majority of cases pregnancy acts unfavorably on the diabetes insipidus, which may disappear or become considerably improved after the termination of the pregnancy. (3) Frequently, the diabetes of the pregnant does not become ameliorated after delivery. The thirst and the quantity of urine, which diminish during the first few days of the puerperium, rise again, the general condition of the patient becomes worse and she may die from tuberculosis or other complications. (4) Like diabetes mellitus, diabetes insipidus in the pregnant may appear only during pregnancy and disappear after delivery without leaving a trace. The effect of diabetes insipidus on the generative organs of the non-pregnant woman is not well established. The organs may either become atrophied or, if the disease appears during the period of development, the latter may be retarded. On the other hand, normally functioning organs are frequently met with. The fate of the fetus is also uncertain. Generally, the woman carries to term and is delivered of a healthy child, but the pregnancy may be

interrupted, this taking place, as a rule, during the second half of gestation. If the woman gives birth at term to a healthy child, she may nurse it herself, inasmuch as the quantity and quality of the milk are not affected in diabetes insipidus. [A. It.]

JOURNAL DES PRATICIENS.

July 20, 1901. (15me. Annee, No. 29.)

1. The Diagnosis of Scarlet Fever. G. VARIOT.
2. The Treatment of Puerperal Infection. P. HUDIN.
3. Mushroom Poisoning. V. GILLOT.
4. The Galvanic Current in the Treatment of Blenorrrhagic Arthritis. LOUIS DELHERM.

1.—In scarlet fever the period of invasion is short, the rash rapidly following the angina and the fever. There may be vomiting, vague pains in the limbs, and dysphagia, at first, with high fever. There is always some pharyngitis. But the diagnosis is only made when the rash appears. If any contagion from other cases of scarlet fever is suspected, the child should at once be isolated, even before any eruption develops. But when the eruption joins the angina and fever in 24 to 36 hours, the diagnosis is positive. The rash is first seen in the groin, on the abdomen, thighs, chest, and axillae. In 12 hours the entire body is covered with a confluent erythema, distinctly punctiform in character. The eruption may be counterfeited by various drug rashes, and by a rash which sometimes follows the injection of antitoxin. Malignant scarlatina is rare, difficult to diagnose, and more difficult to treat successfully. [M. O.]

2.—When the diagnosis of puerperal infection is certain, digital curettement should be practiced, one hand in the vagina, the index finger in the uterus, the other hand holding the uterus through the abdominal wall. In this manner, all causes of infection should be removed. An injection of bichloride (1-4000) is then given. Instrumental curettement follows, and a solution of creosote in glycerin (1-4) is applied finally, vaginal irrigation completing the treatment. If much hemorrhage occurs, tampons are left in the vagina and uterus. 12 or 18 hours later, another bichloride injection is given. These procedures should also be carried out whenever there exists a suspicion that puerperal infection might develop. [M. O.]

3.—Gillot reports the histories of poisoning by different mushrooms. In one family four people died from eating the *amanita phalloides*, and five others were very ill; in the other, six persons were made ill by the *amanita muscaria*, but all recovered. These poisonous mushrooms much resemble edible varieties. [M. O.]

4.—Delherm reports 12 cases of blenorrrhagic joint trouble, treated during the acute inflammatory, febrile stage with galvanism. Two cases of arthralgia were cured in from one to two applications; three hydrarthroses, in from two to four applications; an arthritis in a small joint, in one sitting; four cases of moderately severe arthritis in from 6 to 14 applications; and three cases of severe arthritis, of the elbow, knee, and back of the hand, respectively, in two, three and many sittings. This electrical treatment should be begun early; and there are no contra-indications to its use. [M. O.]

ARCHIVES DE MEDECINE DES ENFANTS.

August, 1901. (Volume IV, No. 8.)

1. Acute Primary Pharyngeal Tonsillitis. E. AUSSET and DORION.
2. An Infantile Family Disease. LUIS MORQUIO.
3. The Reduction of the Deformity in Pott's Disease. P. REDARD and P. BEZANCON.
4. A Case of Infantile Scurvy. JULES COMBY.

1.—Ausset and Dorion report 19 cases of acute primary inflammation of the normal pharyngeal tonsil, leaving out those cases with developed adenoids, in which the condition is generally recognized. But it is a fact not universally known that the pharyngeal tonsil can become inflamed, without hypertrophy, just as the palatine tonsils do. Hypertrophied or not, this inflammation has been called adenoiditis. It occurs with most infectious diseases,

and, when it persists, forms adenoids. Or it may be a purely local condition, due to the different septic cocci. Cold is the usual predisposing cause. Its onset is sudden, first a slight coryza appearing, followed by fever and constitutional symptoms. These vary in severity. There is always some dry cough, followed by snoring and mouth breathing. The voice changes and earache develops (noted in eleven out of the nineteen cases), but without otitis media. The cervical glands enlarge, as a rule. Examination with the mirror or the finger confirms the diagnosis. Generally it runs an acute course, with spontaneous recovery in three or four days, or adenoids follow, especially after several attacks of pharyngeal tonsillitis. Antiseptics and menthol are the only drugs used. Ausset and Dorion consider the condition common. [M. O.]

2.—Morquio reports a rare symptom-complex seen in two brothers, aged 8 and 5 years, whose three brothers had died at 8 and 10 years of age, with identical symptoms. In the family history nothing of interest was discovered except that an aunt had had convulsions, and died insane. The eldest brother, aged 17, had never been ill, and the youngest, a child of 2, is also well. In both boys convulsive attacks appeared at four years, as many as five in a day, with or without unconsciousness, generally caused by some emotion, and followed by headache. There was arrhythmia, with an irregular, unequal pulse. The attacks were epileptic and syncopal in character. The elder boy died with influenza. The autopsy showed a persistent hypertrophied thymus, dilatation of the right ventricle and some congestion of the liver and spleen. The other organs were normal. The disease shows the syndrome of Stokes-Adams. Morquio believes the cause of this odd disease is some alteration of the cardio-bulbar centres, with congenital malformation or hereditary weakness. The absence of all lesions tends to confirm this theory. [M. O.]

3.—Redaud and Bezancon describe their routine treatment, by slow forcible extension, of the spinal deformity in Pott's disease. In cases which have existed only a few months the whole deformity disappears in one treatment of from ten to fifteen minutes. Cotton is placed over the reduced deformity and a plaster jacket applied. The child is then left lying on its abdomen, out of doors, as much as possible. As a rule, the deformity should be reduced before it has existed eighteen months. After two years it should be left alone. The results are excellent in Pott's disease of the dorsal and lumbar vertebrae. Of their 60 cases, 14 are well, 29 are pretty well, 12 have paraplegia, abscess or tuberculosis elsewhere, and 3 or 4 have died. [M. O.]

4.—Comby reports a case of infantile scurvy in a child of 11 months, fed upon "lait maternisé." Gaertner's milk, made from cow's milk by removing the casein by precipitation. This boy showed purpura, gingival fungosities and hemorrhage, and multiple subperiosteal hematomas. He was very thin, anemic, and weak. Upon fresh milk, orange juice and mashed potatoes he recovered rapidly. Comby states that of the eleven cases of infantile scurvy published in France, the condition was due to "lait maternisé" in eight cases. [M. O.]

KORRESPONDENZ-BLATT FUER SCHWEIZER AERZTE.

September 1, 1901. Jahr. XXXI, No. 17.

1. A Further Case of Puerperal Gangrene of the Foot. E. WORMSER.
2. The Mechanical Reduction of Bodily Temperature. ERNI.
3. A Contribution to the History of the Treatment of Clubfoot. E. HAGENBACH-BURCKHARDT.

1.—Wormser reports another case of puerperal gangrene of the foot, in which three weeks before parturition a prepatellar bursitis had developed. Pus was found to be present and the fever considerable. In this condition the woman, who was thirty-four years of age and in her sixth pregnancy, was brought into the hospital with two fistulous openings in the knee. She was delivered on the same day and examined but once internally under the precautions of a sterile rubber glove. Bronchitis and diarrhea then set in. Three days after delivery a large foul-smelling clot was removed from the uterus, followed by intrauterine irrigation. The prepatellar abscess was incised and evacuated, quickly healing. The temperature again began to rise and more putrid clots were removed. The uterus was curetted. On the twelfth day after delivery

gangrene began on the left foot, which became more marked on the following day. Death occurred two and one half days later, no time being left for the time of demarcation to set in. The autopsy confirmed the clinical diagnosis of general septicemia due to streptococci, as ascertained by the chill, fever, pulse, articular involvement and the bacteriological findings in the lochia. The postmortem diagnosis of gangrene was based upon thrombosis of various venous radicles in the affected area, there being no involvement of the arterial system, in addition there was found a suppurative of the symphysis. The author unfortunately omitted to examine the pus in the prepatellar abscess, and can therefore not state with certainty whether the streptococci found in the endometrium which were responsible for the general infection originally came from the prepatellar abscess. The patient stated emphatically that she had not been examined outside, and she was but once examined during her labor and that with the aid of a sterile glove. The author states that the gangrene can take place in one of three ways; either by interruption of the venous and articular circulation or by both. The latter is the most common and was present in the first case the author reports; rarer, however is the pure arterial involvement and the rarest of all, the exclusive participation of the venous system as was present in this case. [M. R. D.]

3.—The author refers to **Streckeisen**, who in 1868 was physician at the Childrens' Hospital of Basel. Notwithstanding the author has failed to find this name mentioned in relation to clubfoot within the last thirty years. But later Dr Fritz Miescher, who afterwards became Professor of Physiology, and Dr. Albert Burchardt published in conjunction with Prof. K. Rudmeyer, with the drawings of a skeleton of a clubfoot, the treatise entitled "Notes Concerning the Structure and Treatment of Clubfoot as Taken from the Drawings left by Prof. Streckeisen," and which may be found in the *Jahrbuch für Kinderheilkunde*, Bd. II. [M. R. D.]

PRESSE MEDICALE.

July 24, 1901. (No. 59).

I. Massive Globulinuria.

A. CHAUFFARD and F. X. GOURAUD.

2. The Treatment of Foreign Bodies in the Urethra.

II. HARTMANN.

1.—**Chauffard and Gouraud** report a **unique case of massive globulinuria** in a woman of 29. She had always been delicate, yet never very ill. While always complaining, she has during the past two months noticed slight headache, cramps in her legs, troubles of vision at times, but no other signs of Bright's disease. She weighed about 90 pounds, was very nervous, but only slightly hysterical. She was constipated and had no appetite. A few rales were heard over both lungs, and the arterial tension was much lowered. Her urine was clear and without sediment. Nitric acid and heat showed quantities of albumen at once. But when 5 or 6 drops of acetic acid were added, the urine became a mass of yellow, transparent jelly. It could be inverted without losing a drop of liquid. On milk and arterial tension increased, as did the quantity of urine passed. The urine, chemically examined, showed deficient chlorides. The amount of albumen, at first 50 g. to the liter, rapidly diminished. Cryoscopy, the absence of casts and the low arterial tension show that there was renal insufficiency due to circulatory stasis. From a series of tests they concluded that the albumen found was pure globulin. Its excessive solubility in acetic acid was probably due to the small quantity of chlorides in the urine. That a jelly was formed by the acetic acid and the globulin was due to the immense amount of albumen, to its being all globulin, and to its incomplete solubility in the acetic acid on account of the great amount of globulin present. As the globulin decreased in quantity, the urine failed to jelly. That there was no nephritis is plain. Examination of the blood showed that it was normal. They conclude that this patient had **hyperglobulinemia**, a disease of the blood plasma, with a pathologic deviation from the normal equilibrium of the albumen of the circulation. The symptoms of the condition are globulinuria, hydrochloruria, and arterial hypotension. She was quite well in two weeks. [M. O.]

2.—The treatment of foreign bodies in the urethra depends upon the nature of the foreign body. When certain

that a foreign body exists in the urethra, there are two ways of removing it, through the urethra, or by urethral section. Often by closing the meatus and having the patient urinate, a calculus will be moved. A pin may be treated by performing version, the head being expressed first, or instruments may be introduced to catch the foreign body and remove it through the incision. This should be done and remove it. Finally, when all other methods fail, cut down upon the foreign body and remove it through the incision. This should then be closed again by sutures.

JOURNAL DE MEDECINE DE BORDEAUX.

July 21, 1901. (31me. Année, No. 29.)

1. Lumbar Puncture. JEAN ABADIE.

2. Alterations in the Blood due to the Bites of Venomous Serpents. R. AUCHE and L. VAILLANT.

3. The Treatment of Cataract. BADAL.

4. Facial Paralysis of Dental Origin. H. RODIER.

1.—**Quinke** first performed lumbar puncture in 1890. **Abadie** describes the technique now carried out by **Tuffier** as the best method. He also relates the accidents which may occur with or after lumbar puncture, not as a rule serious. Only small quantities of cerebrospinal fluid should be withdrawn, and that should be allowed to flow slowly. Lumbar puncture is indicated in congenital hydrocephalus, brain tumor with pressure symptoms, meningitis, etc. As a therapeutic measure it has remained worthless, so far as regards recovery. As a palliative proceeding it is very useful. Headache, epilepsy, cerebral tumor, chorea, etc., have all been improved temporarily by it. Lately lumbar puncture has been supplemented by the injection of drugs, especially to produce anesthesia. [M. O.]

2.—From their experiments, **Auché** and **Vallant** conclude that the bites of venomous serpents have the same effect upon the blood as the injection of extract of dried venom. The red corpuscles are destroyed in great numbers, and there is marked leukocytosis, with increase of the polynuclear leukocytes and diminution of the lymphocytes. [M. O.]

3.—**Badal** reports three cases of cataract treated by iodide of potassium and sodium washes. These are applied in a cup for a few minutes, with the eyelids wide open, twice a day. By this treatment he has never seen a cataract disappear, but it fails to progress further and remains stationary. The case-histories follow. [M. O.]

4.—**Rodier** reports a case of facial paralysis in a woman of 23, occurring the day after an alveolar abscess. Neuritis of the trigeminal developed and was transmitted to the facial by its recurrent fibers. The cause was dental caries, and the whole condition disappeared when the tooth in question was extracted. [M. O.]

CENTRALBLATT FUER CHIRURGIE.

July 13, 1901. (28 Jahrgang, No. 28.)

1. The Technique of the Operation for Appendicitis.

SPRENGEL.

1.—**Sprengel** raises the pelvis before operating, and makes his incision along the outer edge of the right rectus muscle. Tampons are then introduced to guard the abdominal and pelvic cavities, and the abscess is opened, with removal of the pus. Should the tampon be soiled by the pus, another is introduced. No irrigation is used unless peritonitis exists. The tampons are removed and the incision is partially closed with silk sutures. Drainage is left in. **Sprengel** wears gloves when he operates during an attack of appendicitis. Since his last report he has operated upon 29 cases, 7 in the interval between attacks, 9 in the first forty-eight hours, with no deaths, and 13 later with four deaths. [M. O.]

Two Cases of Laryngofissure.—In the *Journal des Sciences Médicales de Lille*, (June 22, 1901), Dr. H. Lavynd reports two cases in which laryngofissure was performed. In the first case, a man of 48, with a cancerous ulceration of the larynx, laryngofissure was done with removal of the tumor, a few days after a preliminary tracheotomy. The patient recovered, but a few months later the tumor recurred. Total laryngectomy was then performed, followed by death a week later from broncho-pneumonia. In the second case, a man of 54, with a papillomatous polyp of the larynx, laryngofissure was performed without preliminary tracheotomy, and the tumor removed. He recovered, and his voice again became normal, after employing faradic electricity for the vocal cords. [M. O.]

Society Reports.

MEETING OF THE NEW YORK MEDICAL ASSOCIATION.

The New York Medical Association held its annual meeting in the Academy of Medicine, New York City, October 21, 22, 23, 24, 1901, the first day's sessions being devoted to routine business of an unscientific character.

The regular scientific business of the Association began with the morning session of Tuesday, October 22, 1901.

TUESDAY, OCTOBER 22—A. M. SESSION.

The Association was called to order at 10 A. M., by the President, Dr. John A. Wyeth.

Dr. Irving S. Haynes, Chairman of the Committee of Arrangements, delivered the address of welcome. He said that it afforded him much pleasure to welcome the members of the Association; that the benefits to be derived from the meeting were not only of a scientific nature, but also of a social one, and that he trusted that each would endeavor to promote the feeling of fellowship by being cordial to others. In preparing the program, he had, after consulting with the officers, asked men who had not been on former programs, in order to have all represented. He also had departed from the usual custom and invited the physicians' wives to the annual dinner. He expressed his thanks for the hearty co-operation of all the members in making the arrangements.

The first contribution to the morning's session was that by Dr. Wisner R. Townsend, New York City, entitled, *The Correction of Deformities Following Osteitis of the Knee*. Osteitis of the knee, involving the lower end of the femur or the upper end of the tibia, or both, with or without destruction of the joint, is followed in about 50% of cases by deformity. This should and could be prevented by proper treatment. How to prevent this has been much discussed by surgeons. The author's views do not differ from those of the majority of surgeons, and may be found in an article on "Tuberculosis of the Knee-joint" published in the *Journal of the American Medical Association*, January 12, 1901. The amount of motion following treatment varies. Results as given by Giboney in 300 cases were as follows: 40 died, 14 were excised, 4 were amputated and the remaining 242 were traced. It was found that under the best conditions 95% recovered with motion; under less favorable conditions only 60% recovered with motion. Deformities may be classified under 2 heads: (1) Sub-luxation; (2) All other deformities, which include flexion, bow legs, knock knee, twisting, rotation and anterior displacement of the tibia. The writer advocated osteotomy for correction of all these deformities, and he showed by photographs of cases that even where the angle made by the junction of the upper and the lower leg was 90 deg., it was possible by an osteotomy above the condyles of the femur to make a straight limb. In his opinion excision in these cases was rarely indicated, for the dangers of osteotomy were less, the healing more rapid, there was less sacrifice of tissue, and less danger of starting up new inflammatory processes.

Echinococcus Disease in North America.—Dr. Irving P. Lyon, Buffalo. (Read by title).

Appendix Fistula, John B. Deaver, Philadelphia. Published in full in this issue of the Philadelphia Medical Journal.

TUESDAY, OCTOBER 22—AFTERNOON SESSION.

Symposium on Malignant Growths.

The Clinical Course of Cancers with Reference to Their Resemblance to Inflammatory and Infectious Processes, Dr. Albert E. Wochert, Buffalo. It is doubtful whether there is an infectious cause or not, and, if so, whether of animal or vegetable nature. Environment seems to play some part, as cancer is more frequent in some localities than others. In Buffalo it is about 4 times as frequent in the German and Polish settlements as in those of the native-born. The inhabitants living upon some soils, as the lime stone, it has been claimed, have marked immunity from cancer. Authors differ in regard to the part heredity plays in the causation of it. However, there is no stage of incubation, and the process is local in the beginning. Cases may be divided into 3 groups: (1) Those in which meta-

stasis occurs early and they are rapid in growth; (2) those more chronic in growth and ulcerations may form; (3) those marked by a mild toxemia. Pyrexia is common, if the cancer is of internal origin. If the liver is involved, there are apt to be chills, intermittent in character. In the pyrexia carcinoma resembles tuberculosis. Osler found in some of his cases a temperature of 103°. In six cases of the author's, two of the liver and four of the stomach, he found variations of from two to four degrees. This points to an infectious process. The blood also would indicate this, as there is first mild anemia, becoming more marked later, in this resembling tuberculosis and syphilis. The kidneys show marked change, and may bring about fatal termination by coma. More elaborate clinical studies are necessary to assist the pathologist to establish the nature of the process.

The Present Status of the Infectious Theory of Malignant Neoplasms, George Blumer, Albany. He went carefully over the ground and discussed the question in all its bearings, and while stating that many points were highly suggestive, the following summary gave the real facts: 1. The most careful bacteriological studies had demonstrated no constant organism. 2. The various morphological studies are not agree. 3. Certain facts of distribution were suggestive of the infectious process, but much more extensive observations must be made before definite conclusions could be reached.

The Estimation of the Malignancy of Tumors, with Reference to the Reported Cures of the Disease, Dr. James Ewing, New York. There is great difference of opinion among surgeons as to the curability of cancer, some reporting 40% of cures, while one eminent surgeon said that he had never cured a case. In the opinion of the writer there should be more careful histological classifications of cancer; then it would be possible to make a more reliable prognosis. In cases of epithelioma, which were the least malignant, thorough excision usually resulted in cure, while the pure carcinoma were the most malignant, and in a very short time nodes had usually extended to a serious extent, and there was but little hope of curing these. In all the field there should be greater co-operation between surgeons and pathologists, in order to arrive at a more reliable prognosis of tumors commonly called cancers.

The Treatment of Carcinomatous Growths by Caustics, Dr. Andrew R. Robinson, New York. Whatever the theory as to the origin, all agreed that the diseased tissue must be thoroughly destroyed, in order that a cure might result. In his opinion the cutaneous epithelioma were the only cancers amenable to treatment by caustics. The writer reviewed the use of the various caustics, but gave his own preference to *caustic potash*, which in some cases gives as good results as excision. He also liked the results obtained from *arsenous acid*, and gave it as his opinion that few cases of epithelioma of the face should be treated by the knife.

The Surgical Treatment of Cancer, Dr. Frances W. Murray, New York. (Read by title).

Malignant Disease of the Nose and Accessory Cavities, Dr. Joseph S. Gibb, Philadelphia. The usual form of cancer found upon the septum of the nose was sarcoma, and the symptoms were the same as in all destructive diseases of the nares, epistaxis being a marked symptom, while pain might or might not be. Carcinoma was more frequently found starting from the ethmoid and spheroid cells and spreading rapidly in all directions, characterized by pain and vascularity. In the naso-pharynx of young persons sarcoma is frequently found, while in the accessory sinuses both sarcoma and carcinoma occur. In all these cases of malignant disease the prognosis is bad. Surgical treatment offers the only hope of relief.

Intrathoracic Growths, Dr. Alexander Lambert, New York. He stated that growths occur in the pleura, lungs and mediastinum. Those of the pleura are usually secondary to growths in other parts of the body. In making the diagnosis, the presence or absence of the tubercle bacilli in the pleura is significant. Carcinoma occurs in the lungs more frequently in men than in women, and after middle life. Sarcoma also occurs and may resemble military tuberculosis. The symptoms are dyspnea, pain in the chest, raspberry-juce sputum, fever and emaciation, usually metastasis in

the axilla. Of the tumors of the mediastinum, sarcoma occurs in the anterior and is most marked by circulatory disturbances, while carcinoma occurs in the posterior and is most marked by respiratory disturbances. Pain is a common symptom, cough an early one, and often spasmodic. Dysphagia should always arouse suspicion of an intrathoracic growth; there is usually bulging of the chest. Duration of the disease is from months to years. The treatment is symptomatic.

Cancer of the Large Intestine, Dr. James P. Tuttle, New York. The point of occurrence of cancer of the large intestine is most frequent at the cecum, secondly at the sigmoid flexure; thirdly the hepatic flexure, and fourthly, the splenic flexure. It develops about equally in both sexes. The development as to age is not very definite, but the author believes it is more common in the young than was formerly supposed. It is a question of age in tissue instead of age in years. The symptomatology in the early stage is obscure. In epithelioma the symptoms are largely reflex. In medullary carcinoma there is passage of pus and blood. In scirrhus there is obstinate constipation. The author believes that, if the bowel is kept washed out, there will be no temperature, as it arises from the retained fecal masses. In regard to treatment all local medication is palliative, and there is but little hope from radical treatment, except in the early stage. The author reviewed the various operations for the relief of this disease and the results.

Malignant Disease of the Penis, Dr. Henry H. Morton, Brooklyn. The author said that age was a predisposing cause. It occurred usually after 50 years; phimosis is another cause. The Jews were largely exempt from the disease. It occurred in men of uncleanly habits and men of gouty tendencies. In the diagnosis persistent wart should be considered suspicious; the history will differentiate from syphilis. Death results in from 1-2 years without operation, but in early complete operation the prognosis is very good.

Malignant Disease of the Uterus, Dr. Willard M. Polk, New York. (Read by title).

The Daily Medical Inspection of Schools, Dr. Frederick William Longhran, New York. The essayist said that it was just as much the duty of parents to preserve the health of their children as to educate them. He showed most convincingly the great good which must inevitably follow an intelligent, well-directed system of school-inspection in the saving of life, by early detection of diseases, the prevention of epidemics by the prompt isolation of sick children, and the improved health of pupils by better sanitary regulations in the school building. He appealed to all physicians to become better educated themselves along this line, and then do all in their power to educate the laity in regard to the wisdom of daily school inspection.

The Ethyl-Bromide and Chloride Respectively as Surgical Anesthetics, Dr. S. Ormond Goldman, New York. The doctor exhibited the apparatus for the proper administration of these two drugs. He gave a careful description of their scientific administration and of the action of each upon the body. In his opinion these anesthetics should be used for minor surgical operations, and never for major, as the prolonged administration was dangerous. He also believed they were very useful to begin ether anesthesia.

Perforation of Gastric Ulcer, Dr. Lucius W. Hotchkiss, New York. He reported a case successfully operated upon sixty hours after perforation. The history of the case was negative and the patient was admitted to the hospital, supposed to be suffering from intestinal obstruction, but peritonitis developed, the correct diagnosis was suspected and confirmed by operation. The author described his method of operating, and also stated that about 95% of cases of perforation of the stomach die unless relieved by operative treatment.

Alcohol as a Therapeutic Agent, Dr. Frank Wellington Dennis, Unionville. At the beginning of the 20th century no drug is more ignorantly prescribed, and produces more physical degeneration than alcohol. Physicians should teach the people these evils instead of following them. After carefully reviewing the therapeutic and physiological action of alcohol it is, in his opinion, so dangerous to humanity that other drugs can and should be used instead of it.

Pelvic Inflammations in the Female, Dr. Abraham Brothers, New York. The doctor said that its management by the general practitioner should only continue when the diagnosis

of pus could be excluded. He contrasted the old pathology with the modern ideas of this condition, dealt quite fully with the causes and urged all physicians to watch carefully their patients who are suffering from the so-called pelvic inflammation, for many of these really contain small pus foci, and any over-exertion might start up renewed trouble. The author believes that in all cases of pus formation, the treatment properly ceases to be medical, and becomes surgical.

Skin Diseases of Special Interest, Dr. Grover W. Wende, Buffalo. He gave a very fine stereopticon illustration of these lesions.

MORNING SESSION, OCTOBER 23, 1901.

10 A. M.

Under the symposium of arteriosclerosis, the first paper was by Dr. Charles E. Mack, New York: **Arteriosclerosis; Importance, Definition, Etiology and Symptomatology.**

First considered was the importance of a thorough study of the blood-vessels, their structural and pathological relationship. A man may be actually old at 30, while another may be old at 50, according to the condition of his arteries. Influence of the nervous system on the blood-vessels, as well as heat and cold, is very marked. Pathologic conditions affect the vessels and heart. Arteriosclerosis is a hyalin degeneration and may exist with or without atheroma. The doctor showed a specimen of aneurysm of the innominate artery. Causes: Heredity, age, sex, alcohol, syphilis, gout, rheumatism, and other acute affections, high-living, hard work, psychical emotions, worry and nervous strains. That "a man is as old as his arteries," is true. Preponderance of cases are in men, owing to their occupations and less restful, less quiet lives. Alcohol is a predisposing cause of arteriosclerosis. There is a relationship existing between arteriosclerosis and hypertrophy of the heart.

The death rate of medical men from 1884-1892 was exceeded only by that of saloonkeepers (who are intemperate), by butchers (who are gluttonous), quarry men (who are exposed to explosives), and underpaid factory employees. 35% of physicians die from arteriosclerosis, heart disease and apoplexy. The kidney is affected and sometimes the brain.

Retinal Findings in Disorders of General Nutrition, L. A. W. Alleman, M. D., Brooklyn. (Read by title).

Cardiac Manifestations of Arteriosclerosis, Dr. De Lancey Rochester, Buffalo.

Hypertrophy of the heart muscle, changing to fibroid degeneration, is early noted. Cardiac manifestations are: Hypertrophy with degeneration, degeneration of the myocardium, and angina pectoris. In certain attacks of palpitation, dyspnea and cyanosis he gives hypodermic injections of nitroglycerin and hot mustard foot-baths, followed by morphine and atropin. He advises the hot-air bath and keeping the bowels open. For the arterioles he gives potassium iodid, and for the circulation thiet, nux vomica. Cactus and valerian are likewise given, but he considers digitalis dangerous, because of its action on the arterioles, and he questioned whether it has any place whatever in the treatment of cardiac manifestations in arteriosclerosis. Amyl nitrate is also a good drug.

Management and Therapeutics of Arteriosclerosis, Dr. Egbert Le Fevre, New York.

The essayist took up the question of cardiac failure and its relation to the arterial system. Successful treatment and management depends upon a consideration of all the causes produced. The most important factor in arteriosclerosis is age, and more or less change in the bloodvessels is natural. There are three stages: 1. Toxemia, which constitutes the curative stage. There is arterial spasm, slight pathological changes in the bloodvessels with hypertrophy of the muscular coat, when there is a hereditary tendency, and usually the onset comes on after 45 years. The habits of the patient have a great influence on the disease. The management and treatment of this stage are mainly prophylactic and very important. Exercise in the open air, outdoor life, diet, small amount of meat, but plenty of vegetables, the eating of which should be encouraged. If alcoholic stimulants must be given, they should be limited to whiskey. The early stages of arteriosclerosis in women differ from those in men on account of

the difference in their daily life. Where toxemia is more or less chronic, it may be necessary to take a saline cathartic. A capsule containing quinine is taken in the morning with laxative doses of mineral waters or phosphate of soda. Second stage—capillary fibrosis. Patient feels heart thumping against chest wall, but thinks it only comes from indigestion. The idea is to put off cardiac failure. Increased obstruction of the artery causes increased cardiac power which sends the blood into the arteries with much force, causing traumatism and exciting spasm of the muscular coat of the artery. Iodine and salts have been called the medicine of arteries. Clinical experience has demonstrated that in arteriosclerosis it has the power of lowering the blood pressure and does it without diminishing the force of the cardiac system.

Discussion: Dr. Quimby (N. Y.) did not believe that the fibrous changes are pathological. They are retributive, but protective. Questions of tissue-nutrition form the basis of the story. The rise of tension is reflex. Hypertrophy of the walls of the artery, as well as in the heart, are protective, and fibrosis comes when nutrition of the arterial muscle begins to fail.

Dr. Walsh (N. Y.) believed that many of these cases of arteriosclerosis come to the general practitioner as neurasthenia. Very often there is this tendency to take too much note of symptoms—vague pains in the thorax and symptoms of constriction that are not pre-cordial in character. The doctor was of the opinion that heredity played an important part in arteriosclerosis, and that young men whose fathers die at 45 or 50 should not take up work requiring nerve-strain, worry, undue excitement, etc.

Dr. Stockton spoke of pneumogastric pain and sometimes age, sex, alcohol, syphilis, gout, rheumatism and other symptoms of gastralgia as misleading physicians as to arteriosclerosis. Post-mortem findings showed, in some cases, degeneration of the lower part of the left ventricle with heart rupture.

(To be Continued.)

The Section on Ophthalmology of the College of Physicians of Philadelphia met October 15, 1901, Dr. Wm. Thomson, chairman, presiding. Dr. Charles A. Oliver gave the history of a case of **Blindness from Congenital Deformity of the Occiput**. He considered the case a rare example of the occipital or occipito-parietal type of cranial malformation, in which the configuration of the posterior portion of the head is flattened but slightly curved, extending irregularly upward and forward to meet the frontal protuberance; the most marked ocular signs being sensory in character. Vision in each eye in such cases is nearly or entirely lost; the orbits are shallow, particularly at their postero-mesial parts; the eyeballs are but slightly protruded, somewhat enlarged, and enjoy full freedom of movement; the entire motor apparatus of the exterior of the eyes is in proper working order; the pupils are but slightly oversized; the irides are prompt to light-stimulus, effects for accommodation, and convergence; the ciliary muscles are active; the eyegrounds in every detail of neuronal, vascular and lymph structure appear normal; in fact, the eyeballs with their entire adnexa perform their functions properly. This complexus of symptoms, with its absolute blindness and concomitants of slight globular protrusion, divergence, and rotary nystagmus as the only ocular signs constituted a most remarkable clinical picture. In it is seen a blindness the proving of which necessitates a careful study of every possible direct and indirect ocular detail; a blindness that may be safely assumed to be intracranial in type, and probably cortical in character. In such cases, he thinks, it is fairly certain that there is a healthy receiving material which is properly functioning. The visual cortex is unfortunately of such imperfect development, and of so feeble a functioning and resisting power, that it early loses much of its physiological activity, and sooner or later degenerates into a functionless organ. Dr. G. E. de Schweinitz reported 3 cases of **Relapsing Traumatic Bullous Keratitis**. After referring to the fact that, at longer or shorter periods after the apparent healing of trivial corneal abrasions, the affected eye may become the

seat of irritative phenomena quite out of proportion to the original injury, he classified these phenomena under three heads, relapsing bullous or vesicular keratitis, originally described by Hansen Grut; recurring erosions of the cornea, first recorded by von Arlt; and reëvolving traumatic keratolgia, a name given to the affection by Grandelement. He pointed out that these manifestations represented analogous lesions. In the first case recurring erosions of the cornea were preceded by vesicle formation, the result of a slight abrasion caused by the switch of a horse's tail. The duration of the disease, which was cured by the actual cautery and massage with the yellow oxide of mercury, was 10 months. In the second, recurring erosions of the cornea with intense ciliary neuralgia had resulted from a scratch with a finger-nail. No preceding vesicle formation was detected. Cure was effected by touching the erosion with nitrate of silver and holocain. The duration of the disease was about 7 months. In the third case there was typical relapsing bullous keratitis, probably traumatic in origin. The bullae were unusually large, covering the whole center of the cornea, and cure was effected by incising the blister, removing the epithelial walls, and cauterizing the surface with tincture of iodine, followed, when the irritative phenomena had passed away, by massage with the yellow oxide of mercury. The duration of the disease was about 3 months. The symptoms which call attention to this disease were: almost always on awakening the patient experiences some difficulty in opening the eye, followed, when the lid is raised, by marked foreign body-sensation, decided epiphora, flushing of the eyeball, and sharp neuralgic pain. The attack continues from one-half to several hours, the symptoms then subsiding and the eye being again apparently normal. Careful examination during the continuance of the irritative signs will reveal on the cornea a small ruptured vesicle, or a larger blister or bulla, or sometimes simply an erosion of the superficial epithelium without indication of vesicle or bulla, which has probably disappeared before the examination was made. The abrasion can always be outlined by means of fluorescein. Dr. Risley referred to 4 cases of the affection, in 2 of which the Saemisch operation had been performed for abscess of the cornea. In one case, a young woman nursing her child, there was no history or evidence of injury to the cornea, and he had attended her through three attacks. There were numerous small blebs over the cornea, which burst, leaving points of ulceration. He had secured satisfactory results from an ointment of iodoform and atropia, with application of tincture of iodine to the ulcerated area. Dr. H. F. Hansell exhibited a new form of stationary ophthalmoscope devised by Dr. Walter Thorner, of Berlin, first exhibited at the International Congress in Utrecht in 1899. The points of superiority claimed by the inventor and verified by the practical use of the instrument are the entire absence of reflexes, the brilliant illumination of the eyeground, the magnification of the image, the extent of the field and its adaptability for demonstrating a normal or diseased fundus to the person inexperienced in the use of the ordinary hand ophthalmoscope. For studying the eyeground it has no superior. The details are shown with remarkable clearness, and the proportionately large section of the field under observation at one time affords valuable aid in learning the topographic relation of diseased patches to each other and to the papilla and fovea. The corneal and lenticular reflexes are abolished by the action of prisms, which permit the illumination of only one-half of the pupil, and this method in no way interferes with the illumination of the major portion of the eyeground, the size of the illuminated area depending upon the dilatation of the pupil. Dr. William M. Sweet exhibited the form of sideroscope, devised by Dr. J. Hirschberg, of Berlin, which has given such excellent results in locating iron and steel in the eyeball. The magnetic needle is provided at its center with a small concave mirror, the whole being suspended by a fine silk thread in a tube of glass and brass. The flame of a lamp is condensed by means of a convex lens upon the small mirror, and reflected, greatly enlarged, upon a graduated screen a few feet away. The slightest movement of the magnetic needle when brought close to an eye containing a piece of steel magnified on the screen, the movement being greatest when the magnet point is close to the situation of the metal in the eye. The instrument should prove of value in all cases where Röntgen rays or the giant magnet are not available.

Original Articles.

OBSERVATIONS ON THE TREATMENT OF CROUP-
OUS PNEUMONIA.By JAMES C. WILSON, M. D.,
of Philadelphia.Professor of The Practice of Medicine in Jefferson Medical
College.

Nearly half a century ago Trousseau, the greatest clinician of France since Laennec, wrote these words: "Pneumonia is not uniform in character: the forms which it assumes, its greater or less intensity and extent—the influence of the prevailing medical constitution—the personal specialties of the patients in respect of age, sex, temperament and previous health—the disease which may complicate pulmonary inflammation, and the unfavorable conditions which may supervene during its course—all demand particular inquiry on the part of the physician. He must take special account of all of them, for they greatly modify the disease, and are also the source of much diversity in the therapeutic indications."* Since that wise utterance medicine has made an enormous advance. Pathology has become a science of definite facts; bacteriology has not only come into existence, but also has assumed in the brief period of its existence leading importance in etiology, diagnosis and treatment. Therapeutics itself has undergone many revolutions and made some advance, but the facts observed at the bedside remain the same—the chill and high temperature, the stitch in the side and dyspnea, cough and rusty sputum, the short course, the critical defervescence, the rapid convalescence of classic pneumonia are the same now as then. The high mortality in certain localities and years, the comparatively favorable course elsewhere and in other seasons, the resistance manifested in early adult life, the helplessness of the senile, the unfavorable influence of previous disease and alcoholism, the disastrous effects of complications, the fact that croupous pneumonia is the terminal event in many chronic diseases and in most healthy persons of advanced age, and that there are occasional exceptions to all these general statements are familiar and abiding truths. The uniformity of the symptom-complex in well developed frank pneumonia is no less remarkable than the diversity of its manifestations in cases of aberrant type. Our dismay at the sudden death of a youth who has apparently been doing well, in consequence of an extension of the exudate or an overwhelming toxemia, is no less than our delight at the unexpected favorable termination of the attack in an aged person. These facts are not only the cause of much diversity in the therapeutic indications; they are likewise the cause of a most bewildering diversity and perplexity in the therapeutic conclusions. Thus Petrescu, after an experience of thirteen years with enormous doses of infusion of digitalis in a series of 1,192 cases, reported a mortality of 2.66 per cent.—while 500 cases from the recent records of the Pennsylvania Hos-

pital, May, 1897, to August, 1901, treated upon expectant-symptomatic methods, showed 125 deaths—25 per cent.* Are we to conclude from the comparison of these figures that the treatment of pneumonia with large doses of digitalis, which created such excitement when first announced, is so much more efficient than the expectant-symptomatic plan, or that this difference in the result is to be explained by difference in the treatment alone. Let us look at the facts in the light of knowledge of the clinical course of the disease and the mortality under different conditions. The observations of Petrescu were conducted in the Military Hospital upon selected cases—young, strong men in previous good health, living under proper hygienic conditions and free from alcoholism. The cases of the Pennsylvania Hospital occurred in persons of that class who seek such an institution only from necessity, many of whom were actually destitute, others overworked, badly nourished, some in previous poor health, aged, tramps and addicted to alcohol. Of 34 of these cases known to have been drunkards, 23 died—a mortality of 67 per cent. The analysis of the results according to age is especially striking: the largest number of cases, namely, 136, occurred in the third decade of life with 25 deaths—a mortality of 18 per cent.—the smallest number one case in the ninth decade. This case terminated fatally. But the mortality by decades with, however, a decreasing number of cases after the third, was in the fourth decade 26 per cent., in the fifth decade 43 per cent., in the sixth 53 per cent., in the seventh 77 per cent., in the eighth 61 per cent. Among the occupations, 122 of the patients were laborers with 42 deaths—a mortality of 34 per cent., 8 were teamsters with 4 deaths—a mortality of 50 per cent., and 13 stevedores with 6 deaths—a mortality of 46 per cent. The frequency with which teamsters and stevedores are addicted to alcohol is well known, and a large proportion of hospital patients who describe themselves as laborers are given to excesses. Furthermore many of those who follow such occupations suffer from chronic bronchitis, emphysema and forms of myocarditis as the result of habitual exposure and over-exertion. Finally a small proportion of hospital patients are admitted in articulo mortis and a considerable proportion practically moribund. It thus becomes evident that personal factors must to a great extent account for such differences in the mortality rather than treatment alone. In point of fact, Aufrecht saw in 377 cases of pneumonia in patients seeking a hospital from necessity, treated without digitalis, at an age between 5 and 20 years, 11 die—a mortality of 2.64 per cent., and Riessell in 127 persons between 20 and 30 years of age only 2 deaths—a mortality of 1.8 per cent., without digitalis. Pel, of Amsterdam, in a recent article on "The Treatment of Croupous Pneumonia Critically Considered,"** from which I have drawn many of the facts in this paper, concludes that "although the admirers of the digitalis therapy furnish cases of pneumonia which have recovered after large doses of digitalis, they have failed to prove that it was just this heroic use of the remedy which caused the favorable termination."

* Read before The Medical Society of the State of New York at its semi-annual meeting, October 16, 1901.

Lectures on Clinical Medicine, translated by Sir John Rose Cormack, American Edition, 1873.

* Norris-American Journal of the Medical Sciences, June, 1901.

* Volkmann's Sammlung Klinischer Vortraege, November, 1900. Translated in the Therapeutic Monthly, June 1901.

and adds that it might be maintained with equal right that the pneumonia was cured in spite of these doses.

Croupous pneumonia more than any other disease demands very large series of cases to establish the efficacy of any line of treatment, and since this disease occurs under such varying conditions, each of which modifies alike the course of the attack and the mortality, it demands large series of cases submitted to the same treatment under similar conditions of age, occupation, previous health and the like—conditions not likely to be fulfilled and not yet complied with in any disease except in the bath treatment of enteric fever.

It would appear that 75 per cent. of all cases of pneumonia admitted to hospitals recover and that in selected cases such as occur in military hospitals, namely, healthy young subjects, the death rate is much lower and in limited series of cases may be as low as 2 or 3 per cent. The mortality is also light in private practice. This diversity in the death rate has given rise to false conclusions as to the result of various plans of treatment. Aside from such errors conclusions equally false have been drawn from reasoning by analogy. In a recent authoritative publication* it has been assumed that full doses of mercurials and other germicides may favorably influence the course of the attack by rendering the exudate an unfavorable culture media for the pneumococcus, especially if administered too early. In regard to a specific treatment Pel calls attention to the fact that we only know four infectious diseases in which we are able to meet the casual indication. Malaria we can control by quinine alone; syphilis only by mercury and the iodides; rheumatic fever only by the salicylates or analogous substances; diphtheria only by its antitoxine. It would be a remarkable fact if croupous pneumonia—a disease due to a specific micro-organism, should yield to treatment by a number of different drugs selected to meet the cause, as the salicylates, iodides, quinine, mercury, creosote and carbolic acid. Nor does it seem desirable to repeat the futile experiments already made in regard to pulmonary tuberculosis, scarlet fever and other acute infections. The effect of indifferent antiseptics and germicides upon parasitic micro-organisms must bear a definite relation to the mass of the circulating blood in which they are diluted and which may be roughly estimated as from 12 to 14 pints in the adult. Experience has shown in regard to these drugs that the parasite is fully as tolerant of their action if not more so than the host. The dictum of Talamon in regard to tartar emetic holds good for other poisonous drugs: By their use we diminish the prospect of cure since we complicate the disease with the effects of a poison. With specifics like quinine in malaria the case is wholly different. In croupous pneumonia it is probable that the pathological process is fully established upon the occurrence of the chill and that the pulmonary lesion is far advanced before a positive diagnosis can be made. The pneumo-toxines produce the initial chills, the fever and the prostration.

Aufrecht's advocacy of quinine* has recently excited much interest. This observer's statistics, ex-

tending over a period of ten years, show that during the last two years under quinine treatment the mortality fell to 6.6 and 8.2 per cent., although in former years it fluctuated between 9.8 and 25.3 per cent. and even grew to 24.9 per cent. during the year that preceded the quinine therapy.

As Pel has shown, the favorable effect of the use of such drugs as indicated by the mortality statistics is more apparent than real, since wide variations in short series of cases are constantly encountered. This critic calls attention to the fact that the period of observation—two years—is much too short and that the figures are much too small to justify conclusions in regard to the efficacy of a mode of treatment. Nevertheless, notwithstanding these objections, it must be conceded that thoughtful researches in the direction of specifics are justifiable.

Clinical experiments with antipneumococcus serum have not yielded satisfactory results. My own observations in the German Hospital with 36 cases treated with antipneumococcus serum showed 10 deaths—a mortality of 28 per cent. The collected cases of Tyler, of Denver, combined with my own number, 162, of which 135 recovered and 27 died—a mortality of 16.6 per cent. Our observations in the service of the German Hospital have not encouraged us to continue the treatment of croupous pneumonia by the use of antipneumococcus serum. Nor have our experiences with hydro-therapy been more satisfactory. This method of treatment was instituted some years ago upon a series of selected cases. Neither the effects upon the immediate course of the disease nor upon the mortality were such as to justify its continuance. Statements occasionally made to the effect that quinine with aconite or veratrum viride employed before consolidation has taken place "has the power of so modifying the hyperemia in the affected area as practically to abort the local process and prevent exudation" are mere assumptions, wholly without the support of statistical or other facts. There are those who appear to believe that croupous pneumonia can be aborted by various forms of treatment. During the first half of the nineteenth century the denial of the efficacy of abstracting blood in pneumonia would have seemed to the majority of practitioners of medicine the denial of a demonstration. At the present time there are those to whom the denial of the efficacy of calomel, quinine, cardiac depressants and the like arouses the taunt of therapeutic nihilism. But their number is few. The great majority of practitioners at this time advocate an expectant-symptomatic method of treatment. This was the plan advocated by Dietl, Niemeyer, Bourgeois and other leaders of the reaction against indiscriminate venesection. It was practically the plan taught by Flint. It is advocated by Pye-Smith in the admirable article on pneumonia in Allbutt's System, who says: "In the long run the expectant method of treatment, which interferes only as occasion requires, is followed by a far lower mortality than misplaced attempts to jugulate the disease or than a completely negative treatment." Osler says: "Pneumonia is a

* Twentieth Century Practice, Vol. xvi.

** Nothnagel's System, xlv Band.

self-limited disease which can neither be aborted nor cut short by any known means at our command," and again, "There is no specific treatment for pneumonia. The young practitioner may bear in mind that patients are more often damaged than helped by the promiscuous drugging which is still only too prevalent," and Pel, to whose article I have so often referred: "The less the physician interferes with the normal course of pneumonia, the greater the probability of a favorable termination."

The plan pursued in my service at the German Hospital in Philadelphia may be briefly outlined as follows:

The diet consists chiefly of milk and light broths. Junket, custard and like gruels are given if the patient cares to take them. In private practice a little ice cream and sometimes raw or stewed fruits may be given. Grapes are often acceptable. All these things are given in small amounts. If the patient will take from one to two pints of milk and a pint of chicken or mutton broth each twenty-four hours it is regarded as sufficient. Water is given in abundance, not more than 2 ounces at any one time. Under ordinary circumstances the patient is sponged night and morning with water, the temperature of which is regulated by his sensations. If the temperature exceed 104° F., cold sponging may be repeated at intervals of two or three hours. Early in the course of the attack two or three large, flat ice-bags are applied to the affected side. These to some extent relieve pain and make the patient feel more comfortable. They have a slight effect in reducing the temperature, but none whatever upon the extension of the exudate or the course of the attack. Alcohol is given in a majority of the cases. Ordinarily the amount does not exceed four or six ounces of whiskey in twenty-four hours. Larger quantities are given to those accustomed to its use.

A calomel purge is commonly administered at the time of the admission of the patient to the ward. If there be nausea and vomiting calomel is given in fractional doses. In the absence of these a single laxative dose is administered. If necessary, a saline is subsequently given. The calomel is frequently repeated once or twice during the course of the attack. If there be great pain, morphia is administered hypodermically. In any case Dover's powder, usually in the form of tablets of two or three grains, is administered every two or three hours throughout the greater part of the course of the attack. The dose of this medicine is so regulated as to produce a slight continuous drowsiness, from which the patient may, however, be readily aroused. By this means suffering is diminished, cough is to some extent controlled and the excitement and apprehension common in pneumonia allayed. No evil effects have been attributed to this use of opium. Toward the close of the attack Dover's powder is given with diminishing frequency. Expectorants are rarely employed. Fresh aromatic spirit of ammonia and the ammonium carbonate are sometimes given. If they do no good, they have never appeared to do harm. Aconite and veratrum viride are never given, and digitalis only in response to particular indications. If the pulse becomes small and frequent, especially if it becomes irregular, digitalis is sometimes given in full doses, not because the patient is suffering

from pneumonia, but on account of the condition of the heart. In many cases strophanthus has answered a better purpose. As a rule strychnia is given as a cardiac stimulant and the nitrites, especially nitroglycerine, for the relief of the laboring right ventricle. These measures failing with increasing signs of failure of the right heart, the development of small mucous rales and cyanosis, venesection is practiced. If pulmonary edema occurs, atropine is given hypodermically and many times has seemed to avert the fatal issue. Dyspnea is regarded as an indication for the use of oxygen, care being taken that in the administration it is freely diluted with air. Nervous symptoms and delirium are to some extent controlled by the systematic administration of Dover's powder. They demand an increase in the quantity of alcohol. Ice to the head, cold sponging or the cold pack are useful, and in young robust individuals delirium tending to pass into coma is treated by cold effusions to the head and neck, repeated at intervals of three or four hours. These are often followed by marked improvement. Neither poultices nor cotton jackets are allowed. The patients wear a moderately heavy, loose-fitting merino undershirt. Blisters are not used save in the case of delayed resolution, when a series of small flying blisters is sometimes applied. At the crisis the patient is carefully watched. If the Dovers powder has been discontinued, a hypodermic injection or an opium suppository is administered. In some cases ammonium carbonate, alcohol or hot coffee appears to be indicated. Collapse is very rare. During convalescence an abundant nutritious diet is given. The patient is permitted to have meat as soon as he desires it. Bitter tonics are employed in some cases and we are in no great haste to yield to the patient's wish to get out of bed.

I do not speak of the treatment of complications. The prognosis of pneumonia in ordinary hospital cases must always be guarded. The statistics of the German Hospital under this plan of treatment are not satisfactory; the figures for the last five years are as follows:

	No. of cases treated.	Deaths.	Per Cent.
1896	12	7	58.3
1897	48	13	27.0
1898	36	18	50.0
1899	48	21	43.75
1900	42	9	21.43
<hr/>			
Total	188	68	36.56

But on the occasions in which we abandoned it for systematic cold bathing and serum therapy our results were still less satisfactory.

These figures do not indicate the result of treatment but show the intractable character of the cases admitted to the service, the high mortality of the disease in a general hospital and the great variation in the mortality in short series of cases in different years.

APPENDICEAL FISTULA.

By JOHN B. DEEVER, M. D.,

of Philadelphia.

Surgeon in Chief of the German Hospital.

There are two reasons why this subject is worthy of our attention, indeed, it is a subject of the utmost importance, for in practically all instances it is a preventable sequel to operations for acute appendicitis and is only seen in the neglected cases, if procrastination on the part of the physician can be so called. If all cases of appendicitis were operated in the early hours of the attack, this complication would be practically unknown. Secondly, the difficulties and dangers of the operation for the relief of appendiceal fistula are often greater than was the original operation, and much more dangerous than is the operation for the removal of the appendix in the early hours of an attack.

When we consider that there are members of the profession, happily each day becoming less numerous, who still advocate the dangerous policy of delay and the medical treatment of appendicitis, it is not strange that we still meet this sequel with distressing frequency.

The mortality of operation for appendiceal fistula is fortunately not high. Although many brilliant results are reported, nevertheless failure to obtain a cure may result. I fear we are all more tempted to report our fortunate results than those which have an unfavorable termination. This fact, although serving the useful object of stimulating us with greater courage in facing serious surgical problems, also has the disadvantage of tending to make us less thoughtful of their dangers. The man who is continually calling to our notice the dangers and gloomy side of any operative procedure exposes himself to the stigma of retarding the science of surgery. This, however, does not apply in this instance because it not only points out the condition, the cause and means of prevention of which are obvious and after all, "Prevention is the best cure." In the early operation for appendicitis we have the almost certain means of avoiding this complication.

Were operation done before inflammation had occurred, while the condition is still one of appendiceal colic the surgical outlook would be ideal.

Appendiceal fistula occurs as one of two varieties—the external and the internal. In the internal variety the channel of the communication, or the fistula, is in direct communication with some hollow abdominal viscus, or in the case of evacuation of an appendiceal abscess by way of the bronchus with the chest cavity.

In the internal variety any of the hollow abdominal viscera may be involved—any portion of the intestinal tract, the bladder, the dilated portion of the ureter, etc., in fact, any of the viscera in close proximity to the appendix.

These internal fistulae, although numbers of cases have been reported, are quite rare in comparison to the external variety. Fortunately, too, they rarely need surgical interference, as they usually

either heal spontaneously or may remain innocuous, as for instance, a communication between the ileum and cecum. We cannot be sure, however, that these internal bowel communications will remain innocuous. In too many instances not only do they occasion local discomfort and attacks of aggravated intestinal indigestion, but offer a fertile cause for mechanical intestinal obstruction. Further, I believe that the local foci of irritation are in a certain percentage of cases forerunners of subsequent malignant growth.

The least dangerous of these internal fistulae are those in which an abscess ruptures into the cecum, the colon or the rectum, as in this variety the danger of intestinal obstruction is minimized and the discharge of pus by this route the safest. The internal variety of fistula rarely requires operative interference and for this reason is considered by some to be a fortunate termination of appendiceal abscess, this, however, is an opinion to which I cannot subscribe, for I have seen too many unfortunate and distressing consequences follow the adoption of this type of procrastination, and a fatal result in more than one instance compels me to lay stress on these facts. Those cases which terminated fatally resulted from, in one instance a communication with the bladder; a second with a communication with the respiratory system; in a third the communication was with the dilated portion of the ureter. Again, the inflammatory bands around such an internal fistula have caused death by internal obstruction of the bowel from a coil of intestine becoming imprisoned beneath such adhesions.

The external fistulae are much more common, but occur practically always in cases where abscess has been present, or where a gangrenous appendix has rested upon the bowel and by contiguity caused a perforative gangrene of the bowel. This was the case with a famous surgeon of my own city. At the time of operation a gangrenous appendix was found with its tip resting against the bowel. At this point there was a small oval patch of gangrene which several days after operation broke down and formed a very obstinate fecal fistula.

Probably the most satisfactory classification of this embarrassing sequela is that which depends upon the character of the discharge. The discharge from an appendiceal fistula can be divided into the fecal and non-fecal. The non-fecal discharges are urine, mucus, flatus, pus and bile. Urinary fistulae are rare and are practically always due to injuries to the bladder, as the ureters from their anatomical position are rarely involved. Yet the ureter as it crosses the psoas muscle may be injured, I have seen the ureter exposed, when it did not look unlike the appendix stripped of its serous coat. The injuries to the bladder consist either in tears made in freeing adhesions at the time of operation; or are due to ulceration into the bladder, either from the pressure of an abscess in the pelvis, or from an appendix adherent to the bladder. Very occasionally an appendiceal abscess works its way upward and ulcerates into the gall bladder and when this abscess is opened, a true biliary fistula is established. This is for anatomical reasons extremely unusual. Another way in which I have seen a biliary fistula is from an infection of the gall bladder

* Read Oct. 22, at the Academy of Medicine N. Y., N. Y. State Association.

secondary to a non-suppurating appendicitis or, rather, an appendicitis without periappendicular suppuration. After operation the gall bladder has perforated and discharged through the appendiceal wound, the general peritoneal cavity being shut off by adhesions.

The other non-fecal fistulae are always due to the presence of a foreign body, this foreign body may consist of one of several things.

An appendix left *in situ*. In many cases of appendicitis in which the operator contents himself by merely opening and draining the abscess, the appendix itself is left as a foreign body and keeps open a fistula which will not disappear until the appendix has entirely sloughed away or has been removed, usually the latter. In these cases the discharge may be almost pure mucus, and in any case in which mucus is discharged from an appendiceal fistula, we can be sure that all, or part, of the appendix is in communication with the tract. In operating upon such cases I have never failed to find a portion of the appendix and, indeed, in cases in which an abscess has been drained and the appendix left undisturbed, at a subsequent operation, I have always found the appendix to be present. The disappearance by sloughing of such an appendix would be a fortunate occurrence and may occur in rare instances, but personally I have never met with it. Again, a mass of lymph, a part of the wall of the appendiceal abscess, may serve as a foreign body.

An infected suture or a few threads of gauze torn from the drainage are often at the bottom of one of these cases of fistula, in others the only way in which they can be explained is a microscopic communication with the bowel through which only enough fecal matter or gas can pass to keep the sinus open and not enough to give a decided fecal character to the discharge.

The fecal fistulae may be divided according to the part of the bowel in which they occur, in the small bowel, high up or low down, or in the large bowel. Another way, in which they can be divided, depends upon whether all or only part of the feces are discharged through the fistula. When all of the feces escape through the fistulous orifice of communication with the large bowel we have formed, for all practical purposes, an artificial anus. Fecal fistulae involving the upper part of the small bowel can be differentiated from those situated low down in the small bowel by the pronounced biliary character of the discharge and the discharge of liquids from the fistula immediately after their ingestion, in the former the biliary discharge excoriates the skin and forms one of the most embarrassing varieties of fistula with which to deal. This is so pronounced in some cases and the pain so great as of itself to indicate operation for the repair of the fistula.

More solid feces show that the discharge comes from the large bowel. Fecal fistulae of the large bowel are more likely to heal spontaneously than those of the small bowel.

The causes of fecal fistula may be specifically divided into the following:

First.—Slipping or sloughing of a ligature used to ligate the stump of the appendix, one or the other of these accidents may occur no matter what

method is used to close the wound in the cecum caused by the removal of the appendix, for even if the cecum be repaired by several rows of Lembert sutures, infection of these sutures may cause enough sloughing to open a large fistula in the cecum. This variety of fistula may appear immediately after operation or even ten days or two weeks later.

Second.—Sloughing of an appendix left *in situ* may cause an especially bad fistula, as here there is not only the opening into the bowel, but also the appendix remaining as a foreign body.

Third.—Ulceration into the bowel at the point of adhesion of an inflamed appendix. This is an effort of nature to relieve trouble by drainage of the appendix into the bowel, removal of the appendix leaves the opening in the bowel which may be overlooked.

Fourth.—Pressure necrosis of the bowel from an abscess or from the pressure of a drainage tube or gauze left in at the time of operation.

Fifth.—Necrosis of the bowel from interference with its nutritive blood supply either from pressure on the mesentery or from septic emboli in the mesenteric veins. Fistulae due to this cause are most common in the cecum or ascending colon. This accounts also for many deaths from absorption of septic material.

Sixth.—Tearing the softened bowel in freeing adhesions at the time of operation.

Seventh.—Stripping the serous coat from the bowel in freeing adhesions. This is a very common cause of fistula and one which we must always be upon our guard against, most of the nutrition of the bowel is derived from the serous coat and stripping this off usually causes a necrosis of the underlying bowel.

The symptoms of fecal fistula are from the nature of the trouble perfectly obvious, there is, however, for the first three or four days before and after a fistula appears usually a very high temperature. Fecal fistulae may appear in the first few days after operation, but more commonly seven to ten days later, and their appearance at a still later date is not unusual.

The constitutional effects of a fecal fistula are marked by a progressive loss of flesh and strength and impairment of nutrition, owing to the escape of the contents of the bowel containing the elements required for nutrition, in fistula involving the bowel high up in the small intestine, or from absorption of septic material along the tract.

The proper treatment of an appendiceal fistula depends upon whether the fistula is fecal or non-fecal. If it is non-fecal, a careful search should be made for the offending foreign body, as its removal will promptly cause the tract to close; great care should be used in this search not to make a non-fecal fistula a fecal one by traumatism to the bowel.

A great many appendiceal fistulae heal spontaneously and an opportunity should always be given nature to achieve this result, and operation only undertaken after this has failed. The only exception to this rule is a case, in which the fistula is so far up in the small bowel that the nutrition of the patient is seriously interfered with.

As soon as a fecal fistula appears, all drainage

should be removed, the tract should not be washed out or packed, and only the external surface be cleaned, nutrition should be given in concentrated form and every effort made to make the feces as solid as possible, which favors the healing of the fistula. Purgatives should not be given, as a rule, but bowels opened by enemata, which should not be large enough to regurgitate through the wound.

In non-fecal fistula all that is required in the way of operation is a removal of the offending foreign body, which should be done very thoroughly and the tract packed and allowed to heal by granulation from the bottom. When the fistula or sinus communicates with an unhealed abscess cavity, the mouth of the fistula should be enlarged sufficiently to permit of a thorough cleansing and packing. When possible, without opening the general peritoneal cavity, the mouth of the cavity should be enlarged sufficiently to make it equal the transverse diameter of the abscess cavity at its widest part. The urinary fistula of course must be freely exposed and the wall of the bladder repaired, best perhaps by Lembert sutures.

Operation for fecal fistula is a much more serious matter, as the danger of peritonitis from an infection of the general peritoneal cavity is very great. This is best avoided by cutting wide of the fistula and working towards it, carefully isolating the infected bowel by sterile gauze.

Fistula of the small bowel usually requires resection, as a simple repair, if the wound was extensive, would probably reduce the calibre of the bowel to a dangerous extent, and the bowel involved is often in so unhealthy a condition that sloughing would be likely to follow. My preference in this work is for an end-to-end anastomosis without mechanical appliances.

Fistula of the large bowel may either be resected or repaired, according to the judgment of the operator in each particular case. In some instances, in which the cecum has been very much injured, it may be wise to do a lateral anastomosis between the colon and the ileum. This anastomosis may be done either with the Murphy button or needle and thread alone, according to the fancy of the operator. Should a resection of the large bowel be necessary my preference is for an end to end union with needle and thread alone.

If all the feces have been passed by the fistula, the terminal portion of the bowel should be carefully examined to see that it is free from obstruction. Another point that we must be particularly on our guard against is the existence of more than one opening into the bowel, for the overlooking of a second fistula has often rendered unavailing an otherwise brilliant operation.

In regard to drainage after these operations, I will say that it is usually required, although sometimes they can be closed without it, which I prefer when possible. The necessity for drainage depends both upon the amount of inflammatory exudate around the fistulous tract and upon the state of the bowel.

In concluding my remarks upon this distressing sequel to operations for appendicitis, I should like to again lay special emphasis on one single fact, the importance and necessity for an early recognition

of acute appendicitis and its natural corollary the prompt institution of surgical interference. If the appendix is removed before any periappendiceal involvement or impairment of the structures contiguous to the diseased appendix has occurred, then it is well nigh impossible for abscess to occur, except as a result of contamination through a defect in the asepsis of the operative technique. If this is true, then we can avoid the formation of the products of the inflammatory process, prevent invasion of the intestinal walls, make it necessary to have such extensive manipulation as is required in the advanced cases, lessen the number of adhesions to be broken up and leave the field of operation in practically as good a condition as it was prior to the attack of appendicitis.

THE ETIOLOGICAL POTENCY OF HEREDITY IN MENTAL DISEASE.*

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"Heredity," says Ribot, "is that biological law by which all beings tend to repeat themselves in their descendants: it is for the species what personal identity is for the individual. By it a ground work remains unchanged amid incessant variations; by it Nature ever copies and imitates herself."

"Hereditary transmission," says Spencer, "displayed alike in all the plants we cultivate, in all the animals we breed, and in the human race, applies not only to physical but to psychical peculiarities."

The ancient proverb that "when the fathers have eaten sour grapes the children's teeth are set on edge" doubtless originated in a recognition of the important part which heredity plays in the development of human affairs. "There is a destiny made for a man by his ancestors," says Mandsley, and no one can elude, were he able to attempt it, the tyranny of his organization."

In truth it may be said that the transmission from parents to offspring of both physical and mental qualities is a fact of universal observations, and that heredity is of far greater potency than environment in shaping a man's destiny in life. Under and by virtue of the operation of this law of nature we constantly see instances of men of obscure and humble origin, who, despite the most adverse conditions of environment, rise and take their places among the rulers of the nation. Striking confirmations of this law are furnished by the lives of Lincoln, Garfield and the lamented McKinley.

"Bless not thyself only," says the author of the *Religio Medici*, "that thou wert born in Athens; but among thy multiplied acknowledgments, lift up one hand to heaven that thou wert born of honest parents, that modesty, humility and veracity, lay in the same egg and came into the world with thee." On the other hand the heredity of morbid tendencies has been recognized "in all times, in every land

* Read before the Medical Society of the State of New York, at its semi-annual meeting, in New York City, October 16, 1901.

and in every nation," almost from the foundation of the science and art of medicine. The idea of hereditary disease found apt expression in the ancient but familiar declaration that the sins of the father shall be visited upon the children even unto the third and fourth generations.

The term heredity as applied to the study of mental disease—the term mental disease being here used in its broadest sense, that is, to include not only insanity proper but all other psychoses, as idiocy, imbecility and psychopathic states of whatever form or nature—implies an original predisposition to the disease transmitted to children from their parents; and while it is true that insanity resulting from hereditary weakness of the nervous system alone without any apparent exciting cause, is comparatively rare, all competent authorities agree that the hereditary nature of insanity has long been recognized as an established fact in medical science, and that heredity plays a most important part in the etiology of this disease through its actual or potential influence upon the nervous organization, whether the tendency descend from direct or collateral branches of the family tree.

This influence usually manifests itself in the progeny in one of three ways; namely, 1, by congenital absence of mind, (idiocy); 2, arrest of mental development in early life before full mental power has been attained, (imbecility); or, 3, the development of a psychoneurotic temperament or insane diathesis which expresses itself in a defective or unstable nervous or mental organization which in turn predisposes the individual to succumb to circumstances in the nature of so-called exciting causes that would not affect a person of innate stable constitution. That is to say, if an individual having a strong hereditary predisposition to insanity and another who inherits no such tendency be subjected to the same or to substantially similar exciting causes, as, for instance, domestic afflictions, loss of fortune, severe mental strain and worry, ill-health, child-birth, dissipations, excesses, etc., the former would be likely to suffer a mental breakdown, whereas the latter would not; and while it is true in respect to the transmission of psychopathic tendencies that the ancestral taint may be, and frequently is, transformed in the progeny so as to appear in an entirely different form, or it may remain dormant in the second generation to reappear in a later one, or it may be deflected from the direct line of descent to a collateral branch, it is destined to crop out from time to time in one form or another, until it is finally rendered inert through the attenuating influence of wise intermarriages, or until the family becomes extinct through the sterilizing effect of degenerative processes going on through generations.

"He who inherits a predisposition to insanity," says Mandsley, "does not necessarily get it from a parent who happens to be insane—no, not even though his father was insane when he was begotten, or though in madness his mother conceived him. He gets it from where his parent got it—from the insane strain in the family stock."

Unfortunately, in the present state of our knowledge, the *modus operandi* of hereditary action is not

definitely determined. But we do know to a certainty that the effect of hereditary influence upon the individual is to render his brain inherently unstable, and thereby susceptible to influence, in the nature of so-called exciting causes which would be quite inoperative in individuals of inherent brain stability. In fact, experience has amply shown that the progeny of insane or neurotic ancestry are distinctly more liable to develop mental disease under the ordinary conditions of life, than are individuals whose ancestry is devoid of insane or neurotic taint.

An examination, even cursorily, of the published statistics relative to the etiology of insanity, will show them to be of small value, owing to the divergent views of collectors respecting the etiological importance of heredity in mental disease and also to the great difficulty of obtaining reliable data as to the heredity of families, the friends of insane patients being reluctant, usually, to admit, even to themselves, the existence in the family stock of a psychoneurotic strain. According to the statistical tables contained in the official reports of hospitals for the insane, the percentage of cases ascribed to hereditary influences varies from 25 to 90, the average for all countries being about 60 per cent. The conclusion to be drawn from these statistics, if accepted, would lead us to greatly underrate the importance of heredity as an etiological factor, whereas the fact is, its importance could scarcely be overrated. In other words, heredity is by far the most important factor with which we have to deal in any consideration of the causation of insanity.

"The tendency of late years," says Mercier, "has been to lay increasing emphasis upon the hereditary factor in the production of insanity, but it is doubtful whether, even yet, the true bearing and significance of this factor have been recognized." Another recent writer* on mental diseases, referring to predisposition, says: "This tendency, although it may sometimes be acquired, is much more frequently born with the individual, so that in the majority of the mentally afflicted we find a directly inherited predisposition to insanity."

Contrary to generally accepted medical opinion, as enunciated in the writings of alienists, the writer believes that the so-called exciting causes of insanity play a very unimportant part in the etiology of this disease, except in so far as they may operate to engender a state of brain denutrition and thus set in motion, hitherto latent inherited conditions or tendencies. The study and observation by the writer, during a period of thirty years, of thousands of cases of insanity with reference to causation, have served to convince him that only those who are predisposed to mental disease, either through inherited or accidental psychoneurosis—as head injury or organic disease of the brain cortex which renders the brain unstable—the latter being comparatively rare—succumb mentally to the influences which are embraced within the category of exciting causes. In support of this claim attention is called to the fact that substantially every individual at sometime during his life is exposed, in many cases

* Berkley.

repeatedly, to many of the so-called exciting causes of insanity, both mental and physical, and yet, despite this fact, we find that sanity is the rule,—insanity, the exception.

Let us take, for example, that best understood, most hopeless and most fatal of all forms of mental disease, paresis, which authorities are wont to attribute, at least in a vast majority of cases, to brain syphilis, excessive venery and other excesses of an exhausting nature, and how rarely we find a victim of this disease, whose history, on careful inquiry, fails to reveal the existence of an inherited psychopathic taint, either in the direct or collateral lines of descent. On the other hand, how few of those within the knowledge of every experienced practitioner who expose themselves recklessly to the conditions which are regarded as most potent in the production of paresis, ever become affected by that disease. Savage, who regards psychoneurotic predisposition as the chief predisposing cause of insanity, declares his belief that only a certain number of persons are so constituted that they can become insane.*

In taking the position that substantially all insanity is due either to inherited or acquired predisposition; that is, that it rarely occurs in individuals who are not predisposed thereto, either through hereditary or accidental psychoneurosis, the writer would by no means imply that every predisposed individual is likely to become insane, even though exposed to exciting causes. On the contrary, many of this class escape through the neutralizing effect of one parent, or through insufficient exposure to exciting causes or through intervention of the law of variation which renders the action of inheritance uncertain. Through the operation of this law the psychopathy of a father or mother may not appear in the descendants until the third generation is reached; or, out of three children hereditarily predisposed one, two or even all three may escape. If it were absolutely certain that every one, who is predisposed to insanity, would develop the disease under the influence of exciting causes, we should have less difficulty in making a satisfactory reply when consulted as to the advisability of such persons entering into marriage contracts, as it would then be our duty to forbid them absolutely.

In conclusion, hereditary predisposition may be regarded as an etiological factor common to all insanities, no matter what the immediate or exciting causes may be; that is, it may act independently as a causative factor or it may act in conjunction with what are denominated exciting causes.

Sarcoma of the Toes.—Léon Lefebvre reports the case of a carpenter, aged 17, who had a tumor of the second and third toes, painful, red, and somewhat elastic. The inguinal glands were swollen and hard. Both toes were amputated and the enlarged glands excised. Three months later tumors appeared at the situation of the anterior tibial gland, and in the iliac fossa. After five months they were excised. A month later the popliteal glands were found swollen. They were also extirpated. All the specimens were sarcomatous. The prognosis is serious, for the tumors will probably yet develop along the thoracic duct, or in the lungs, since it was impossible to extirpate the iliac glands thoroughly. (*Journal des Sciences Médicales de Lille*, June 29, 1901.) [M. O.]

* Insantly, George H. Savage, M. D.

ACUTE ALCOHOLIC MULTIPLE NEURITIS WITH PECULIAR CHANGES IN THE GASSERION GANGLIA.*

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The case presented in this paper is interesting on account of the occurrence of palsy of the bladder and rectum, peculiar changes in the Gasserion ganglion, and the degeneration of the nerves going to the pelvic viscera. The patient's history is as follows:

Mrs. B. K., act. 37, was admitted to the Philadelphia Hospital on January 11, 1901. Her family and previous personal history was negative except that she had been a heavy drinker for years. The patient's history is as follows: One week before admission to the hospital she began to have pains and numbness in the extremities, muscular tenderness and weakness.

Examination. She was a fat, flabby woman with a flushed and bloated face. Her lips and teeth were covered with dried blood. She was dull and stupid. She was able to answer simple questions, but could not give any coherent account of her illness. The muscles of the legs were soft and there was great loss of power, but she was still able to flex and extend the feet, also the knees, to a slight extent, and to move the hips a little. Later there was almost complete loss of power in both legs with marked foot drop. There was complete extensor and quite marked flexor palsy of both forearms. The upper arm movements were also weak. At first she had control of both bladder and rectum, but about a week after admission both became paralyzed. There were no cranial nerve palsies. All the deep reflexes were absent. The nerve trunks and the muscles of the arms and legs were very sensitive to pressure. Tactile sensibility appeared to be normal, but hot and cold were often confused. She lost flesh rapidly not only from general emaciation, but also from local atrophy in the arms and legs. She was delirious or stupid the greater part of the time, but was mentally clear at intervals. A slight grade of jaundice developed toward the end. There was continuous slight fever averaging between 99° and 100° and twice rising to 102° for one night. The pulse rate ranged from 100 to 130; the respiratory varied from 26 to 40 per minute. For several weeks before death she had great difficulty in breathing without there being any physical signs to account for it. On February 13, 1901, her temperature fell to 97°, and she died, the radial pulse ceased to be felt some time before death.

The autopsy revealed cirrhosis of the liver; slight fatty degeneration of the kidneys and slight general arteriosclerosis. The other viscera, including the lungs were normal. Microscopic examination of the peripheral nerves by the osmic acid fresh method revealed parenchymatous degeneration of the vagus, median, ulnar, peroneal and phrenic nerves, the vesical and sacral plexuses and the corresponding anterior and posterior spinal roots. Staining confirmed the presence of this degeneration and also revealed in the vagus and phrenic hemorrhagic extravasations between the nerve bundles and within the sheaths. Examination by the Marchi and Weigert method showed that the degeneration became markedly lessened as the central ends of the nerves were approached. The intramuscular nerve filaments were extremely degenerated and the muscle fibers by the Marchi method showed local areas of degeneration. The rest of the muscle structure surrounding these areas was unaffected.

The central nervous system studied by the Nissl, Weigert and Marchi methods and treated with the nuclear and other stains showed marked alterations. Widespread and intense chromatolysis with at times vacuolization was present in the anterior horn cells, the cells of Clarke's columns and those of the bulbar nuclei. There was intense con-

*From the William Pepper Clinical Laboratory, Phoebe A. Hearst Foundation.

**Read before the American Neurological Ass'n, Boston, June 20, 1901.

gestion of the gray matter throughout the entire cord and medulla. The Marchi method showed intense acute degeneration of the posterior columns, the direct cerebellar tract, and to a lesser degree throughout the entire cord. The anterior and posterior roots, both intra and extra medullary, were markedly degenerated. The Weigert and carmine stains confirmed these changes and revealed an old and quite extensive perivascular sclerosis affecting the posterior and lateral tracts, (see fig. 1), presenting the appearance somewhat of a postero-lateral sclerosis (combined system disease).

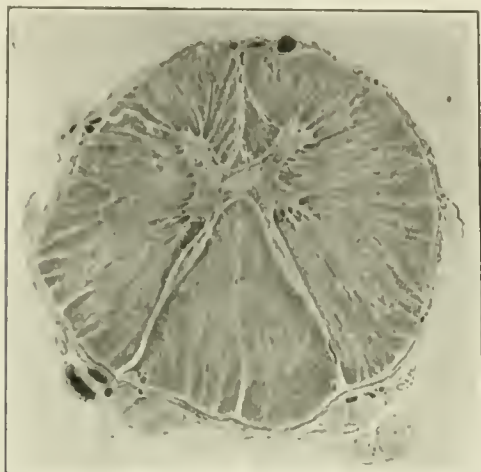


FIG. 1.—Spinal Cord of Case 1, showing degeneration in the posterior and lateral tracts; also a very marked perivascular sclerosis stained by Weigert's method; the intense congestion of gray matter is well shown, as are also the lighter colored areas indicating the degenerative portion of the cord. The white streaks are areas of sclerosis surrounding small distended thickened capillaries.

The Gasserian ganglion was markedly altered. The nerve fibres were degenerated like the other peripheral nerve and nerve roots. The ganglion cells were in a condition of almost complete chromatolysis, vacuolated and very many of them completely destroyed and infiltrated with a calcareous material staining a deep purple with haemalum and presenting a peculiar semicrystalline structure. These areas were still surrounded by the cell capsule and presented a totally different picture to other areas of infiltration of a similar nature in the neighborhood of the smaller vessels. Such areas were small in size, and bunched in the form of rosettes about the vessels. At no time did they show the peculiar concentric arrangement of the concentric bodies found in the aged and in the *douloureux* (Spiller-Barker).¹ The vessels of the ganglion and elsewhere revealed evidence of an active pathological process in the thickening of the media and a marked increase of the number and size of the nuclei of the vessel walls. The most marked and striking changes were found in the cell capsules and in the interstitial tissue. There was a very marked round cell infiltration in the stroma of the ganglion without any special congestion of the ganglion. These cells were not leukocytes nor were they the small round cells found in inflammatory conditions, but were of larger size and more the shape and size of the connective tissue of the stroma. In the normal ganglion the ganglion cells are each surrounded by a capsule composed of a single layer of endothelial cells. In this ganglion the cells of the capsules had proliferated to such an extent as to form several layers about the cell and at times to completely fill the cell capsule, although this did not frequently occur, (see fig. 2). The only other condition in which these changes occur with any degree of constancy is hydrophobia. In the capsular changes of hydrophobia, however, the original layer of capsule cells is preserved, the proliferation occurring internally toward the centre of the cell, whereas in this specimen the proliferation occurs both internally and externally to the capsule with complete obliteration of the original layer of capsular cells. The

new formed cells are very different from those found in hydrophobia; here we find the cells with a distinct cell body and forming laminated layers of cells around the cell like so many connective cells. Such a condition of these cells is rare in hydrophobia, where we usually find but little tendency to form a spindle cell body and merely nuclei to indicate the cell proliferation. These changes together with the calcification of the ganglion cells has led us to the conclusion that these ganglion changes, especially the capsular changes are of a chronic or at least of a very subacute character with possibly an acute exacerbation towards the end of the disease.

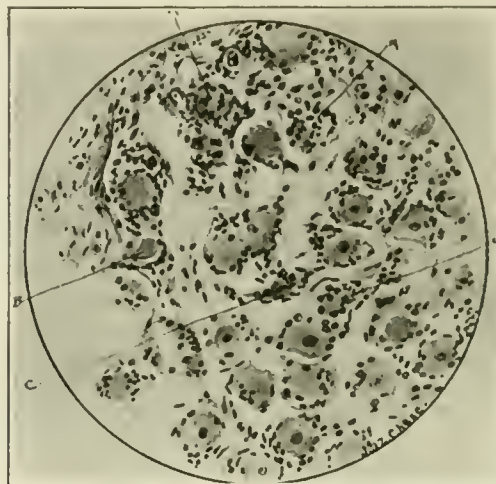


FIG. 2.—Gasserian Ganglion of Case 1 (alcoholic multiple neuritis) showing interstitial and pericellular and intra-capsular small round cell infiltration.

A. Capsule entirely filled with proliferated cells.
B. Nerve cell almost completely degenerated; the nucleus has disappeared and the cell is shrunken.
C. Proliferated stroma cells.

To sum up we have a case of acute alcoholic multiple neuritis, with involvement of the bladder and rectum and acute widespread degeneration of the central and peripheral nervous systems, of the pelvic nerves, the vagus, and phrenic with hemorrhagic extravasation within the sheaths of the latter; degeneration of both fibre and cellular structure of the Gasserian ganglion (the other intervertebral and cerebral nerve ganglia not being examined) and intra and extra capsular round cell infiltration and proliferation about the ganglion cells which were in an advanced state of chromatolysis.

The changes in the Gasserian ganglia may be of some clinical and pathological significance and importance. Van Gehuchten and Nélis, in an article on rabies ascribed the paralysis to changes found in the intervertebral ganglia, which often were not as intense as the changes found in the ganglia here described. They came to this conclusion because no degeneration was found in the motor fibres from the cortex to the muscles and did not sufficiently take into consideration the cell changes of the spinal cord at times occurring in rabies. In any event it will be worth our while even with the presence of degeneration of the nerves sufficiently intense to cause the symptoms in alcoholic palsies, to bear in mind the possibility of these ganglionic changes as a contributory factor in the production of the spinal and cranial nerve palsies. The capsular lesions in the ganglia are in all probability due to

1. Spiller—*Jn. Am. Med. Ass'n*, 1900, P. 1094.
Barker—*Jn. Am. Med. Ass'n*, May 5, 1900, P. 1093.

2. Van Gehuchten and Nélis *Bull. de l'Acad. Royal de Med. de Belgique*, 4 Serie 14, 1900.

the irritant effect of the alcoholic or some metabolic poison, just as the lesions in rabies are due to an irritant product acting on these structures. Proliferation of the capsular cells has been described only two or three times outside of rabies³ in which it constantly occurs in advanced cases. In an article on this subject one of us in conjunction with Dr. Ravenel predicted, that such capsular changes would be found in diseases due to irritant toxins, but were unable to find them in an extensive investigation of tetanus and diphtheria. Crocq⁴ found in one case of fatal diphtheria, lesions analogous to rabies but differing both from that affection and the lesions described in this paper.

The bladder and rectal disturbances in alcoholic multiple neuritis are interesting, because it is usually taught, that they do not occur and that their presence is a differential point against multiple neuritis.⁵ Oppenheim states that, in the absence of delirium or unconsciousness, it should suggest some complications such as an involvement of the spinal cord." Pathological changes acute and chronic were present in this case. The acute changes, an extension of the peripheral changes to the spinal cord, are not infrequently found in a multiple neuritis unassociated with bladder or rectal symptoms. There was no palsy of the bladder and rectum until the development of the acute disease notwithstanding the chronic sclerosis. We are therefore of the opinion that, in the absence of any special lesions in the lumbar enlargement, the bladder and rectal incontinence was due to lesion of the peripheral neuron as manifested by the intense degeneration of the pelvic nerves and sacral roots.

From these findings it can be easily understood why impotence is met with in some cases and amenorrhea in others.⁶ It is also demonstrated in this case that a multiple neuritis with demonstrable lesions affecting the bladder and rectal nerves can occur, and too much stress should not be laid on this point in differential diagnosis from cord disease.

THE INFLUENCE OF SECONDARY INFECTIONS IN CHRONIC PULMONARY PHTHISIS:

An Introduction to a Discussion on Mixed Infection in Tuberculosis, July 26th, 1901.

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The influence which is exerted by secondary infections on the course and outcome of certain forms of tuberculosis in man is a matter of the greatest importance in the practice of medicine, and one which began to attract attention so soon as the identification of the specific parasite of the disease enabled its pathology to be studied with exactness. But the difficulty attending on the attempt to arrive at a true solution of this question is no less considerable than its importance; and it was with extreme diffidence that, at the request of the Secre-

tary of this Section, I undertook the responsibility of opening a discussion on mixed infections in tuberculosis.

Having once undertaken the responsibility, however, I felt that by dealing with the one aspect of the question which seemed to me to be of the greatest importance practically, I could better supply material for debate than by merely recapitulating generally the opposing views on this matter which have been put forward by different pathologists; views which are well known to all of you, and which will doubtless be revived and discussed by succeeding speakers.

My own remarks, then, will be limited almost entirely to the consideration of the part played by secondary infections in that form of tuberculosis in which the complication is most markedly manifest, and in which the results of secondary infection are, as it would seem, most disastrous, that is to say, in chronic pulmonary tuberculosis as it occurs in adults.

Chronic Pulmonary Tuberculosis and Chronic Pulmonary Phthisis.

Whilst there can be no question as to the cardinal part which *bacillus tuberculosis* plays as the primary, or original, factor in the condition known as chronic pulmonary phthisis, the influence of the specific parasite in the production of the symptoms characteristic of this condition, and its importance as an ultimate factor in the excessive mortality caused by the disease, are not by any means so well established.

Frequently, indeed almost invariably, the terms chronic pulmonary tuberculosis and chronic pulmonary phthisis are used in clinical medicine as if synonymous; whereas pathologically the two conditions differ widely, although agreeing in the fact that *bacillus tuberculosis* is present in the lesions of each. In uncomplicated chronic pulmonary tuberculosis the single organism present, the specific bacillus, is one which, under the given conditions, does not manifest more than a quite low degree of virulence in the majority of cases, whether as regards its direct action on the tissues actually infected, or as regards its action on the system as a whole by the production of toxins. In chronic pulmonary phthisis, on the other hand, to the action of this parasite is added the more acute influence of pyogenic organisms, whose potentiality for evil, again under the given conditions, is incomparably greater, whether by direct action on the tissues infected, or by the production of toxins.

That success in treatment is founded on the correct pathology of a disease is the most obvious of truisms; and since a further reduction of the still excessive mortality from pulmonary phthisis is one of the two great objects to which the efforts of public medicine of the present day are most earnestly directed, the importance of a true appreciation of the influence of the several factors which cause this mortality can scarcely be overstated. In dealing with chronic pulmonary phthisis, are preventive and curative measures to be directed exclusively against the specific parasite of tuberculosis, or are we to regard the secondarily infecting organisms

3. Ravenel and McCarthy—Univ. Med. Mag., Jan. 1901.

4. Iderm—

5. Oppenheim Lehrbuch, Zw. Aufl. '98.

6. Buzzard quoted by Oppenheim Lehrbuch.

* From advance sheets furnished by our representative at the Congress on Tuberculosis, London.

as factors of equal, or even greater, importance in the causation of the mortality?

And in seeking an answer to this question, the first thing that one has to consider is, what is the nature of chronic pulmonary tuberculosis before the occurrence of secondary infection has converted the condition into one of chronic pulmonary phthisis.

Uncomplicated Chronic Pulmonary Tuberculosis.

By uncomplicated chronic pulmonary tuberculosis I understand is meant the condition in the lungs brought about, usually in adults, by the presence of *bacillus tuberculosis* alone, in which a limited number of granulomata in various stages of development and degeneration are present in the tissues infected, and in which infection has in a very large majority of cases occurred by way of the air passages.

The fact that such a condition usually results from direct air-infection is rendered probable by what one observes in the experimental infection of animals.

In lower animals the conditions which correspond with general miliary tuberculosis and with chronic pulmonary tuberculosis can be produced at will according to the method of inoculation practiced. If one causes a general blood infection by the injection of *bacillus tuberculosis* directly into a vein, the result is manifest in the development of a large number of gray miliary tubercles in the lungs—the common seat of arrest and lodgment of bacteria circulating in the blood—in the spleen, and elsewhere. The animal usually dies from the effects of the infection before sufficient time has elapsed for the granulomata to undergo the degenerative changes found in cases of tuberculosis in which the degree of primary infection has been less intense.

If, on the other hand, the animal is made to inhale infected dust, one gets a chronic, and at first strictly localized, tuberculosis, such as is the first stage towards chronic pulmonary phthisis. Under these conditions, unless the initial dose of bacteria inhaled has been excessive, life is sufficiently prolonged for the resulting granulomata to undergo the successive degenerative phases seen in the lesions of chronic pulmonary tuberculosis in man.

The first thing to be noted about uncomplicated chronic pulmonary tuberculosis in man is that the condition is comparatively rarely met with by the physician in his practice, and that the opportunity for the study of its morbid anatomy is found mainly in patients who have died from some other disease. It is rarely recognised by the physician, because of the absence of any definite symptoms produced by it in the majority of instances, such cases as are diagnosed being usually those in which a certain amount of cough has attracted attention to the chest, and the sputum has in consequence been examined. In such cases physical signs and definite symptoms of disease are most frequently absent; and the discovery of the infection by the finding of bacilli in the sputum is usually almost a matter of accident.

On the other hand, such a condition of uncomplicated chronic pulmonary tuberculosis as being the initial stage of chronic pulmonary phthisis must, we know, be an extremely common one; and the frequency of its occurrence is emphasized when we

consider, not only the number of cases in which secondary infections have determined the onset of definite pulmonary phthisis, but also the large number of cases of pulmonary tuberculosis which there is reason to believe never arrive at that stage, and are not recognized at any time during life. The frequency of these latter cases can only be estimated from the number of instances in which lesions, usually of limited extent indicative of cured or arrested tubercular infection, are found in the lungs of adults dying from other causes.

Ample evidence of this has been brought forward by many pathologists, and I need now only quote the following facts.

The condition of the lungs with regard to evidence of past disease has been recorded with particular care in the case of all patients dying with malignant disease in the cancer wards of the Middlesex Hospital, during the eighteen months. In all 128 such cases have been examined during the period, and the following results have been tabulated.

Age.	Lungs free from any lesions suggestive of recent or cured tuberculosis.	Lungs with lesions suggestive of recent or cured tuberculosis.
1—20	3	—
21—30	2	—
31—40	6	3
41 and over . .	80	34

The lesions found may be roughly classified as follows:—

Recent localized tuberculosis, 3 cases,

Caseous or calcareous nodules in lungs, 18 cases.

Cicatrization of lung substance, 16 cases.

In all these cases the extent of the lesions was limited; and in not one case was any actual history of past phthisis obtained during life. Of the cases in which lung lesions of one sort or another were found, there was absolutely no history of any chest trouble at all in thirty-four; in the case of the remaining three the following histories were given. One patient had suffered from "inflammation of the lungs," and another from "chronic bronchitis," both some years previously, whilst the third, a woman aged 34, stated that she had suffered from "spitting of blood" seventeen years previously. Seven of the ninety-one-patients who, after death, showed no lesions in the lungs had also given a history of either "bronchitis" or "inflammation of the lungs" at some time previous to admission.

Excluding the three cases of recent tubercular infection, the result of the investigation shows that of one hundred and twenty patients of both sexes who had survived beyond the age of thirty, thirty-four showed definite evidence of past destruction of lung substance, with subsequent arrest of the disease which caused it. And knowing from *post-mortem* examinations the relative frequency of occurrence of diseases which cause such destruction of lung substance, it cannot be questioned but that a large proportion of these thirty-four patients had at one time or another suffered from pulmonary tuberculosis.

Dr. Lazarus-Barlow has been kind enough to give me the results of the last one hundred and sixty-two consecutive *post-mortem* examinations which he has carried out at the Westminster Hospital on

adults over the age of thirty dying from diseases other than tuberculosis. Of one hundred males, eighteen showed evidence of arrested tuberculosis; and of sixty-two females, fourteen showed similar evidence. This gives a proportion of thirty-two cases of arrested tuberculosis in one hundred and sixty-two of both sexes. We find, then, that in individuals dying from causes other than tuberculosis a considerable percentage show evidence of having at one time or another suffered from a localized pulmonary tuberculosis which has not been sufficiently severe to attract notice during life by definite symptoms. If we compare the ratio of deaths from chronic pulmonary phthisis to deaths from all other causes, other than the various forms of tuberculosis, in adults over the age of thirty, we can gain some idea as to the frequency with which the arrest and cure of chronic pulmonary tuberculosis occurs without a development into pulmonary phthisis.

We next have to consider the nature of the bacteria which by infecting the lesions of chronic pulmonary tuberculosis convert that condition into one of chronic pulmonary phthisis.

The Secondarily Infecting Bacteria of Chronic Pulmonary Phthisis.

Our knowledge of the flora of pulmonary tubercular cavities has been arrived at by the examination of (1) the sputum discharge during life, and (2) of the walls and contents of the cavities after death.

Examination of the sputum has usually been carried out after the plan suggested by Kitasato; the mouth is well rinsed out, the sputum caught in a sterilised vessel, and washed repeatedly with sterilised distilled water. Culture media are then inoculated with the sputum and incubated.

Using this method, the error arising from contamination by bacteria from the mouth and pharynx is reduced as much as possible, and on comparing the results of the cultures with stained specimens of the sputum a reasonably accurate estimate of the relative proportion in which any bacteria are present in the pulmonary lesions during the progress of the disease may be obtained. Cultivation of the bacteria found in the contents of the cavities after death, and microscopic examination of the cavity walls, appear to me as a method of examination of rather less value than the preceding; the results obtained are, so far as the particular object in view is concerned, very liable to be vitiated by the occurrence of bacteria which have infected the cavities only during the last few hours before death, or afterwards, and which consequently have had no influence on the progression of the disease during life. A full catalogue of the literature embodying the work of those who have dealt specially with the species of bacteria which infect such cavities has lately been published in Sata's monograph on Mixed Infections in Pulmonary Phthisis (I), and there is no need for me now to do more than mention the different species commonly found.

Practically all who have worked at the subject are agreed that various species of cocci are the predominating organisms in the secondary infection of tubercular cavities, *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*,

Diplococcus pneumoniae, and *Micrococcus tetragenus*, being found more especially. Amongst other bacteria of less common occurrence under these conditions are, *Bacillus coli communis*, *B. pneumoniae*, of Friedländer, *B. pyocyaneus*, species of *Protus*, and *Saccharomyces albicans*. Sata also describes *B. pseudodiphtheriticus* and *B. pseudodiphtheriticus pulmonalis* as occurring with some frequency.

Artault (2), again, has compiled a very full list of the bacteria which are found in cavities after death, but many of the organisms mentioned by him, and by others who have carried out this method of examination after death, must have been present as merely casual contaminations, and cannot be considered seriously as having had any definite influence on the course of the disease.

It is to the pyogenic cocci, and above the rest to *Streptococcus pyogenes*, that we have therefore to look when considering the effects of secondary infections as exercised through the lengthened course of a case of chronic pulmonary phthisis.

The Pathogenic Action of the Secondarily Infecting Bacteria.

It may next be asked in what manner it is that these cocci exert an injurious influence; a point which must be dealt with in some detail. And the action of such organisms may be considered, first as to their action locally on the tissues actually infected, and secondly, as to their effects on the system generally.

The local effects are manifest by an active destruction of the tissues actually infected, by the occurrence of perinodular pneumonia, and by what may be described in general terms as a lowering of the powers of resistance—a lowering of the vitality of tissues in the neighborhood of those actually infected; the latter effect being partly due to the direct action of toxins produced by the bacteria, and partly to vascular disturbance in the proximity of the lesions.

There action on the system at large may be expressed either by the results following on the absorption of toxins, toxemia, or by those of an actual infection of the blood generally by the bacteria themselves.

From these ways in which the secondarily infecting bacteria might act injuriously, we may, I think, exclude a general blood infection as being a factor of any importance in the pathology of chronic pulmonary phthisis, save only as a terminal infection.

Evidence on this point is afforded the examination of the blood during life, and of the blood and organs after death.

Petruschky (3) examined the bodies of fourteen patients who had died with pulmonary phthisis, and in eight cases isolated streptococci from the blood and internal organs. These observations are of value only as establishing the relative frequency in phthisis of terminal infection by the organism which is the predominant secondarily infecting parasite during life, and beyond that have no direct bearing on the pathology of the progressing disease.

Jokowski (4) examined blood, drawn from the finger, from patients in the hectic stage; in eight

cases out of nine thus examined. Jakowski obtained cultures, either pure or mixed, of *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, *Streptococcus pyogenes*. The method of examination used has, however, now become obsolete because of the difficulty of avoiding contamination, and in the light of recent work Jakowski's results must be looked upon with suspicion. Thus Straus (5) on making cultures from the blood of phthisical patients, "en pleine fièvre hétique," the blood being obtained with a syringe directly from a vein, found it absolutely sterile in every case out of thirteen examined.

Mangin-Bocquet (6) similarly examined the blood from seven cases of advanced phthisis, one cubic centimetre of blood being withdrawn from a vein and transferred to culture media. In five out of the seven cases the culture tubes remained sterile; in the other two cases a small proportion of the tubes inoculated showed a growth of a white coccus.

The balance of evidence afforded by these and other observations allow us, then, to exclude general blood infection as a factor of any consequence in the present discussion. And the effect of secondarily infecting organisms has to be considered only with regard to their local action and with regard to the production of a toxemia.

Method of Secondary Infection.

The method by which secondary infection occurs may just be mentioned. In normal tranquil respiration, carried on through the nostrils, all bacteria in the air inspired are arrested in the anterior part of the nasal passages, and so the air which passes through the glottis into the lungs is under ordinary circumstances free from organisms.

This arrangement is necessarily disturbed by the act of coughing, when a sudden and deep inspiration through the mouth occur preparatory to violent expiratory efforts. And under these circumstances potentially pathogenic bacteria will pass with the rush of air through the glottis, and into the lungs, the working of the normal mechanism for their arrest being in abeyance.

Assuming that the lining cells of the lower portion of the respiratory tract are in a healthy condition, and that the dose of inspired bacteria is not excessive, the natural germicidal power of the healthy mucous secretion will probably be sufficient to destroy the activity of any invading bacteria before mischief is done. If, however, portions of the mucous lining have their vitality impaired by the irritation caused by neighboring tubercular nodules, or if granulomata have, in breaking down, exposed small cavities containing caseous material, any invading bacteria find conditions favorable for their growth, and are able to effect a lodgment.

It is of some interest to note that the bacteria which are under normal conditions arrested in the fore part of the nasal passages are amongst those which are most frequently found infecting pulmonary cavities. Thus von Besser (7) on examining the nasal secretion of fifty-seven individuals found *Diplococcus pneumoniae* present fourteen times, *Staphylococcus pyogenes aureus* fourteen times, *Strepto-*

coccus pyogenes seven times, and *B. pneumoniae* (Friedländer) twice.

Apart from the infection of the lungs by inspired air, one must just mention secondary infection down the trachea by direct continuity of surface, in cases where there is a laryngitis, as a possible mode of secondary infection of tuberculous lesions in the lungs.

Comparison of the Pathogenic action of *B. Tuberculosis* and the Secondarily Infecting Bacteria in the Production of the Characteristic Phenomena of Chronic Pulmonary Phthisis.

Uncomplicated chronic pulmonary tuberculosis being a condition which, in a large majority of the cases in which it occurs, does not of itself give rise to serious symptoms, and which, in a probably considerable number of the cases in adults, appears to become spontaneously arrested, we have next to consider to what extent the serious and fatal features of chronic pulmonary phthisis are due to the further growth of *B. tuberculosis* and to the secondarily infecting bacteria respectively.

Taking the primary pathological features of fully developed chronic pulmonary phthisis during life as including (1) evidence of active destruction of lung tissue, and (2) the production of what is termed " hectic fever," with its accompanying high evening temperature, morbid sweating, and wasting of the tissues generally, we must at the start allow that infection of a cavity by, for instance, *Streptococcus pyogenes* will afford a satisfactory explanation of all the phenomena. On the other hand, we find good reason for believing that *B. tuberculosis* by itself would not—at any rate, under the conditions which prevail in what may be termed a "chronic infection," such as we are now considering—be capable of producing these effects in anything like the extent to which they occur. As to active destruction of tissues, this is never a direct effect of a pure infection by *B. tuberculosis*. A slow destruction of tissue does, of course, occur, but only because of the breaking down of granulomata, the very presence of which, as they occur in tuberculosis, is evidence of a low grade of virulence in the parasite producing them. The organism comes to rest at some point in the tissues, and its presence there is just sufficient to determine an aggregation of round cells, from which the granuloma is developed. A quite similar result may be produced by a purely mechanical irritation, and up to the time when the granuloma is fully developed, there is, so far, no evidence whatever of any active destruction of tissues. The subsequent degenerative changes which the tuberculous granuloma may undergo are to be attributed quite as much to a cutting off of the blood supply of the cells concerned as to any injurious action on the cells by the bacteria contained in the lesion; and with these changes there is no active destruction of the living tissue neighboring on the caseating or breaking-down granuloma, but merely a certain amount of round-cell infiltration, which, in the neighborhood of the simple tuberculous granuloma, is always of slight extent.

With regard to the secretion of toxins, which by a toxemia might produce general or constitutional symptoms, all that one can say is that in all forms

of chronic pure tuberculosis in parts other than the lungs, the symptoms which can be attributed to such a toxemia are either of the slightest, or conspicuously absent. When one does get symptoms due to an acute infection by *B. tuberculosis* they are of a quite different character, not merely in degree but in type, from those of chronic pulmonary phthisis. The comparative inertness of chronic tuberculosis disease, before an entirely new feature has been added by secondary infection, cannot be better illustrated than by what occurs in cattle. An ox may have the most tuberculous infection of the pleural or peritoneal sacs, and yet will frequently be in absolutely prime condition, there is no suggestion of disease until the tuberculin test is applied, or the animal is slaughtered. But given a breaking down of tubercles in the lung substance, with secondary infection of the cavities, or an ulceration of tuberculous lesions in the intestine, and one finds the same high temperature, the general wasting, and the same active destruction of the infected tissue which characterize the average case of chronic pulmonary phthisis in man. In cattle the effects of tuberculosis depend not on the extent of the specific lesions—so long at least as these are localized—but rather upon the occurrence of secondary infection. When one considers more especially those forms of chronic infection which come more commonly under the care of the surgeon, one finds the same thing; so long as secondary infection by pyogenic bacteria is absent, constitutional symptoms indicative of any serious toxemia are wanting. When a secondary infection occurs, either spontaneously or as the result of operative interference, one gets the same train of general symptoms as those which mark the transition of uncomplicated pulmonary tuberculosis into chronic pulmonary phthisis.

I may, perhaps in the short time which remains, quote very briefly two cases which I have recently been able to follow closely, and which illustrate my contention as to the change brought about in chronic tuberculous disease by the supervention of secondary infection.

The two cases were at first apparently ones of uncomplicated chronic pulmonary tuberculosis in men, aged thirty-four and about twenty-four respectively. Neither complained of any definite symptoms, except cough; in neither was the temperature, when the cases first came under notice, above 99° F. in the evening. The older man was powerfully built, and well nourished; the younger man was of slight build, but not of unhealthy appearance. Both had been examined by skilled physicians, and in both I was told that definite physical signs of chest disease were absent, except that in the older patient there were some indications of old pleural inflammation, and in the younger patient a very indefinite suggestion of some impairment of resonance at the right apex. In both the disease ran very much the same course. When the sputum was first examined it consisted of a tenacious mucoid mass, a small quantity of which was discharged on rising in the morning. This contained in each case an abundance of *B. tuberculosis*, and no other bacteria except a small quantity of cocci from time to time, these

latter, when isolated, appeared to correspond with *Staphylococcus pyogenes albus*, and were not present on every occasion when the sputum was examined. After a few months in each case—during all which time periodical examinations of the sputum were being made—chronic pulmonary phthisis became well established. And in each with the development of physical signs in the chest, and wasting, night sweats, and high evening temperature, large quantities of *Streptococcus pyogenes* appeared in the sputum, with marked alteration in the physical characters of the expectoration and in its quantity. And no one who had examined the sputum, and watched the change in the patients, could have doubted the relation of the appearance of the pyogenic organism to the progress of the case.

Believing, then, that secondary infection of the lungs is the chief, or at any rate the immediate, cause of the excessive mortality from pulmonary phthisis, it is permissible to ask whether the pathology of these infections can throw any light upon their treatment.

The Treatment of Secondary Infections in Pulmonary Phthisis.

Stated generally, I believe that the teaching of pathology on the matter is that the treatment of secondary infections should be the chief object aimed at in the first place.

Believing strongly as I do that ultimate success in the specific treatment of declared tuberculosis will be attained with some modification of tuberculin, I also feel that the comparative failure of the method in the past, and the consequent discredit which has fallen on it, have been almost entirely due to the ignoring of the effects of the common secondary infection of the lung lesions by pyogenic cocci. Knowing as one does the intense reaction in the neighborhood of tubercular lesions which may follow the use of tuberculin, it is difficult to understand how its use in a patient whose lesions are secondarily infected and lung tissue damaged by actively virulent pyogenic bacteria could fail to be followed by disastrous consequences. Before any attempt at the use of such a method should be made, the extent of any secondary infection should be carefully taken into consideration. And, whilst a very large proportion of the cases which come under treatment will have already suffered this secondary infection, the question must arise as to whether any practical steps can be taken to reduce the intensity of such an infection by pyogenic cocci. And I think that one can fairly claim that in cases of average severity efficient steps might be taken in this direction. By keeping a patient who has a cavity infected by pyogenic cocci in an atmosphere of practically germ-free air, such as may be found at moderate altitudes, and by enforcing the nearest approach to complete physical rest possible, one can not merely protect him against the risk of reinfection by pus organisms, but also one places him under conditions in which the work that has to be done by a damaged lung is reduced to a minimum. With the patient thus protected as far as possible against any reinfection of the cavity, one may confidently hope that the intensity of the present pyogenic in-

fection will be reduced. It is a matter of common experience that when pyogenic bacteria are confined in a limited space, and are kept from reinforcement from outside, that their virulence becomes attenuated, and that after a time they tend to die out. Thus the streptococcus from an old empyema, old pyosalpinx, or chronic abscess of any sort will often be found to have lost much, or all, of the virulence which it originally must have possessed. Charrin and Guillemonat (8) have recently shown that the same attenuation of virulence in intestinal bacteria takes place when an animal, without any special preparation, is kept in an atmosphere of sterile air and fed on sterilized food. In the absence of reinforcement from without, the number of intestinal bacteria is markedly diminished, and the vitality of such as survive is distinctly lowered. If, therefore, a patient is kept under the conditions which I have spoken of, one may expect that improvement, so far as the pyogenic infection of cavities is concerned, will follow. And it is probable that this is what happens in most of the cases in which apparent arrest of phthisis follows treatment in well ventilated hospitals and sanatoria. Every one knows, however, the common after-history of such cases. A working man as the result of such treatment puts on weight, night-sweats disappear, the physical signs become insignificant, and as I said, the tuberculosis is looked upon as being arrested, or even cured. What has probably really happened is that, with the disappearance of secondary infecting bacteria, the pulmonary phthisis has reverted to the former condition of uncomplicated pulmonary tuberculosis. If the patient returns to his old surroundings, a reinfection with pyogenic cocci from the foul air in which he lives occurs, and the case slowly drifts back into one of chronic phthisis again. Or if the conditions are more favorable, the proper tuberculous lesions may in time undergo a natural cure in the absence of any re-infection.

The constancy with which a recrudescence of the disease happens in patients with arrested phthisis discharged from sanatoria and hospitals to their old surroundings cannot be attributed to re-infection with *B. tuberculosis*, and no other explanation than a re-infection of tuberculous lesions with pyogenic organisms will suffice.

I have laid some stress upon this matter, because it is just in this stage of arrested phthisis, that specific treatment of the now more or less pure tuberculosis with tuberculin should have the most chance of success. The lungs being free from pyogenic organisms the result of the specific reaction might be expected to be far less severely felt, and a real cure of the tuberculosis might be hoped for.

In addition to the treatment by rest and pure air, it is likely enough that a systematic treatment with anti-streptococcal serum in cases in which *Streptococcus pyogenes* is the predominating organism, and those cases form a large proportion of the whole, would help materially in shortening the time which must elapse before any specific treatment for the tuberculosis can be safely attempted.

Other problems of interest in connection with

the subject of mixed infection in pulmonary tuberculosis, which I have not had time to touch on, are (1) the effect of secondarily infecting organisms on the progress of the tubercular infection itself, a question on which diverging views have been expressed, some holding that the growth of the bacillus is thereby checked, and others that its dissemination is favored; and (2) the exact pathology of those cases in which phthisis rapidly supervenes after some infective diseases, such as typhoid fever, influenza, or variola. Are such cases the result of secondary infection of a lung already the seat of latent tuberculosis, or are they the result of a secondary infection by *B. tuberculosis* of a lung already damaged by bronchitis or pneumonia in the preceding specific disease?

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended October 19, 1901:

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	San Francisco	Oct. 6-13.	3	1
KENTUCKY:	Lexington	Oct. 12-19.	12	
LOUISIANA:	New Orleans	Oct. 12-19.	5	
MASSACHUSETTS:	Boston	Oct. 12-19.	18	2
NEBRASKA:	Omaha	Oct. 6-19.	6	
NEW HAMPSHIRE:	Concord	Oct. 6-12.	1	1
NEW JERSEY:	Camden	Oct. 12-19.	6	
NEW YORK:	Elmira	Oct. 12-19.	6	
	New York	Oct. 12-19.	4	1
PENNSYLVANIA:	Norristown	Oct. 12-19.	1	
	Philadelphia	Oct. 12-19.	69	10
	Pittsburg	Oct. 12-19.	1	
	Steelton	Oct. 13-20.	1	
RHODE ISLAND:	Newport	Oct. 12-19.	1	
UTAH:	Salt Lake City	Oct. 12-19.	1	
VERMONT:	Burlington	Oct. 12-19.	15	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Sep. 28-Oct. 5.	4	
BELGIUM:	Brussels	Sep. 28-Oct. 5.	1	
COLOMBIA:	Cartagena	Sep. 23-29.	1	
	Panama	Oct. 7-14.	125	
FRANCE:	Paris	Oct. 5-11.	6	
GREAT BRITAIN:	London	Sep. 28-Oct. 5.	169	7
	Southampton	Sep. 28-Oct. 5.	1	
INDIA:	Calcutta	Sep. 7-14.	2	
	Madras	Sep. 7-13.	2	
MEXICO:	Mexico	Sep. 29-Oct. 6.	2	
NOVA SCOTIA:	Halifax	Oct. 6-12.	20	
RUSSIA:	Moscow	Sep. 14-28.	5	1
	Odesa	Sep. 28-Oct. 5.	2	
	Warsaw	Sep. 14-21.	1	
SPAIN:	Madrid	July 15-Sep. 9.	9	26
URUGUAY:	Montevideo	Aug. 16-24.	22	2

PLAGUE—United States.

CALIFORNIA:	San Francisco	Oct. 6-13.	1	1
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PLAGUE—Insular.

PHILIPPINES:	Manila	Aug. 18-24.	11	
		Aug. 31-Sep. 7.	2	

PLAGUE—Foreign.

CHINA:	Hong Kong	Aug. 31-Sep. 7.	6	6
	Newchwang or Newchang	Aug. 31.	2	
INDIA:	Bombay	Sep. 10-17.	250	
	Calcutta	Sep. 7-14.	18	
	Harachi	Sep. 8-16.	18	13

YELLOW FEVER.

COSTA RICA:	Port Limon	Oct. 5-12.	2	1
MEXICO:	Merida	Sep. 21-28.	3	
	Valladolid	Sep. 21-28.	4	
	Vera Cruz	Sep. 28-Oct. 5.	7	4

CHOLERA.

INDIA:	Bombay	Sep. 10-17.	11	
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The Philadelphia Medical Journal

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The Fourth Disease.—It is perplexing, after examining a child suffering from an exanthematous disease, to make a diagnosis of measles and then to be told that the patient has had the measles before; it is even possible that two former attacks of measles may be claimed for the patient. It has long been taught that one attack of an infectious disease protects the individual against a second attack; and researches in bacteriology, followed, as a natural consequence, by studies on immunity, have shown that the microorganisms of these diseases require a virgin soil for their growth and that their biological processes produce such changes in the body of the host that the soil is exhausted for the development of that particular germ. Long ago measles and scarlet fever were thought to be one disease, until, in the seventeenth century, Sydenham clearly demonstrated the differences between them. Later, the term measles was shown to include two diseases, the second of which was termed rubella, rōtheln or German measles. In this country, Smith, Holmes and Griffith, among others, have been instrumental in giving rubella its place as a distinct disease. Many writers describe a form of rubella that resembles measles in its symptomatology, *rubella morbillosa*, and a form that resembles scarlet fever, *rubella scarlatinosa*. It is the latter group of cases that leads to grave anxiety on the part of the physician. If the disease is scarlet fever, a period of isolation of from forty-two to fifty-six days is required before it is safe to allow the patient to resume his customary habits. If the disease is rubella, a shorter period of isolation is required. Clement Dukes (*Lancet*, July 14, 1900, p. 89) is convinced that there are two diseases included under the term rubella, rose rash or German measles; the one, rubella; the other he names "the fourth disease." This disease presents no premonitory symptoms, vomiting is usually absent, and the eruption, which is like that of scarlet fever, is the first symptom to attract attention. The fauces are red and swollen, but they give rise to no discomfort, however severe the rash may be. In some instances the skin is merely rough, but in the majority of cases there is free desquamation of small scales; in still other cases the desquamation

is equal to the worst ever seen in scarlet fever. The tongue is furred throughout and there is no peeling of that organ on the fourth day as there is in scarlet fever. The lymph-nodes are universally enlarged, tender and hard. The temperature averages 101° F.; the pulse is usually below 100; albuminuria is never found. The incubation period probably varies from nine to twenty-one days. The continuation of desquamation, however, is of no consequence as a cause of infection or of sequelæ. The enumeration of the characteristics of the disease shows the main differences between it and scarlet fever. Furthermore, the disease is not a mild form of scarlet fever because both diseases occurred concurrently in the same epidemic, and some patients had both diseases in the same epidemic. The difficulties of distinguishing "fourth disease" from rubella are (1) the similarity of the symptoms in both, with the exception of the dual appearance of the rash. (2) The fact that in rubella the rash is at first discrete, like that of measles, but terminates by coalescing and assuming an appearance like that of scarlet fever. (3) Rubella and "fourth disease" frequently occur in the same locality at the same time. (4) The period of incubation is almost identical in both diseases. An attack of rubella, however, does not protect against "fourth disease." Simpson (*Archives of Pediatrics*, September, 1901) refers to an epidemic of an exanthematous disease in which there was difficulty in diagnosis. At first, the cases were thought to be cases of rubella; but later, were believed to be mild cases of scarlet fever. When, however, an attendant, who had previously had scarlet fever, contracted the disease, this diagnosis became doubtful. Many of the patients presented desquamation similar to that seen after an attack of scarlet fever. The incubation period was at least two weeks. Without positively committing himself, the author seems to incline to the opinion that this was an epidemic of "fourth disease." Ashby (*British Medical Journal*, September 7, 1901) in a discussion in the Section of Diseases of Children of the British Medical Association places himself in agreement with Dukes. He believes that there are two diseases included under the term rubella; the usual one with a

long period of incubation, German measles; and a rare one, only diagnosable when it occurs in epidemics.

The Health of the Army.—According to the forthcoming report of the Surgeon-General, the health of the United States Army for 1900 must be regarded as having been unusually good. Just before the Spanish-American War the admission rate (by which is meant the number of admissions to sick report) had fallen in 1896 to 830.65 per thousand, while the lowest death-rate (in 1897) was only 5.11 per thousand. The Spanish-American War of course sadly interfered with the continuance of this good record, but in 1900 the health of the troops began again to be something like normal.

The admission rate for all causes in the army, both volunteer and regular, with a mean strength of 100,389, in 1900 was 2311.81 per thousand. The troops serving in the United States (mean strength 20,690) had an admission rate of 1510.97 per thousand. The death-rate was 7.78 per thousand—4.83 from disease, and 2.95 from injury.

In the Philippines, with a mean strength of 66,882, the admission rate was 2621.96—an increase over the preceding year, due largely to sickness among newly arrived volunteers. Malarial and diarrheal diseases caused two-thirds of the admissions. The death-rate was 28.75 per thousand—20.26 being due to disease. This was a diminution. The health of the troops in the Philippines has been steadily improving. The Chief Surgeon reports that the rate of non-efficiency for the first six months of the present year was less than 7 per cent. The chief diseases were those already mentioned. Typhoid fever has not cut a great figure, and smallpox has almost disappeared. Only one case of plague occurred in the army, and that was in an enlisted Chinese cook.

The health of the troops in Cuba was excellent. With a mean strength of 8690, the admission rate was 1873.07 and the death-rate was only 9.78, as against 18.30 in 1899. Yellow fever was responsible for even a part of this not excessive death-rate, but as the report points out, the cities of Cuba are now well inspected and the death-rate should still further decline.

In China the death-rate was high—47.76. Porto Rico seems to be an ideal place for troops, and the records are about as good as for home stations. The admission rate was only 1577.98, as compared with 2522.40 for the previous year. The death-rate was only 5.05, as against 11.27 in 1899. This death-rate was lower than the lowest recorded death rate in the United States Army—5.11 per thousand in 1897.

Altogether the report of the health of the army, considering that a large part of the troops is serving in foreign and tropical lands, is not discouraging.

The American Troops in China.—The latest issue of the *China Medical Missionary Journal* contains an interesting paper by Dr. Charles Lewis, Surgeon to the U. S. Legation Guard at Peking, on the health of the American troops under his care during the recent campaign in China. He thinks, with reason, that American readers will be interested to know how these soldiers fared when they went to the relief of the besieged legation, and how many of them laid down their lives in the struggle. As Dr. Lewis was practically an eye-witness of most of the things he describes, his report has an especial value. His statistics refer to the army only, the men in the naval and marine service not being included.

Two battalions of the 9th Infantry were the first of these American troops to engage in active hostilities. In the battle of Tientsin they sustained a loss of 19 killed, including Colonel Liscum, and 66 wounded. These wounded were transferred to the hospital ship *Solace*. The 9th and 14th Infantry, and 5th Artillery, Battery "F," were in the battle at Yang-Tswen, and lost 7 killed and 59 wounded. At one place on the march to Peking, 96 men were overcome with the heat.

The above-named force, with the addition of a troop of the 6th Cavalry, took part in the engagement before the walls of Peking, where they suffered a loss of 6 killed and 31 wounded. After the capture of the city the American troops went into winter quarters in the Temple of Agriculture, and most of them remained there during the winter. The largest number present was in October, when the strength of the command was 4044. The average in this command for nine months of non-effective men was only 5.8 per cent.—a remarkably good showing.

The prevailing diseases during these nine months were diarrhea, dysentery, malaria, typhoid fever and venereal affections. Dysentery ranked first in its number of victims, but Dr. Lewis thinks that very much of this dysentery was imported from the Philippines by the troops coming from Manila; these soldiers were much debilitated on their arrival in China, and had the disease when they came. At autopsy the cases of dysentery showed extensive and deep ulceration of the colon, but no ulceration above the ileo-cecal valve. In most of the cases the whole surface of the large intestine was a succession of ulcers. But two deaths occurred from typhoid fever—both from perforation. A grave

form of pneumonia also developed and resulted in 12 deaths. Dr. Lewis says that this disease would have headed the list, had dysentery not been imported from Manila. He also calls attention to the fact that the health of the command during these nine months was better than in most posts at home—an exceedingly interesting fact, considering the circumstances, and one that goes to prove that North China is a healthful region. In spite of the fact that the men wore only felt hats, instead of the tropical helmet, there were no permanent injuries from heat. It is interesting to note, too, that the malaria encountered seemed to have been imported from Cuba or the Philippines, and the men who had it recovered after they had been in China for some time. Syphilis was the most common of the venereal diseases. The report is entertaining both historically and from the standpoint of military hygiene.

Tax-Rate and Death-Rate.—The city of Glasgow is reputed to be one of the best governed municipalities in the world. Its Municipal Council conducts the city's business on business principles, and the citizens, to whom the whole municipal plant belongs, obtain the benefits. A correspondent of *The Outlook* gives some of the figures on which the scheme is carried out. A small house of three rooms and a kitchen rents at \$160 a year, and the tenant (who in Glasgow has to pay the city taxes direct) is taxed \$24 a year. This tax would represent an assessed valuation on the real estate of about \$1300, according to the Philadelphia tax-rate. Of the \$24 thus paid, \$18 is made up of municipal charges, and the balance consists of a charge of \$3 as a poor tax, and \$3 as a school tax—the former rather high and the latter rather low, according to American ideas. There is an extra tax of \$3 for water. But real estate which is assessed at only \$1300 would hardly rent for \$160 a year (the tenant paying the taxes), so the inference is that the property is worth more than that sum, and that the tax-rate in Glasgow is not so high as in Philadelphia. In Glasgow, we are told, the people have great civic pride and regard the city itself as only a larger home than the house. They have half-penny fares on the street cars, fine schools, parks and art galleries, and a splendid and never failing water supply. But better than all, they have reduced the death-rate to fourteen per thousand, although the city has a bad climate and is a great industrial centre, and its death-rate was once notoriously high. From all this it would seem that the citizens of Glasgow have learned how to run their town on business and sanitary principles.

The Value of the Blood Examination in Surgical Diagnosis.—Two interesting and valuable contributions on the subject of the blood state in surgical diagnosis have appeared recently. (*The Annals of Surgery*, September 1901). The first of these represents a comprehensive study of the blood changes induced by ether, from the pen of John C. Da Costa and Frederick J. Kalteyer. They have studied the blood before anesthesia and after anesthesia in 50 cases, as well as having performed experiments on rabbits, in which they have found very marked changes suggestive of erythroblastic proliferation as a result of the ether, and they inquired in the light of this experiment whether the pains in the limbs and back, so common after anesthetization, are not due, at least in part, to changes in the marrow. In this experiment only a trivial amount of blood was lost. The conclusions of Da Costa and Kalteyer, bearing as they do the stamp of most careful study and conscientious work with a large amount of clinical material, are especially interesting in the light of the value of blood examinations to the surgeon. Briefly, they state that accompanying anesthesia there is usually polycythemia caused by a lessening of the watery elements of the plasma, and consequently causing concentration of the blood. The blood inspissation is, as a rule, most pronounced immediately after the termination of the anesthetic stage. The relative increase in the number of erythrocytes is generally still present some time after the operation. But not infrequently the adjustment of the watery and solid elements presents itself before this time and an oligocythemia may be present. The corpuscular hemoglobin value (color index) is always reduced after the termination of the anesthetic state. They were not able to determine the influence of the amount of ether nor the duration of the anesthetic state upon the blood, on account of the many modifying factors. They make the interesting observation that the blood loss does not seem to affect the state of the blood. On account of the hemolysis, which is shown by the fall in corpuscular hemoglobin index after operation, they believe that a general contraindication to operation is present if the hemoglobin is below 50%, and they state that if the hemoglobin is below 40%, a general anesthetic should not be given except under stress of absolute necessity, and when it is given, oxygen should be combined with it, and the operation should be performed rapidly. Proper methods should be taken to bring about reaction after its completion and oxygen inhalation should be used to remove the ether quickly from the lungs. The increasing importance of having some one administer the ether who is skilled and experienced in the work is also fully emphasized by these writers.

The second article to which we refer is that of

Cabot, Blake and Hubbard who have studied the effects of ether upon the leukocyte count; the effects of operation upon the leukocyte count and the effects of fractures upon the leukocyte count, as well as the regeneration of the blood after operations for malignant disease. They also have investigated 50 cases, and their findings are as valuable as they are interesting. They state that at the end of complete anesthesia, there is occasionally a slight increase of leukocytes, but seldom a marked leukocytosis. At the end of the operation, leukocytosis is usually present, and in almost all cases some increase beyond that found at the end of complete anesthesia. They observed that simple complicated fractures seldom increase the leukocyte count to any considerable extent. The blood after operation for malignant growths is not necessarily much impoverished, and regenerates normally. Especially interesting are the statements that very violent physical exertion produces in the blood a condition which leaves physiological limits, and approaches, or is identical with, that found in disease, and that a variation in the hourly leukocyte count exists in other conditions than the preperforative stage of typhoid, and may occur in health. This would seem to militate somewhat against the value of the hourly leukocyte count as an indication for operation in the condition of suspected typhoid perforation.

Unsuspected Trichinosis.—A very interesting paper by Williams has recently been published (*Journal of Medical Research*, June, 1901) in which he calls attention to the prevalence of trichinosis in the United States. We are concerned not so much with the interesting pathological findings in his cases, as with the fact that in the tissues of the 505 cases obtained at autopsy, from subjects in which there was no suspicion that trichinosis existed, the encysted parasites were found 27 times, that is, in 5.34 per cent. Practically, however, when we examine these statistics we find that in the cities of Buffalo and Baltimore 431 cases were examined with 17 positive results, and that of 57 cases coming from an institution in New York State, 9 were positive; that is, a proportion nearly four times as great. So that we assume that the average proportion of cases of this disease is really about 4 per cent. in our large cities. Now what can we infer from this? Are the Americans becoming like the Germans, feeders on raw pork, or are our ordinary methods of preparing pork insufficient to destroy the trichina parasites? These questions, of course, cannot be readily decided. There is no doubt that our German population maintains to a greater or less extent the habits of its native country, and naturally the increasing proportion of

this element should give an increased amount of trichinosis. When we examine the statistics we find that of the 27 positive cases, 6 were born in Germany, 2 in Italy and 7 in other foreign countries, that is, 55 per cent. of the whole number. The birthplace of one is not given; of the remaining 11 cases, 5 were negroes, 1 was a butcher, and 1 was an epileptic and dement. That is to say, we can assume that in the great majority of cases the victims of the disease were either foreign born, or persons whose habits or occupations were such as to render them exposed to the infection.

Williams has carefully collected the statistics on this point, and shows that as a matter of fact the white population of the United States has trichinosis less frequently than the colored population or the white population of other nationalities. The nationalities suffering most are the Canadians and the Italians, and the Germans are very close to them. Insane patients also appear to be more subject to the disease than others, but why this should be is very difficult to tell.

The paper is important because it seems to confirm the old Semitic objection to pork, and it warns us to be far more careful than we have hitherto been, to see that the flesh of the hog shall be thoroughly cooked.

The latest number of the *American Journal of the Medical Sciences*, under the able editorship of Dr. Francis R. Packard, of Philadelphia, comes to us enlarged. The publishers, Messrs. Lea Brothers & Company, of Philadelphia and New York, announce that this old and familiar periodical will henceforth contain about 200 pages of text or nearly 2400 pages per annum. It has been claimed for the *American Journal* that during the long period of its existence it has so fully represented medical science that a history of medical progress could practically be written from its pages. This is saying a great deal for any one journal. It is probably said as truly of this journal as it could be said of any in the world. We congratulate both the editor and the publishers upon this evidence of continued energy and vitality in the *American Journal*.

Current Comment.

QUACKS AND AN AMERICAN NEWSPAPER.

A Newspaper published in the United States, the *Philadelphia Times*, appears to have taken a step which should commend itself to all decent citizens in the district in which it circulates. It has published a statement to the effect that it declines to accept any advertisements that savour of quackery or fraud. We commend the *Philadelphia Times*, for the position it has taken up and we see no reason why a newspaper that has resolved to keep its columns free from degrading advertisements should not

give the fullest information as to its policy to the public for which it caters. In England there are many newspapers which do not publish advertisements of the class first referred to. These are, as a rule, newspapers circulating in classes of the community where such advertisements would not be tolerated or would not secure customers for the advertisers. The majority of newspapers in England which circulate among the lower middle and lower classes of society, and in circles where the credulous and the vicious are likely to form an appreciable element, almost invariably contain advertisements of the kind which the *Philadelphia Times* refuses to accept. It would be utopian for us to hope for the exclusion of quacks' advertisements from newspapers simply on the ground that they contain fraudulent promises of impossible cures and are the means of swindling simple-minded people. It is otherwise, however, when the advertisements deal with the results of sexual immorality and more or less openly proclaim the merits of alleged aphrodisiacs and abortifacients. Recent prosecutions have for a time caused a cessation of advertisement of the latter class; those of the former continue, and it will be remembered that it was the vendors of the female pills and concoctions who were prosecuted—not the newspaper editors who accepted their perfectly candid advertisements. Advertisements relating to venereal diseases and infirmities connected with sexual intercourse are in England declared indecent by Act of Parliament when exhibited near the highway or in public urinals. In newspapers their indecency would presumably be a question of fact for a jury, but the police do not institute proceedings in respect of them. That their suppression is desirable none will deny, for they are not only the product of vice and immorality—they are direct incentives.—*The Lancet*.

THE ABUSE OF THE DEFENCE OF INSANITY.

Nearly every one has enough of the milk of human kindness in his breast to be willing to concede that the taking of a human life under certain circumstances could have been none other than the work of a maniac, but it does grow wearisome to take up the paper day after day and find the plea of insanity entered as a matter of routine in murder trials. So commonplace, indeed, has such a plea become that it has for some time been the frequent theme of the paragrapher and the comic editor. We hear much from them of "The Insane Murderers' Trust" and like nonsense. Nor is this the only evil that has resulted. Only the other day, in a Massachusetts court, the jury deliberately sentenced to jail a murderer, who had been pronounced by experts both for the prosecution and for the defence a most dangerous paranoiac, on the ground that the public was tired of seeing criminals who had committed capital crimes temporarily confined in insane asylums and then allowed their full personal freedom to continue to menace the community. One learns with a sense of almost horror of such a decision and yet it is impossible not to feel that it is, in a sense, only the return of the boomerang cast by the hand of the alienist.—*The Medical News*.

Reviews.

Chronic Urethritis of Gonococcal Origin. By J. De Keersmaecker and J. Verhoogen. Translated and edited by Ludwig Weiss, M. D. New York: William Wood & Company, 1901.

In an introduction to this work by Oberländer, the reason for which is not plainly manifest, the statement is made that to arrive at a precise diagnosis of urethral inflammation and apply a rational therapy we must resort to urethroscopy. In the second introduction by the editor, which is of course eminently proper, the further statement is made that the urethroscope has proved to be indispensable to the specialist, and ought soon to become as favorite an instrument in the hands of the versatile practitioner as the otoscope or laryngoscope. The instruments employed by these authors are, however, so completely superseded by those of more modern construction that,

except for the admirable work done by the translator, this most modern work on a special subject would present the incongruity of ignoring the very devices that render this special study practical to the general practitioner.

The part devoted to the pathology of the subject is worthy of high praise. The descriptions are accurate and helpful. The treatment is, in the main, that generally applied by the majority of special workers in this branch of surgery. Special attention is paid to the use of Kollman's dilators, combined with irrigation. As a lubricant, it is noted that Gonyon's neutral soap is advised. This is not nearly so serviceable as certain moss preparations. There is a final chapter on gonorrhea and marriage, by the editor, which is characterized by the sound common sense and clear expression that everywhere mark his utterances.

The book closes, just before presenting some very fine illustrations, with conclusions that, as they are more or less authoritative, are worthy of being quoted:

Chronic gonorrhea of the urethra in man is an affection of invading character; its lesions are the result of the evolution of a neoplastic infiltration set up by the presence of the gonococcus.

The gonococcus may remain in the canal an indefinite time, and it is impossible to determine at what moment, the gonococcus having disappeared, the disease ceases to be transmissible.

The gravity of chronic urethritis results from the complications that may ensue in man and in others, especially women. It is therefore an absolute necessity to cure the disease in man. For this purpose there must be a precise diagnosis based upon complete methodical examination of the patient.

The nature of the pathological secretions, as to whether they contain gonococci, must be determined, and the origin also. Finally, exploration will be tried, using the well-known exploring instruments, having recourse also to the urethroscope. The only one of these instruments that seems to give results that are satisfactory is the urethroscope of Oberländer, but the newer urethroscopes with mignon lamps and without water-cooling device, are of course preferable (they are built after Oberländer's model).

The urethroscope must be relied on during the whole course of treatment, as it enables the operator to follow the course of the cure and to properly apply the principles of therapy. Dilatation is seemingly the only means of acting directly upon the fibrous infiltration that constitutes the essential lesion of chronic urethral gonorrhea.

By dilators the operator surely succeeds in setting up resorption of all the infiltration tissue capable of disappearing. The tissue not absorbed is transformed into indifferent cicatricial tissue, incapable of giving rise to recurrence or to transmission of the disease.

Complete cure is obtained by the dilators only when there is strict adherence to the rules for the use of them.

To declare a case of urethral gonorrhea cured, it must be shown that there is no longer any trace of purulent secretion (discharge, urinary filaments); that the canal no longer shows any kind of inflammatory lesion when examined through the urethroscope; and that the foci of infiltration, whose resorption has not been obtained, should have passed into the condition of indifferent cicatrices, as the end-stage of their evolution. [E. M.]

A Manual of Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A. M., M. D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City; Laryngologist to Columbus Hospital, the University and Bellevue Hospital Medical College Clinic, and the Demilt Dispensary; Member of the New York Academy of Medicine, Society of the Alumni of Bellevue Hospital, Medical Society of the County of New York, American Laryngological, Rhinological, and Otological Society, etc., etc. Second edition, revised and enlarged. Lea Brothers & Co., New York and Philadelphia. 1901.

Dr. Coakley's Manual reviews briefly, though in a very satisfactory manner, the anatomy of the upper respiratory organs and the disorders to which they are liable. While a perusal of the work distinctly shows that the au-

tumor has prepared it for the student or general practitioner, one cannot but be struck by the wisdom embodied in many of the counsels given regarding the measures to be used. Rhinology and laryngology cannot be said to have advanced to any marked degree in recent years, unless it be in one direction, i. e., the proper limitation of operative procedures. Some years ago the saw, the snare and the cautery-knife constituted the ordnance with which the nasal cavities were attacked at whatever cost. As mere channels for air they could hardly be sufficiently widened to satisfy the needs of the organism. When, however, higher physiological functions were found to include the nasal mucous surfaces and the mucus itself, and when the very tortuousness of the canal was ascertained to be a desirable mechanical attribute of the protective functions of the portal of life—which after all the nose obviously is—a reaction occurred. Dry nostrils, foul breaths and adhesions which had become increasingly common among supposedly cured patients, also served to show that the nose had functions besides those of admitting, heating and dampening the air inhaled. Dr. Coakley stamps himself as a true specialist when he says: "We wish to caution the inexperienced against too active surgical interference. Many think that if a little cauterization or snaring gives a moderate amount of relief, more might be better. The result is a destruction of too much of the mucous membrane, thus leaving the patient with a condition of freedom so far as breathing is concerned, but with a dryness of the nose and throat very distressing and extremely difficult if not impossible to overcome." We are also pleased to note the conservatism which underlies the surgical treatment of the sinuses and the middle turbinate. Considerable may be done in these regions, but without entailing risks, especially when the lamina papyracea is involved, if for instance the curette is avoided and the alligator or punch forceps is used. Grünwald's punch forceps is very properly recommended for the purpose by the author—another detail which illustrates his true worth as an operator and teacher. Dr. Coakley's Manual is not only a very good book, but it is a *safe* book. [C. E. de M. S.]

The Pathology and Treatment of Sexual Impotence. By Victor G. Veckl, M. D. Third edition. Revised and enlarged. Philadelphia and London. W. B. Saunders & Co. 1901.

This is a thoroughly scientific work, and one, moreover, which bears evidence of much learning and which is written with rather a free hand. The author is never indelicate, but on the other hand he cannot be accused of an excess of delicacy. He never apologizes for his book (as so many writers on sexual subjects are apt to do) and we confess that we like him all the better for his frankness and independence.

The subject is a perfectly legitimate one for medical treatment; nay, it is highly necessary to have it well treated, and, provided an author does not descend to mere pruriency, he is under no obligation to make excuses for himself or to write with an affectation of modesty.

As we have said, Veckl's work is scientific, and based upon a large experience and an extended literary research. It is consequently not a book to be sniffed at, but to be frankly read, cogitated and digested. The subject is of perennial interest and importance to man and to woman. It is too much ignored in practice—a fact which will account probably for the surprise which most medical readers will feel when told by the author that sexual impotence in the male is a common affection. We protest that from our own experience in medical practice we should class it among the rare diseases. In its arrangement Veckl's book is strictly conventional; its value and its force consist in the individuality of the author's style, and in the fact that the subject matter is treated without undue reserve by a writer who has carefully studied it in all its phases. [J. H. L.]

Text Book on Nervous Diseases. By Charles L. Dana, A. M., M. D., Professor of Nervous Diseases in Cornell University Medical College, Visiting Physician to the Bellevue Hospital, Neurologist to Montefiore Hospital, Ex-President of the American Neurological As-

sociation, Corresponding Member to the Société de Neurologie, etc. Fifth edition, two hundred and forty-four illustrations. William Wood & Company, New York. 1901.

A text book which has reached a fifth edition in the comparatively short period of time which has elapsed since the first edition of this work appeared, surely does not need an extended review. The merits of Dr. Dana's work on Nervous Diseases are well known, not only to the specialist but to the general practitioner. We judge there is no book on nervous diseases in the English language which has been more frequently read and consulted. The present edition contains some minor changes throughout the text, but the most important addition has been a full chapter on general paresis. There is also a practically rewritten chapter on myelitis. Other necessary changes and some corrections have been made, but the size of the book is not materially increased. We congratulate the author upon the favor with which his book has been received and we bespeak for it a continuation of patronage by the profession. [J. H. L.]

Perinephritic Abscess.—Not only is perinephritic abscess rare, but it may exist without being even suspected. Besides, the diagnosis is very difficult. Perinephritis may be primary, or secondary to an affection of the kidney or of some other near-by organ, or to an infectious disease. Perinephritic abscess is generally seen in adults of the laboring classes. Traumatism, renal lithiasis, and disease of the kidney or any of the neighboring viscera may cause it. Or typhoid fever, septicemia, etc., may produce perinephritic abscess. Infection may reach the perinephritic tissues by the blood vessels, in the infectious diseases, by the lymph vessels, from near-by foci of suppuration, or by the urine, from a kidney affection. Dr. E. Verstraete, in discussing this subject before the Société Anatomique-clinique de Lille, (*Journal des Sciences médicales de Lille*, June 1, 8, and 15, 1901) divides perinephritic abscess into partial or total; also into retrorenal, suprarenal, or subdiaphragmatic, and anterolateral or subrenal abscess. It may open in the pleura or bronchi; in the iliac fossa, along the psoas; in Petit's triangle; or in the umbilicus. During onset the symptoms are deep lumbar pain, radiating in many directions, or a vague pain occasionally. There may be fever, or no general symptoms at all. About two weeks later a swelling is felt in the lumbar region, with great tenderness, and a decidedly hectic temperature persists. Until the tumor appears, diagnosis may be impossible. The prognosis is generally favorable. As a rule, a lumbar incision, with evacuation of the pus, and drainage, results in recovery in a few months. The histories of six cases of perinephritic abscess follow in full. Of these, 4 recovered, one died, a man of 67, and in one the condition recurred eight months after operation. [M. O.]

On the Restriction of Tuberculosis in Western Europe and America.—F. M. Blumental, in a paper read before the section of bacteriology of the Imperial Society of Natural Science, Anthropology and Ethnography (*Russki Archiv Patologii, Klinicheskoi Meditsiny i Bakteriologii*, March, 1901), pointed out that while the Franco-Prussian War (1870-1871) cost Prussia 40,950 men, tuberculosis destroyed during the same period 80,000 lives. In Moscow 1475 persons died of cholera from 1892 to 1894, inclusive, while the number of deaths from tuberculosis reached 10,650, i. e., 7 times more. In Europe, except Russia, the mortality from tuberculosis is one million annually; in Russia 360,000-450,000. Statistics show that the majority affected are in the prime of life, between 20 and 40, and that three-fourths of the victims are recruited from the laboring class. Regarding the financial loss sustained, it is found that Germany, with a mortality from tuberculosis of 89,000 in 1894, lost 370,000,000 marks, and France about half-a-million francs. In the fight against tuberculosis the following three propositions should be accepted: 1. Tuberculosis is infectious; 2. It is preventable and curable, and 3. all measures undertaken for its restriction should be thorough. Thanks to the wise sanitary measures and the establishment of special sanatoria, England, as well as New York brought about a marked decrease in the mortality from tuberculosis. [A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, at 8.15 P. M.: Monday evening, November 11, Section on Medicine, College of Physicians; Tuesday evening, November 12, Pediatric Society; Wednesday evening, November 13, Philadelphia County Medical Society; Thursday evening, November 14, Pathological Society.

The Municipal Hospital to be Sold.—On October 30, the Councils Committee resolved that the grounds of the Municipal Hospital of Philadelphia be advertised by the city for sale, and the site abandoned for a more isolated one in a less populated section of the city. The chairman of this committee will introduce the resolution to that effect in Councils. It was reported that some years ago an offer of \$250,000 was made for the ground now occupied by the hospital. A committee was appointed to consider the purchase of property for the new municipal hospital.

A Temporary Smallpox Hospital.—The committee in charge of arrangements for the Meschianza, which is to be held at the Academy of Music November 11 to 16, for the benefit of the McKinley Memorial Hospital, has taken an important step toward fulfilling the object of their mission. A large plot of ground has been secured near Fort Mifflin, in the lower section of the city, upon which a temporary hospital will be erected for the treatment of smallpox and other contagious diseases.

A New Miners' Hospital.—At a meeting held last week at Pine Grove, Pa., a committee was elected for the purpose of petitioning the Legislature for the establishment of a Miners' Hospital on the summit of Broad Mountain, ten miles north of Pine Grove. The territory appealing for this relief are the miners from the Lykens, Williams, Pine Grove, Tremont and Swatara Valleys, being parts of Dauphin, Lebanon and Schuylkill counties, and comprising a population of about 50,000 people that need hospital service. The miners claim that lives have been lost and injured men required to endure intense suffering until the Miners' Hospital at Ashland is reached.

A Needle's Journey.—After carrying a portion of a needle in his body for twenty-six years, a resident of Berwick, Pa. had the tiny bit of steel removed from his left arm. When the needle first entered his body, it ran into his right leg below the knee. At that time a portion of it was removed. At various times since then he has been troubled with pains that he thought were caused by rheumatism, but which are now supposed to have been caused by the needle.

Smallpox.—During the week ending November 2, there were 52 cases of smallpox reported in the city of Philadelphia, with 12 deaths. While there is no increase, there seems to be but a slight decrease in the present epidemic. A number of cases have been discovered in the vicinity of Philadelphia, six cases being reported from Bryn Mawr, where the hospital and five houses are in quarantine. The State Insane Asylum in Norristown has decided that every physician, employé and patient in the institution must immediately be vaccinated.

Diphtheria in Greenfield, Pa.—In Greenfield, twenty miles from Corry, seven deaths are reported from diphtheria. Failure to use antitoxin early is supposed to be the cause of the spread of the disease. The place is quarantined.

Philadelphia Polyclinic Appointments.—At the meeting of the Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, held on October 29th, Dr. John H. Gibbon was elected Professor of Surgery, to succeed Dr. T. S. K. Morton, who was appointed Emeritus Professor in this department. Dr. Samuel McC. Hamill and Dr. James H. McKee were elected professors of diseases of children.

German Hospital Election.—At a meeting of the Board of Trustees of the German Hospital, October 29th, Hermann Hessenbruch was unanimously elected to fill the

office of president, made vacant by the death of John D. Lankenau on August 30 last. Colonel M. Richards Mucklé was re-elected vice president. The other officers are: secretary, the Rev. F. Wischan; treasurer, Charles A. Wörwag; solicitor, Joseph G. Rosengarten. Mr. Hessenbruch comes of a German family, originally of Halwer, Pomerania. The family moved to Itterscheidt, Düsseldorf, Prussia, in the centre of the German steel and iron industry, in 1700, and there the cutlery business was established that has been conducted by the family for three generations. Mr. Hessenbruch was born in Philadelphia, June 20, 1846, his father, Gottlieb Theophilus Hessenbruch, having come to this country in 1836. After being educated at the Zane street grammar school in Philadelphia, and after spending two years in Germany and a year in Belgium, he returned to this country, and was admitted to business with his father in 1870.

Free Hospital for Poor Consumptives.—In an appeal sent out by the Board of Managers of the Free Hospital for Poor Consumptives over the signature of Dr. Fllek, president, they say: "We have forty patients, in various hospitals, for each of whom we pay \$5 a week. We have two female patients in the Adirondacks, for each of whom we pay \$7 a week. We have twenty male patients in our camp at White Haven, who stand us about \$5 a week per patient. Our expenses aggregate about \$1300 a month. The State gives us about \$400 a month, and we are compelled to raise \$900 a month from the charity of the people. Our treasury is empty. The forty dying patients are given a decent place in which to die, and we are abating forty centres of distribution of tuberculosis. Ninety per cent. of the twenty cases at White Haven we believe will recover, and return to lives of usefulness. In August their gain was twelve pounds per patient; in September, seven pounds per patient. Four patients have returned to work. It is certain that tuberculosis can be cured, but money must be provided." Edward A. Millar, 404 Walnut street, is the treasurer.

Vital Statistics of Philadelphia for the week ending November 2, 1901.

Total mortality.	415	Cases.	Deaths.
Inflammation of the appendix 1, brain 10, bronchi 5, heart 6, kidneys 21, larynx 1, liver 3, lungs 47, pericardium 1, peritoneum 3, stomach and bowels 14.			112
Marasmus 15, inanition 7, debility 7.			29
Tuberculosis of the lungs			53
Apoplexy 9, paralysis 8.			17
Heart—disease of 32, fatty degeneration of 3, neuralgia of 2.			37
Uremia 8, Bright's disease 5, diabetes 2.			15
Carcinoma of the bladder 2, breast 4, stomach 4, uterus 5, liver 4, esophagus 1.			20
Convulsions 3, convulsions, puerperal 2.			5
Diphtheria.	98		8
Brain—abscess 1, disease of 1, dropsy of 2, softening of 2, tumor of 1.			7
Typhoid fever	46		4
Old age.			10
Scarlet fever	82		4
Smallpox.	52		12
Abscess of the kidney 1, alcoholism 1, asthma 1, atheroma 1, burns and scalds 1, casualties 10, carbuncle 1, cholera infantum 2, cirrhosis of the liver 3, croup 1, croup, membranous 4, drowned 1, epilepsy 2, fracture of skull 1, gangrene stomach 1, hernia 2, homicide 1, intussusception of the bowels 1, indigestion 2, lymphadenoma 1, obstruction of the bowels 7, poisoning 2, shock, surgical 1, septicemia 2, sore mouth 3, suffoca-			

Cases.	Deaths.
Diphtheria 3, sulicide 1, tetanus 1, tetanus, traumatic 1, ulceration of the stomach 1, unknown coroner cases 19, whooping cough 1	82

NEW YORK AND NEW JERSEY.

New York State Antitoxin Laboratory.—The State Antitoxin Laboratory in Albany, of which Dr. H. D. Pease, of Yale University, has been appointed director, has secured a good building. The animal house for the manufacture of serum will hold 15 horses. It is proposed to supply antitoxins to the State institutions and to such municipalities as are not already provided with a similar laboratory. Thus all the health officers in the State will have the same facilities for the investigation, diagnosis and treatment of infectious diseases as are now supplied by the City of New York.

Czolgosz's Body.—The fact that Czolgosz's body was buried in sulphuric acid and quicklime has roused the ire of the chemists, for an equal quantity of these substances will exactly neutralize one another. Yet any excess of either material will rapidly destroy the body.

Poisoning from Doughnuts.—From New York comes the news that twenty people were poisoned by eating crullers and doughnuts purchased at a certain bakery on Tenth avenue. The baker had used a new baking oil the day before. None of the cases proved fatal.

New York Skin and Cancer Hospital.—The Governors of the New York Skin and Cancer Hospital announce that a fourth series of clinical lectures on diseases of the skin will be given by Dr. L. Duncan Bulkley in the Out-Patient Hall of the Hospital on Wednesdays afternoons, at 4.15 o'clock. The course will be free to the medical profession.

NEW ENGLAND.

The New Hospital for Consumptives, Boston, Mass.—The trustees of the pauper institutions on Long Island are building a new hospital, in which, when it has been completed, all those suffering from tuberculosis will be placed, thus separating them from the other patients under treatment. The plans show a building with two long wings, connected by a central building. Two lobbies lead into a corridor in each wing, and on either side are nurses' rooms. At the end of each corridor is a ward the full width of the wing, with a sun room attached, lighted by five windows. Back of the lobbies is a central kitchen with a dining room on either side. The main entrance, opening into the corridors, has an octagonal front porch with southern exposure. Over this porch is a third sun room, with a large women's ward behind it. Only the central pavilion has a second story. The wings are to be at a right angle to one another, joining the central building obliquely.

Tribute to Dr. S. G. Howe.—The hundredth anniversary of the birthday of Dr. Samuel Gridley Howe will be celebrated in Tremont Temple, Boston, on Monday, November 11th, at 3 o'clock P. M. Senator Hoar has consented to preside on the occasion, and addresses are to be made by surviving personal associates of Dr. Howe. A romantic, chivalrous and philanthropic life of rare usefulness is to be commemorated. The memory of what Dr. Howe did, his earnestness and usefulness in forwarding good work are inspiring, and the presence at this gathering of the blind people, with the welfare of whom his name is inseparably connected, will be a touching feature of its proceedings.

The Purity of Ice.—H. W. Clark, at the meeting of the associated boards of health of Massachusetts described the purity of ice. It was long a popular notion that water purifies itself in freezing. But the discovery, in recent years, that, while all microbes perished from a moderate degree of heat, there were forms that survived the most intense cold, brought the idea into disrepute. Clarke's researches, however, show that the old notion was very nearly correct. He shows that in crystallization ice exerts a force of expulsion, not only upon bodies held in suspension, but also upon a large percentage of those held in solution. Hence, ice is not only likely to be free from bacterial impurities, but the melting of ice formed from water that is hard or salt produces water that is comparatively

soft and fresh. It is important, however, that we should understand that ice is thus purified only when there remains a considerable proportion of water not frozen. The rejected impurities accumulate in this water. And the deeper and stiller the water, the purer the ice. When the entire body of water is frozen, the impurities are naturally included. If ice is flooded with impure water to make it thicker, it naturally, likewise, becomes impure, and may be correspondingly dangerous to health. But there appears to be comparatively little danger from the pollution of an ice supply, and instances of disease from such sources are exceedingly rare.

WESTERN STATES.

The University of California.—Beginning in 1905, the Medical Faculty of the University of California will demand at least two full years of college work from all applicants for admission. These two years must have included advanced work in chemistry, physics, and zoology, with sufficient English and scientific French and German. In a circular recently published, it is suggested that students expecting to matriculate in 1905 or later also do some preliminary work in advanced mathematics, comparative anatomy, embryology, chemistry, and physics. A broad foundation in general culture is advocated as a forerunner to one's medical education. From perusing this circular, the fact is plainly shown that the great universities of the West are closely following the high standard set by those in the East.

Rocky Mountain Industrial Sanatorium.—This sanatorium for consumptives has been in operation for one month, five miles southwest of Denver, Col., with which it is connected by electric railway. While there are at present but 15 patients, as many as 35 will shortly be admitted. Patients are obliged to pay only for the actual cost of living, and will be given the opportunity to take part in remunerative industries. There are satisfactory buildings for present needs, an orchard of five acres, garden ground, and a good water supply for irrigation. The medical director is Dr. A. M. Holmes.

Tetanus in St. Louis.—One dozen deaths attributed to lockjaw have occurred in St. Louis as a result of the administration of diphtheria antitoxin manufactured by the city chemist. Eleven other children are reported to the Health Department as suffering from lockjaw, with slight chances for recovery. The cause of tetanus in each case is said to be poisoning from the city's diphtheria antitoxin. The Health Department of St. Louis has begun the free distribution of tetanus antitoxin for injection into the blood of diphtheria patients who have been inoculated with the infected serum and thus exposed to lockjaw. No more diphtheria antitoxin will be manufactured by the city of St. Louis. The investigation ordered by the City Coroner to determine positively the cause of the deaths of the eight children who are alleged to have died of lockjaw, following the administration of the city's antitoxin, is being pushed. Doctors Bolton, Fish, and Waldron, three of the most experienced bacteriologists in St. Louis, are making tests with the anti-toxin and the serum taken from the spinal columns of the dead children. Dr. Ravold, city bacteriologist, who made the antitoxin from serum taken from a horse which developed tetanus on October 1 and was shot, declares that if the animal's system contained tetanus bacilli on August 24, when the last serum was taken from it, it was impossible to detect it by an inspection of the horse. At the Baptist Hospital an independent investigation has convinced Drs. A. B. Nichols, R. C. Harris and C. C. Morris that the presence of tetanus germs in the city antitoxin is indisputable. A guinea pig, inoculated with the antitoxin Wednesday night, developed symptoms of lockjaw Thursday morning and died next day.

Asylum for Insane Indians.—An asylum for insane Indians has just been completed at Canton, S. D., at a cost of \$55,000.

Ears Bought for \$300 Apiece.—Dr. E. E. Prescott found two men in Chicago, each of whom signified his willingness, in answer to an advertisement, to part with one ear for a consideration of \$300. The ears are necessary for an unusual operation the physician hopes to perform. Obstacles in the case of criminal responsibility, however, presented themselves to Dr. Prescott, for Justice Blume in-

formed him that if he covered a healthy ear from the head of any person, knowing that he would thus deform that person, he would be guilty of mayhem. The physician immediately went to State Attorney Deneen regarding his responsibility in such a case. The prosecutor told him that in his opinion he would be guilty of no crime. The two persons who will sell their ears as sacrifices to this operation are widely different, both in age and appearance. One of them is a paralytic nearly sixty years of age.

Smallpox Destroys Indians.—Late reports from the Winnebago Indian Reservation in Nebraska show that 53 of the 1000 Indians on the agency have died of smallpox. As the medical force of the reservation is limited, the epidemic of smallpox threatens the destruction of the entire tribe.

CANADA.

Two New Fellows in Pathology.—Dr. G. A. Charlton, of Montreal, and Dr. P. G. Wooley, of Johns Hopkins University, have been appointed fellows in pathology at McGill University. The former is a graduate of McGill, while the latter claims John Hopkins as his "alma mater." Both will assist Dr. Adam, professor of pathology; and their special work will be to discover means to combat the spread of infectious diseases. Dr. Ford, some time ago appointed to the Rockefeller research scholarship at McGill, who has been studying for several months at the Pasteur Institute, Paris, will shortly return to McGill. The pathological department, which has been undergoing extensive alterations and additions, will soon be ready for taking up this research work.

The Science Faculty at McGill has raised its standard, the following notice having been placed upon the college boards: "It has been decided by the Faculty that the number of marks required for pass-standing in any subject shall be forty per cent.; for second-class honors, sixty per cent.; for first-class honors, eighty per cent. The change is said to be unpopular among the 300 odd students of the Faculty of Applied Science, but it is only a precursor of what is to happen in the other faculties in the near future. In the Faculty of Medicine the course at present consists of four sessions of nine months each, which will soon, in all probability, be raised to five sessions of nine months each.

An Extensive Outbreak of Smallpox is reported from Ottawa. Something like forty cases developed before October 26; and there has been a good deal of excitement, interference with business, and anxiety on the part of the citizens of the Capital. Dissatisfaction with the Medical Health Officer, Dr. Robillard, became so pronounced that the local Board of Health had to ask for his resignation. This was acceded to after some delay and Dr. Law, of the same city, appointed as his successor. A general vaccination has been prosecuted, and the outlook for prompt limitation of the scourge seems to be good.

Canadian Medical Graduates and the Imperial Army is a subject which has again come to the fore on account of an announcement by cable that a Canadian medical graduate had been refused permission to serve on the British medical staff in South Africa. Only a few months ago the Militia Department was notified that a measure had been introduced into the British House of Commons which would provide for the entrance of graduates of recognized colonial medical colleges into the Imperial army, naval, and civil services. What became of this measure, military surgeons are now asking in view of the cable announcing that one of them has been set aside as a candidate for one of these positions.

The Birth Rate in Ontario is being vigorously assailed by the Anglican clergy. Three years ago the Committee on Vital Statistics of the Provincial Synod of the Anglican Church, which has jurisdiction over the Maritime Provinces, Ontario and Quebec, was instructed to prepare a report on the three questions of the birth rate, infant mortality in Quebec, and tuberculosis. This Committee brought in a report at the recent meeting at Montreal, from which it would appear that the birth rate has gradually declined in both Quebec and Ontario for the past four years, returns not being available from the other provinces. For instance, Ontario has decreased from 20.7 in 1896 to 19.4 in 1899; while Quebec has come down from 38.57 to 33.46. Ontario has a birth rate lower than that of any European

country, but not lower than some of the neighboring States, notably Michigan and New Hampshire. The committee state that the cause of the ever decreasing birth rate in this province is the use of preventives, information as to which is spread far and wide by advertisements in the public press and otherwise. They advise that the Bishops be requested, in their pastorals, to call the attention of the people to the Divine and social purposes of marriage, and to the awful sin of interfering to prevent the procreation and birth of children. This advice is already being carried out; and it may be expected that the Anglican clergy will become a powerful factor in the elimination of this class of advertising from the public press, a condition which has become too common.

University of Toronto.—It is announced that Professor Goldwin Smith has given \$10,000 to the trustees of the University of Toronto to be expended upon the library. As the University is in need of funds, it is to be hoped that this example will be followed by others.

MISCELLANY.

Yellow Fever in Yucatan.—Advices were received by the Marine Hospital Service from Alabama last week that yellow fever is now epidemic throughout Yucatan. The disease prevails among the Yucatan Indians from whom it has been contracted by the Mexican troops sent to fight them. The report says the Government cannot prevent the introduction of the fever into New Loel through lack of railroad facilities.

The World's Mortality.—Statistics show that 33 millions of people die every year throughout the entire world, an average of 91,534 a day, 3730 an hour, and 62 every minute. The average length of human life is 36 years. One quarter of the world's population dies before reaching the age of 7 years, and one half before becoming 17 years old. Out of 100,000 people, but one reaches the age of 100. Of 1000 people who reach the age of 70, 43 are clergymen or politicians, 40 are farmers, 33 workmen, 32 soldiers, 29 lawyers or engineers, 26 professors and but 24 physicians.—*Journal de Medecine de Paris.*

Average length of Life.—We are rapidly gaining in the average length of human life. Better sanitation, the enforcement of precautions against contagious and infectious diseases, and the advancement of surgery and medicine, are causing an even more rapid reduction of the death rate than the layman might guess. The census bulletin of deaths that occurred in 271 cities of 5000 population or more shows that 18.6 persons died in 1900 out of every 1000, whereas in 1890 the number who died in the same cities was 21 out of every 1000. The average age at death in 1890 was 31.1 years; in 1900 it was 35.2 years. If these statistics be accurate, the saving of human life that has been achieved in a decade is enormous.

Smallpox in Alaska.—The captain of the revenue cutter Bear, who has just returned from Bering Sea, brings reports of the havoc wrought last year by an epidemic of smallpox. Not more than half of the population survived. In the asylum at Golovin and Port Clarence there are 45 orphans, whose parents were victims of last season's epidemic.

There are about 2,500 hospitals and asylums in the United States. These give employment to 65,000 people and pay over \$23,000,000 in salaries. These hospitals have 300,000 beds, are attended by 37,500 physicians, and treat over 1,000,000 patients during the year.—*Cleveland Medical Gazette.*

Obituary.—Dr. J. Mortimer Crawe, Sr., at Watertown, N. Y., October 29, aged 70 years—Dr. William M. Hudson, at New Haven, Conn., October 30, aged 68 years—Dr. A. B. Purrington, at Bell Center, Wis., October 31, aged 79 years—Dr. Benjamin H. Bradshaw, at Salem, Oregon, October 14, aged 67 years—Dr. George B. Bunn, at Mount Vernon, Ohio, October 22—Dr. William J. Kearney, at Mariposa, Cal., October 10, aged 45 years—Dr. Albert Binder, at Ottoville, Ohio, October 22, aged 38 years—Dr. Louis D. LaBonte, at Derby, Conn., October 21, aged 31 years—Dr. William Geddes at Washington, D. C., October 21, aged 50 years—Dr. Charles Edward Dority at Brooklyn, N. Y., October 23—Dr. Gustavus E. Gramm, at Philadelphia, Pa., on November 2, aged 78 years—Dr. E. P. Lowther, at Martinsville, W. Va., November 2—Dr. Garrett D. Van Vranken, at Hempstead, L. I., November 1, aged 60 years.

GREAT BRITAIN.

The Plague in Great Britain.—Toward the end of October several cases of bubonic plague were discovered in Liverpool. While these cases were at first thought to be influenza, bacteriological examination after death proved that the patients had the plague. Six deaths of supposed plague have occurred in Liverpool since September 3. No new cases have developed this month. At the same time the plague reappeared in Glasgow, where four cases were discovered in a hotel. That these cases were true plague was also proved bacteriologically. From Brisbane, Australia, comes the news that the plague has reappeared, though there had been no cases reported during August and September.

Bristol Royal Infirmary.—On October 25, 1901, the new bacteriological department of the Bristol Royal Infirmary was opened. Sir Frederick Treves, K. C. V. O., C. B., delivered an address, and presided at the annual dinner of the Medical School afterward.

Statistics Obtained by Antityphoid Inoculation in Dublin.—Statistics made during the epidemic of typhoid fever which occurred in Dublin last winter show the great immunity of those people who had been inoculated with antityphoid serum. In 501 persons under 55 years old, who were inoculated, no cases of typhoid occurred, while in the 114 uninoculated five cases occurred. Another list shows that while 30 cases occurred among 298 uninoculated, out of 339 inoculated but five cases occurred.—*Lancet*.

Outbreak of Typhoid Fever.—A serious outbreak of typhoid fever is raging in the East Northumberland mining districts, many hundreds of cases being under treatment.

New Sanatorium for Consumptives.—On October 18th the new sanatorium for consumptives in Delamere Forest, Cheshire, which cost £15,000, was opened. This will be used in connection with the Liverpool Hospital for Consumption and Diseases of the Chest.

Obituary.—On October 14th, by the death of Dr. James Foulis, Edinburgh has lost one of its most successful physicians. Born in 1846, at Sydney, New South Wales, he was graduated at the University of Edinburgh in 1874. His most important work was upon diseases of the ovary. Lately he took an active interest in the question of the transmission of infectious diseases by milk. He died of cardiac disease aggravated by influenza.—From Belfast comes the news of the death of Dr. Hugh Fisher, on October 18th, aged 31 years.—On October 16th Dr. R. B. McClelland, who graduated at Glasgow University in 1849, died at Banbridge, Ireland.—Charles King, M. R. C. S., died recently in London, aged 76 years. He was a graduate of Guy's Hospital.—On October 20th Henry Duncalfe, M. R. C. S., died at Droitwich, aged 73 years. He was a graduate of Guy's Hospital and was former president of the Birmingham and Midland Counties of the British Medical Association.

CONTINENTAL EUROPE.

Nothnagel's Sixtieth Birthday.—Though Professor Nothnagel was sixty years old on September 28th, the celebration of his birthday only occurred on Sunday, October 13th, when his portrait, painted by Horowitz, was presented to the Professor by his friends and former students. Dr. von Kogerer delivered the address of presentation. Hermann Nothnagel has been professor of medicine and director of the First Medical Clinic in the University of Vienna for years. The *Wiener klinische Wochenschau* published a "Festnummer" in his honor, containing the work of six assistants of the Nothnagel Clinic.

Typhoid Fever in Germany.—A severe epidemic of typhoid fever has been raging in the province of Westphalia, Germany, for the past six weeks. While the death list is comparatively short, the total number of patients reaches far into the thousands. In the centre of the affected district are the towns of Gelsenkirchen, Bochum and Lünen-scheid.

Fiftieth Anniversary.—Dr. Wanjura, Privy Sanitary Councillor in Berlin, celebrated the anniversary of the completion of his fiftieth year in medicine on October 6, 1901.

The Plague at Naples.—Dr. Santoliquido, chief of the health department, of the Ministry of the Interior, spec-

ially delegated by the government to direct and supervise measures dealing with the disease when its presence was discovered in Naples, made the following statement: "It is quite true that there have been several cases of bubonic plague here recently, but it is an exaggeration to characterize the matter as epidemic. From first to last, fifteen persons were attacked. Out of these, eight deaths occurred. At the present moment there is not a trace of the plague in the neighborhood. Within three weeks from the discovery of the first case, the disease was completely mastered." Dr. J. M. Eager, of the United States Marine Hospital Service, medical attaché to the United States Consulate, calculated that the number of cases has been about twenty. Dr. Eager and his staff examine all emigrants leaving Naples for America, disinfect their belongings and even take the temperature of all would-be emigrants. Those whose temperature is above normal are detained and kept under observation.

A New Treatment for Seasickness.—Dr. Heinz, professor of therapeutics at the University of Erlangen, advises long, deep, and quick breathing for curing seasickness. He believes that one cerebral lobe is affected, and that this influences the stomach. Oxygen rapidly reaches the blood by drawing deep, long and quick breaths, and the feeling of nausea disappears. His experiments upon people have been very successful.

The Second International Congress of the Medical Press.—At the first International Congress of the Medical Press, held in Paris last year, it was decided to hold the second annual congress in Brussels during 1901. The Committee appointed last year has determined to postpone the second International Congress of the Medical Press for another year. In the meantime delegates from the entire world will be chosen, and a constitution prepared. The president of the Committee is Dr. L. DeJace, of Brussels, and Dr. V. Pechère is secretary.

Germans Taught Hygiene.—The German government has instructed the Berlin Hygienic Association to open offices in which instructions on hygiene and sanitary matters shall be imparted gratis. Doctors will be present at certain hours every day to answer questions as to the best food to eat, the best clothing to wear in the different seasons, and questions on housing, cooking, heating, sleeping accommodations; whether children should be washed with hot or cold water; what outdoor exercises are best at various seasons; how long children should remain out of doors; how to protect one's self against colds, influenza, etc.

Malarial Poison as a Cure for Cancer.—Injections of malarial blood as a cure for cancer are proposed by Professor Friedrich Löffler, of Greifswald. Finding that amid tropical condition most conducive to malaria cancer is of extreme rarity, he was led to the conclusion that, when malaria is administered, it acts as an antidote to cancer. What he calls the remarkable infrequency of cancer among negroes in the United States and other African populations is cited as one of the chief supports for his theory. It is established that malaria, when artificially produced by hypodermic or internal injections of the blood of malarial patients, can be arrested by prompt administration of quinine. He suggests the inoculation of cancerous persons with mosquito poison or the blood of patients afflicted with other malarial infections. Previous attempts to cure cancer through vaccination with infectious substances have not only been crowned with little success, but have been accompanied by great danger, because of inability to control the antidote. In tropical lands where malaria flourishes cancer is seldom known. In Borneo, after ten years of close observation, not a single case was discovered.

Obituary.—On October 15th Dr. Oskar Wilhelm Stelzner died in Dresden, aged 62 years. Dr. Stelzner has been surgeon to the Dresden City Hospital for over thirty years.—The death is announced of Dr. Marcel Nencki, professor of medical chemistry and bacteriology in the Institute of Experimental Medicine in St. Petersburg, at the age of 55 years. Dr. Nencki was formerly professor of medical chemistry in Berne.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

October 19, 1901.

1. A Discussion on Renal Tension and Its Treatment by Surgical Means. R. HARRISON, J. W. COUSINS, G. BARLING, R. C. CHICKEN.
2. On Certain Points in the Operative Treatment of Renal Calculus. J. HUTCHINSON, JR.
3. A Case of Movable Kidney Producing Pyloric Stenosis and Constriction of the Duodenum by Peritoneal Bands. H. BRAMWELL.
4. Radical Cure for Femoral Hernia. H. P. PARRY.
5. The Prevention of Shock During Prolonged Operations. W. H. BROWN.
6. A Discussion of Gastro-jejunostomy in Ulcer of the Stomach and Duodenum and in Pyloric Stenosis. G. BARLING, G. HEATON, L. T. BRIDWELL, S. WHITE, C. A. MORTON, R. MORISON, J. P. BUSH, and H. P. PARRY.
7. An Operation for Perforated Gastric Ulcer. G. B. FERGUSON.
8. The Treatment of Cancer of the Breast by Oophorectomy and Thyroid Extract. G. T. BEATSON.
9. Oophorectomy in Mammary Cancer. G. E. HERMAN.
10. Amputation of the Leg for Senile Gangrene. J. RANKIN.
11. Notes on the After-history of a Series of Cases of Pyloroplasty for Pyloric Stricture and Ulcer. R. MORISON.
12. Discussion on Injuries to Joints with Special Reference to their Immediate and Remote Treatment by Massage and Motion. H. MARSH, H. A. WHITELOCK, F. F. BURGHARD, J. W. COUSINS, G. BARLING, J. P. BUSH, and J. R. MORISON.
13. Treatment of Congenital Dislocation of the Hip. F. F. BURGHARD.
14. Reduction of Long-standing Dislocations. ELIZA W. DUNBAR.
15. A Case of Hydatid Cyst in the Right Pleura Treated Successfully by Operation. R. H. A. WHITELOCK.
16. A Case of Suprapubic Lithotomy for a Vesical Calculus Weighing 200 Grains in a Boy aged 11 Years. E. M. SYMPSON.
17. A Case of Partial Excision of the Pancreas for Multilocular Cystic Tumor. G. HEATON.
18. Discussion on the Diagnosis, Prognosis, and Treatment of Pernicious Myopia. P. SMITH, A. S. PERCIVAL, H. POWER, A. DARIER, A. H. THOMPSON, H. EALES, E. D. BOWER, E. E. MADDON, A. BRONNER, R. D. BATTEN, and J. T. THOMPSON.
19. A New Refractometer. C. S. BLAIR.
20. Superficial Punctate Keratitis in Bombay. H. HERBERT.
21. A Case of Symmetrical Bullous Keratitis. J. T. THOMPSON.
22. An Unusual Form of Keratitis Associated With a General Skin Eruption. C. S. BLAIR.

1.—The satisfactory termination of many cases of exploratory incision into the kidney for various suspected lesions which were not found at the time of operation leads Harrison to infer that renal tension has been the cause of the symptoms and that the relief of this tension by incision has been responsible for the good results, just as marked mitigation follows iridectomy for glaucoma, and orchitis subsides after puncture or limited incision. It is not to the study of dead kidneys, but rather to the palpation and inspection of the living organ in situ, that the conviction of the importance of tension in the production of some of the conditions which are included in the term of Bright's disease, is due. Six cases are cited in which incision was followed by recovery. One was scarlatinal nephritis, one a nephritis from exposure to cold, one a sub-acute nephritis subsequent to influenza, one a nephritis associated with injury, and one a cystic degeneration of the kidneys developing after trauma. "The following may be regarded as some indications for relieving tension sur-

gically in cases of nephritis, however arising: (1) Progressive signs of kidney deterioration, as shown by the persistence or increase of albumin when it should be diminishing or disappearing from the urine, as in the natural course of inflammatory disorders ending in resolution; (2) marked suppression of urine or approaching this state; (3) where a marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders." The author prefers making the incision along the convex border of the kidney; punctures may be made wherever the congestion seems greatest, but it is well to avoid the pelvis of the organ. Drainage is essential, a rubber tube usually remains in place from a week to ten days. The question as to which organ should be selected for incision is of little importance unless there be marked pain or some other definite indication for one side or the other, as division of the capsule of one kidney reflexly lowers the tension in its fellow. Spanton reported two cases in which complete recovery followed exploratory incision of the kidney for the calculus in which no stones were found. He believes the best subjects will be those who present a subacute nephritis. Cousins thinks the most favorable cases for surgical measures are the acute inflammations associated with infection through the blood. Barling said that the majority of cases of renal tension were bilateral, and that they could only be relieved by medical measures and local treatment, such as cupping, applicable to both sides. Chicken deprecates the opening of the capsule for high tension alone. [F. T. S.]

2.—Hutchinson states that the X-rays (except in stout subjects or in the case of very small stones) enable an exact diagnosis as to size, position, and number of renal calculi, to be made; they enable the surgeon to remove stones with the least possible injury to the kidney and dispense with bringing the organ to the surface of the wound. Limited incision over the calculus through the renal pelvis should be preferred, as they heal as well as wounds of the parenchyma. Urotropin is advised before and after the operation to render the urine healthy. Renal stones, however small, should be operated upon as soon as the diagnosis is made; the damage which they may inflict bears no relation to their size. [F. T. S.]

3.—Bramwell's patient was a widow, aged 49 years who had suffered with indigestion for 19 years. The right kidney was movable, a mass could be felt in the region of the pylorus and the stomach was dilated. She died from syncope owing to a sudden increase in the size of the stomach from gas distension. At autopsy an enormously dilated stomach with walls as thin as paper was found. Three cords of thickened peritoneal tissue extended from the pylorus to the surface of the kidney, which was movable to the extent of 3 inches. The peritoneum was firmly attached to the kidney, and descent of the organ clearly dragged on the duodenum and pylorus, causing stenosis. [F. T. S.]

4.—Parry proposes a new operation for the cure of femoral hernia. A curved incision with the convexity downward is made from a little external to the pubic spine to the middle of Poupart's ligament and the flap of skin raised. The inguinal canal is opened just above Poupart's ligament and the transversalis fascia divided. A catgut suture is passed through the fundus of the sac, then through its neck, and finally through the conjoined tendon and transversalis fascia so that when it is tightened, the sac disappears within the abdomen. The conjoined tendon is now attached to Gimbernat's ligament and Cooper's ligament by two sutures of catgut, thus closing the crural opening. Two or three sutures fix the conjoined tendon to Poupart's ligament to strengthen the inguinal canal. Fifteen cases have been operated upon by this method, 6 were under observation for 3 years and 5 for over 2 years without recurrence being noted in any. [F. T. S.]

5.—Brown extols the value of intravenous injection of salt solution in the treatment of shock and hemorrhage. [F. T. S.]

6.—Barling says the conditions which may call for operation during the course of gastric ulcer are: Fulminating hemorrhage; recurrent hemorrhage; pain, vomiting and loss of weight; stenosis of the pylorus with dilatation of the stomach; and adhesions interfering with the motility of the stomach. There is little encouragement for the operative treatment of fulminating bleeding and we should rely on medical measures. For recurrent bleeding the ulcer may be excised or cauterized, or an anastomosis may be

made between the stomach and the jejunum; the author seems to favor the latter. In the treatment of stenosis of the pylorus, pylorodiosis should be abandoned; pyloroplasty is suited to cases in which there is not much thickening of the parts, and when adhesions are not present. In performing gastro-jejunoostomy the author has always employed the anterior method by using the Murphy button. The button has been retained in all of the cases, but has never given rise to any disastrous results. Heaton claims that anterior gastroenterostomy is the better operation when an anastomosis is desired, as it may be quickly performed, and thus gives a lower mortality. Bidwell analyses 14 cases of gastric dilatation consequent to ulcer of the stomach. In 8 the pylorus was contracted from scar tissue; in 2 the dilatation was due to adhesions; and in 4 spasm of the pylorus was present. There were no operative deaths. When operation is undertaken during actual ulceration, Bidwell prefers gastro-enterostomy if the ulcer is situated near the pylorus, and pyloroplasty if it is in a distant part of the stomach. For spasm of the pylorus, dilatation by invagination is curative; when the stenosis is due to cicatricial contraction, gastro-enterostomy is the best procedure. White argues that gastro-enterostomy is applicable to all cases of pyloric stenosis, can always be effected through healthy tissues, the parts may be withdrawn from the peritoneal cavity and carefully isolated with pads, it has fewer failures than pyloroplasty, and the mortality is no higher; it is the better operation for the majority of cases. Morton recorded a case in which recovery followed gastro-enterostomy for ulceration. Morison expressed views similar to those of Barling. Bush believes stretching the pylorus will be gradually less performed. He attached great importance to early operation. Parry related the histories of two cases of gastric dilatation following pyloric stenosis and treated by pylorotomy. Both cases made an excellent recovery.

[F. T. S.]

7.—Ferguson reports a case of **perforation of the stomach** by an ulcer in a woman aged 25. There had been previous gastric pain. At operation the perforation was found on the posterior wall of the stomach just to the right of the esophagus and 2 inches below the lesser curvature. It was inverted with Lembert sutures and the peritoneal cavity wiped dry with gauze. Recovery followed.

[F. T. S.]

8.—Beatson reports an inoperable **carcinoma of the breast treated by oophorectomy and the administration of thyroid extract** in a woman aged 44 who had suffered from the growth for 1½ years. Six months after the operation the mass had almost entirely disappeared and the enlarged glands in the axilla and above the clavicle could no longer be palpated. The diagnosis was confirmed by microscopic examination. The operation is not advisable when metastasis has taken place. Barling did not think the operation could be substituted for the ordinary operative procedure. Chicken recommended that the ovaries be removed coincidentally with the primary growth, and that the operation need not be confined to inoperable cases.

[F. T. S.]

9.—Herman reports the results in 8 cases of **oophorectomy for cancer of the breast**. One is free from cancer at the end of 3 years, in 2 life was prolonged 18 months, in 1 life was prolonged 1 year, 1 is markedly improved at the end of 11 months, 1 received no benefit, 1 had a pelvic metastasis at the end of 8 months, but was improved just after the operation, and 1 was greatly improved at the end of 4 months, when she died of intestinal obstruction. [F. T. S.]

10.—Rankin details the history of a man aged 72 who developed **senile gangrene** from an ingrowing toe-nail on the right side. The disease to the adjoining toe and the foot became considerably swollen. The limb was disarticulated at the knee joint and an uneventful recovery followed.

[F. T. S.]

11.—Morison gives a table of 20 consecutive cases of **pyloroplasty** showing the results at periods varying from six years and eight months to 2 years after operation. He thinks the procedure is one of the most satisfactory operations in abdominal surgery. Fourteen of the patients are in good health, 1 could not be found, but was in good health when last heard of, 2 are dead, and 3 are much improved, but still have occasional stomach troubles. Of the deaths 1 occurred 6 months after the operation from cancer, a malignant

being mistaken for a fibrous stricture, and the second died 2 years and 3 months after pyloroplasty; until the commencement of his last illness he was perfectly well.

[F. T. S.]

12.—Marsh lays down the precautions to be taken in advising massage and discusses its physiology. Massage and exercises are indicated in **sprains and contusions** of previously healthy joints in which there is no fracture, subluxation, displacement of tendons, or pre-existent affection as tuberculosis, gout or hemophilia. The after treatment of dislocations has undergone a most advantageous change. After a dislocation of the shoulder the arm is now kept in a sling for a day or two until the pain has subsided, then daily passive motions and massage are begun. Concerning the remote treatment of injured joints it is of great importance to eliminate tuberculosis, rheumatism, gout, sarcoma, and hemorrhagic effusion into the joint due to hemophilia, before motions are begun. Stiffness and pain are the chief indications for the movement of an articulation. These are due to some condition outside the joint, even if a limited amount of normal smooth motion is retained. Muscle wasting is invariably present when the joint is involved and it may be present, though never extreme, when the periarticular structures alone are injured. In those patients whose joints are slightly swollen and a little stiff for a prolonged period after an injury, the symptoms are probably due to a slender adhesion which may be broken under an anesthetic. Whitlock called attention to the value of the salicylates in injuries of the joints in the rheumatic. Burghard advocates daily massage with careful and gradual movement under gas once a week for adhesions following dislocations. Cousins said that too much rest is commonly employed; that after breaking up a partial ankylosis splints and bandages should be discarded and that the joint should be put into immediate use. Barling discards splints in Colles's fracture unless the deformity is great; he commences passive motion 2 days after the injury. Morison thought that a certain amount of rest was essential following joint trauma. [F. T. S.]

13.—Burghard thinks that **congenital dislocation of the hip**, when seen under the second year, should be treated by massage, passive movements in the direction of extension and abduction, and weight extension to the limb at night. Between 2 and 5 years, the Lorenz method should be tried. The surgeon should not be satisfied until the head of the bone is in place. If an X-ray examination shows that the dislocation has not completely reduced, the manipulation may be repeated two or three times at short intervals. If it then fail, the open method is to be employed without further waste of time. When seen in the sixth or seventh year, the open method is indicated unless a single trial of the Lorenz method shows that the bloodless reposition is likely to succeed. After the age of 7 an apparatus modelled upon the Shede's should be worn to diminish the unsightly waddle.

[F. T. S.]

14.—Dunbar narrates a case of partial dislocation of the head of the femur downwards and outwards which was reduced 5 years after the original injury; and a case of subluxation of the right ilium forward, which was reduced 6 years after its occurrence. [F. T. S.]

15.—Whitlock reports the case of a woman aged 28 on whom he operated for what was supposed to be an empyema of the right pleura. A swelling about the size of an orange was seen over posterior portion of the eighth intercostal space; portions of the ribs just above and below this were resected evacuating a straw colored fluid containing many small cysts. An unsuccessful effort was made to remove the mother cyst, about 5 months later it appeared in the wound and was extracted with forceps. The patient is now in good health. The source of infection could not be determined; the woman had always resided in England.

[F. T. S.]

17.—This patient was a woman aged 27 years who had suffered with pain in the back since childhood. She presented a left-sided abdominal cyst which was diagnosed as a hydronephrosis. The left kidney was exposed through an incision in the loin and found to be normal. A second incision through the left semilunar line disclosed a **multilocular cystoma of the pancreas**. This was dissected from its bed up as far as the head of the pancreas, and there amputated after passing interlocking sutures of silk

through the organ. On the tenth day following operation, all the stitches having been removed, the wound burst open, allowing the intestines to prolapse. They were washed, replaced, and the wound resutured. Uneventful recovery ensued. The patient's appetite and digestive powers were and still remain good; neither before nor after the operation was any excess of undigested fat found in the stools; and the urine has never exhibited even a trace of sugar.

[F. T. S.]

LANCET.

October 19, 1901.

1. Introductory Address. OLIVER LODGE.
2. A Clinical Lecture on Tumors of the Parotid Gland. H. T. BUTLIN.
3. Developmental (Myelogenetic) Localization of the Cerebral Cortex in the Human Subject. PAUL FLECHSIG.
4. On the Protective Substances of Immune Sera. E. W. AINLEY WALKER.
5. Gynecological Cases. G. MACNAUGHTON-JONES.
6. The Prevention of Asphyxia When the Birth of the After-coming Head is Delayed. G. F. BLACKER.
7. The Treatment of Hemiplegia. LEONARD G. GUTHRIE.
8. The Treatment of Syphilis, etc. WINFIELD AYERS.

2.—Butlin, in a clinical lecture on tumors of the parotid gland calls attention to the difficulty in differentiating malignant from benign growths of this gland. A few years ago many cases of malignant growth were reported which did not recur after removal, and it seemed at that time that the prognosis of malignant growths of the parotid gland was more favorable than of those situated elsewhere. It has since been shown, however, that many of the tumors supposed to be sarcomata were really endotheliomata. Some pathologists deny the occurrence of sarcoma of the parotid gland. The lecture is illustrated by the presentation of a number of patients who had been operated upon. The improvement in the surgery of the parotid gland must lie in earlier recognition of the nature of the disease affecting it. [J. H. G.]

3.—Flechsig gives an outline of the developmental (Myelogenetic) localization of the cerebral cortex in the human subject. A part of the author's researches which have been carried out some time ago, and new researches on the human subject, lead to the conclusions that the convolutions are divided at certain periods of age into regions which are, "1st, well provided with medullary substance, 2nd, scantily provided with medullary substance, and 3rd, altogether devoid of medullary substance." He has estimated the number of myelogenetic cortical areas at 36 and he states that a special anatomical position, and therefore also a special functional importance is attached to each area of myelogenetic localization of the cortex. These cortical centers, he also classifies into three groups: "1st. Regions of early development (primordial zones); 2nd. Regions of the intermediate development (intermediary zones). 3rd. Regions of late development (terminal zones). The author then discusses the significance of each zone.

[F. J. K.]

4.—Walker in a preliminary communication writes on "the protective substances of immune sera." The minimum lethal dose of a given bacterial culture being known, and the dose of immune serum sufficient to protect against the dose of the toxine, this is designated as its serum equivalent. It has been shown that if an animal be given two minimum lethal doses of the bacterial culture and two doses of the serum equivalent, infection and death follow, the animal therefore is not protected. He states that this is explained on the ground that there exists a deficiency in the leukocytic ferment in the animal concerned, but in reality, the amount of immune body given in the immune serum is deficient. From his experiments he deduces the following: That the leukocytic ferment of different animals would supply the lactic ferment of some other animals, and further that addiment is not so special to the species as claimed by Professor Ehrlich. He reaches the following conclusions: 1st. Addiment is not extremely

special to the species. 2nd. Addiment is a leukocytic ferment. 3rd. Addiment is increased during and by immunization. 4th. The immune body is produced exclusively by the leukocytes. 5th. Agglutinations assist the phagocytic process." [F. J. K.]

5.—Macnaughton-Jones reports a series of gynecological cases including a primary tuberculosis of the Fallopian tube associated with pyosalpinx in a young woman of 22 years, also a large hernia following an abdominal section, the hernial sac protruding over the pubis and covered only by integument. A surgical operation with tier-suturing resulted in a cure. Also, a large fibromyoma removed by hysterectomy with recovery of the patient. The tumor weighed 28 pounds. [W. A. N. D.]

6.—Blacker gives a historical note upon the methods for the prevention of asphyxia, when the birth of the after-coming head is delayed. He refers to the obstetrical authorities from 1754 to date who have treated of this subject, including a description of Pugh's method, which consisted in the introduction of a tube made of metal, spiral wire, or elastic gum, such a tube acting as a prolongation of the trachea. Barnes, in his book, mentions that he kept a child alive for 10 minutes in a case of breech-presentation by retracting the perineum, thereby enabling air to enter the chest. The author remarks that the passage of a catheter or special tube into the child's mouth, when the head is lying high up in the pelvic cavity, is likely to lead to a waste of valuable time, while if the head is sufficiently low down in the pelvis to admit of air reaching the mouth, if the perineum be retracted, its immediate extraction should be a matter of little difficulty. [W. A. N. D.]

7.—Guthrie discusses the treatment of hemiplegia. The author emphasizes that the treatment of hemiplegia is usually limited to the administration of iodide of potassium, strychnine, and other drugs, and attention to hygienic surroundings, but the treatment of paralysis is almost constantly neglected. He also emphasizes that mild cases never recover unless treated, and severe cases go from bad to worse unless treated vigorously. This paper mainly deals with the treatment of paralysis, which is due partly to articular adhesions, partly to the motor paralysis leading to muscular atrophy, and in part to spasticity or spasmotic contraction, which finally induces shortening of the stronger muscles. Paralysis when treated early would lessen the number of incurable patients, and would alleviate the number of incurable ones, but when the conditions just named are in a far advanced state, they are hopeless. He summarizes as follows: "1. Neglect and want of treatment aggravate severe, and retard the recovery of mild cases. 2. The evils to be foreseen and guarded against are articular adhesions, late rigidity, and muscular atrophy. 3. Articular adhesions should be prevented by passive movements of each joint from the very first. 4. Faulty positions of the limbs should be constantly corrected or they will become chronic. 5. Contraction of the muscles should be treated by endeavors to improve the nutrition of their weaker opponents. 6. Massage, passive movements, and, to a less extent electricity, should be used with this object. These agents not only counteract muscular atrophy from disuse, but probably take the place of normal stimuli and invigorate the neurons. 7. The recovery of mild cases may often be hastened by re-education of the movements. Want of re-education often prevents recovery. 8. Re-education consists in a combination of passive and active exercises. 9. Movements should first be encouraged in those parts which naturally tend to recover first. 10. Incoordination and general weakness of the limbs, which have not yet regained power of movement, should be treated by exercises and mechanical therapeutics. 11. It is important to find out what the patient can do and make him do it."

[F. J. K.]

8.—Ayers discusses the treatment for syphilis with special reference to the best method of administering mercury. As the result of an extensive experience based on 180 cases treated with mercuriol, he finds that this preparation given in tabloids, one grain doses, steadily increasing the dose until slight tendency on the part of the gum and teeth to become tender, is the best method of administering mercury. [F. J. K.]

MEDICAL RECORD.

November 2, 1910.

1. Carbonate of Creosote as a Remedy for Pneumonia, etc. LEONARD WEBER.
2. On the Use of A. C. E. Mixture and Ethyl Bromide in Operations for Adenoid Vegetations. J. G. GLEITSMANN.
3. Notes on Vienna Hospitals. JOHN E. SOMERS.
4. The Pathology of Bright's Disease. GEORGE E. DAVIS.
5. A Report of Some Cases Presenting Gross Lesions of the Basal Ganglia. M. L. PERRY.

1.—Weber reports nine cases of pneumonia that were treated by carbonate of creosote in doses of from 40 to 60 grains daily. Eight of the patients recovered and one died of myocarditis during convalescence. [J. M. S.]

4.—Davis believes that in the pathogenesis of dropsy, albuminuria, by withholding nourishment, produces (1) an alteration in the composition of the blood, or anemia and hydremia; (2) an alteration in the texture of the capillaries; (3) an alteration in the condition of the vasomotor nerves which control the circulation, the exudation, and the absorption by the capillaries. Uremia is a mixed form of poisoning, due to many causes, and we cannot offer one explanation alone for all accidents of bad repute which may appear in the course of Bright's disease. [J. M. S.]

5.—From a study of three cases, Perry concludes that (1) the corpus striatum has no intimate relation with either the motor or the psychical centers; (2) that there may be a very extensive lesion involving both the caudate and the lenticular nuclei without giving rise to symptoms; (3) that there is in the posterior portion of the lateral nucleus of the thalamus an area, irritation of which will produce immediate loss of consciousness with convulsive movements upon the opposite side, and destruction of which will produce immediate death; (4) that there may be a tumor of considerable size involving the pineal body without giving any pressure symptoms; (5) that the pineal body may be entirely destroyed by disease without producing symptoms; (6) that there is no tract of nerve fibers originating in the pineal gland and connecting it with the remainder of the brain. [J. M. S.]

MEDICAL NEWS.

November 2, 1910. (Vol. LXXIX, No. 18).

1. Some Observations on Southern California. SAMUEL A. FISKE.
2. Examination of the Mouth in Infancy and Childhood. JACOB SOBEL.
3. A Case of Concussion of the Brain and Hystero-Epilepsy. WILLIAM B. NOYES.
4. On Experimental Tuberculosis of the Suprarenal Capsule in Relation to Addison's Disease. Preliminary Report of a Pathological Study. RINDO De VECCHI.
5. The Physician as a Social Factor. ALEXANDER ROVINSKY.
6. An Interesting Accident of Staining. J. O. COBB.

2.—J. Sobel says that for a thorough inspection of the mouth of infants and children, three conditions are necessary: (1) Good position; (2) good light; (3) good tongue depressor. He advises the use of Chapin's tongue depressor, particularly when a very thorough inspection of the pharynx and tonsils is desired. Inspection of the anterior surface of the epiglottis is frequently a simple matter with this depressor, especially in very young children. He also gives the following method for a systematic examination of the mouth: The depressor is inserted at the left angle of the mouth, the cheek and lips everted, then at the right angle, and the cheek and lips everted. The spatula then catches the frenum, and the under surface of the tongue, the frenum and the floor of the mouth are observed; the spatula being removed, the upper surface of the tongue is viewed; the latter is then firmly depressed and the hard and soft palates, fauces, tonsils, pharynx, and in the vast majority of cases the epiglottis are observed. [T. M. T.]

3.—W. B. Noyes in his article on Concussion and Hys-

tero-Epilepsy states that hystero-epilepsy may mean general hysteria with hysterical convulsions, or definite epilepsy with intercurrent epilepsy, or it may be a convenient term to cover up one's ignorance as to whether hysteria or epilepsy is the proper diagnosis. From a legal standpoint this is not an unimportant question, for, in the minds of the majority of lawyers as well as jurymen, hysteria is still held to be synonymous with simulation. To establish a pathology for such combined cases during life and frequently by autopsy is a difficult problem. Admitting the presence of an exhaustion paralysis of a temporary nature following an epileptic fit, and also admitting that the condition present in a case of temporary hemiplegia which the author reported, and in a long series of cases reported by Clarke of the Craig Colony of various other paralyzes, is truly the result of exhaustion, the question arises, why are not these complicated symptoms, which we call hysteria, so closely associated with definite epileptic attacks, to be explained also as fatigue symptoms in a man who was originally suffering from concussion of the brain, and secondarily from epilepsy? One condition is common to all these traumatic cases, and that is, whether or not litigation is being carried on, they have almost lost the power of working continuously at any occupation, and fatigue promptly follows any exertion. [T. M. T.]

4.—B. De Vecchi, in his report of experiments on the above conditions, says it is clear that by tuberculizing the suprarenals a serious poisoning of rabbits is produced which ultimately leads to their death. The circulating poison has great destructive properties, as is shown by the pathological changes in the heart, liver and kidneys, and the cells of the central nervous system are particularly vulnerable. These injuries explain the nervous symptoms of those suffering from Addison's disease. He did not observe any secondary changes in the sympathetic cells and in the rabbit where the celiac ganglion was partially destroyed; he encountered no symptoms not seen in the other animals. Although he says he has certainly succeeded in causing an intoxication in animals by this special method, he has been unable to reproduce the characteristic bronzed skin. He also states that the cause of the diseased condition produced lies in the gradual destruction of suprarenal substance. To this undoubted capsular insufficiency must, however, be added the tuberculous intoxication, so that we have two factors to deal with. The author believes that he has reproduced as nearly as possible the process as it goes on in the human body, and while he does not believe he has entirely settled the question, it has been brought nearer to solution and an entirely new method of research has been opened. [T. M. T.]

6.—J. O. Cobb found in staining for tubercle bacillus with methyl instead of methyl blue a rod about three times the size of the tubercle and shaded light lilac. In studying this rod it was found to be a crystal of the stain. It was also noticed that the presence of carbolic acid and heat produced beautiful crystallization, and fresh preparations of the stain gave crystals much more uniform in size and much smaller than in old preparations. The author also calls attention to the accident of staining with Sudan III and does not advise its use on account of the deposit of crystals resembling closely the bacillus. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

November 2, 1901. (Vol. LXXIV, No. 18).

1. Address in Surgery. REGINALD H. SAYRE.
2. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
3. Scientific Aids to Diagnosis. HENRY H. HOLTON.

1.—R. H. Sayre, in his address on surgery, gives Cabot's blood experiences in over a hundred cases of appendicitis: (1) Red cells: No change occurs save in old chronic abscess; (2) Coagulation is slow, but fibrin is increased; (3) As in most infections, the mildest and the severest cases show no leukocytosis; this absence in a case which is distinctly serious is as bad a prognostic as in pneumonia or diphtheria; (4) Catarrhal appendicitis is really accompanied by leukocytosis; (5) An increasing leukocytosis is equivalent to a spreading process and may be the sole

evidence of this fact; a steady increase is a very bad sign and is more important than a large count that does not increase; (6) After walling off, the count remains stationary or decreases. [T. M. T.]

3.—H. H. Holton states that all cases demanding operative intervention, except emergency cases, should not be operated upon until the result of the blood examination is known. He gives some blood examinations as follows:

Normal Blood.

Quantitative—

Red Cells	4,500,000—5,500,000
White Cells	6,000—10,000
Blood Plates	200,000—300,000
Hemoglobin	100—90 degrees (Fleischl)

Qualitative—

Red cells, uniform size and shape. No nucleated cells in adult blood.

White cells—

Young,	
Large lymphocytes	20-30 per cent.
Small lymphocytes	4-8 " "
Adult (polymorphonuclear neutrophils)	62-70 " "
Old (eosinophiles)	1½-4 " "
Mast cells	¼-½ " "

Primary Anemias.

Chlorosis.

General.—Blood as a whole very pale in marked cases, coagulates rapidly. Fibrin not increased. Specific gravity low.

Quantitative—

Red cells, 4,000,000.
White cells normal.
Hemoglobin, 25 to 60 degrees.

Qualitative—

Red cells, small, pale, often deformed. Nucleated corpuscles rare.
White cells, increase in lymphocytes.
Blood plates, increased.

Pernicious Anemia.

General.—Blood excessively pale, watery, and fluid; coagulates slowly. Uneven, streaky appearance of drop.

Quantitative—

Red cells, 1,500,000 to 1,000,000 or less.
White cells, 4,200, to 500.
Hemoglobin, 60 to 20 degrees (usually high in proportion to number of cells).

Qualitative—

Red cells, increase in average size. Deformity of shape (poikilocytosis). Staining changes. Nucleated corpuscles present: Megaloblasts (most numerous); normoblasts.
White cells, large percentage of lymphocytes; small percentage of myelocytes.

Leukemia.

General.—The drop as it emerges from puncture looks perfectly natural, very sluggish, coagulation slow.

Splenic Myelogenous Form.

Quantitative—

Red cells, about 3,000,000.
White cells, about 450,000.
Hemoglobin, 30 degrees.

Qualitative—

Red cells, nucleated forms numerous.
White cells, 30 per cent. myelocytes.

Lymphatic Form.

Quantitative—

Red cells, 3,000,000 or lower.
White cells, 100,000 or lower.
Hemoglobin, 30 degrees.

Qualitative—

Red cells, nucleated forms rare.
White cells, 90 per cent. lymphocytes.

Typhoid Fever.

General.—The blood appears normal on puncture. Coagulation and fibrin are normal.

Quantitative—

Red cells, 4,000,000 to 1,300,000; in the third week begin to decrease.

White cells, no increase; in late weeks decrease.

Hemoglobin, loss relatively greater than loss of cells.

Qualitative—

White, increase in proportion of young leukocytes.

Serum, agglutinin appears on the average in from 5 to 8 days.

Malaria.

General.—The presence of the plasmodium malarie is absolute proof of this disease.

Quantitative—

Red cells, 2,000,000 to 1,000,000. Reduced in number after each paroxysm. A tendency toward regeneration and restitution during the afebrile periods.

White cells, numbers subnormal, decreasing during paroxysms and rising toward normal again during the afebrile period.

Hemoglobin, diminished with red cells.

Qualitative—

Red cells, deformity in size and shape. Normoblasts, megoblasts, and ghost cells (resembling pernicious anemia).

White cells, lymphocytosis. Increase in eosinophiles.

Septicemia.

General.—Blood in macroscopic appearance normal. The infecting organism can usually be separated by cultural methods.

Quantitative—

Red cells, 3,000,000 to 1,000,000; diminution depending on severity of disease.

White cells, marked increase in majority of cases.

Hemoglobin, running parallel with red cells, often exuding and staining serum.

Qualitative—

Red cells, very little deformity.

White cells, polymorphonuclear variety most in evidence.

In conclusion the author would impress upon the rural practitioners, who make up the great bulk of the profession, the great possibilities that these various aids present to them, if they only choose to avail themselves of, and perfect themselves in, the use of these advances in scientific accuracy. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

October 31, 1901.

1. The Mechanics of Lateral Curvature as Applied to the Treatment of Severe Cases.

ROBERT W. LOVETT.

2. Intermittent Hydrops. E. G. BRACKETT.

3. Association of Anemia With Chronic Enlargement of the Spleen. ARTHUR H. WENTWORTH.

4. A Case of Anomia and Paraphasia.

GEORGE H. THOMAS.

5. On the Passing of the Trephine.

THOMAS H. MANLEY.

1.—In cases of scoliosis with fixed bony curves, the same theory of corrective treatment cannot be applied as in cases of scoliosis with flexible curves. The fact that there is a fixed portion of the spine situated between two movable parts makes it easier to twist or displace the thorax as a whole than to make any change in the curved portion itself. As a result of this, forcible attempts to correct bony rotation in fixed curves will increase the lateral curve, unless the thorax is kept from rotating, and forcible attempts to correct the lateral curve are likely to increase the rotation. To judge from the observations on the cadaver, suspension as a corrective agent has but little corrective effect in rigid cases. For the application of forcible jackets, the prone position, with the legs hanging perpendicularly, seems the most effective. Forcible correction seems to have its place only as preliminary to gymnastic treatment. [J. M. S.]

2.—Intermittent hydrops is an affection without discoverable anatomical basis, without proof of infection, giving a simple, noninflammatory, serous effusion in the joints, occurring at regular inexplicable periods, interrupted without rule, or in accordance with what may be termed psychic stimuli, associated in some instances with what are usually classed as functional nervous disorders. Certainly,

the disease seems to be a functional, as opposed to an organic, trouble; and whether we do or do not call it a vasomotor trouble or a neurosis, depends largely on our reluctance towards these catch-alls for unexplained disorders. [J. M. S.]

3.—In infancy and early childhood there is a severe grade of anemia associated with marked enlargement of the spleen, the etiology of which has caused a great deal of discussion. The disease, known as anemia infantum pseudoleukemica was believed at one time to be a primary disease of the blood. Its prototype, in the adult, anemia splenica, was thought to be a primary disease of the spleen. The author believes that they are secondary conditions dependent upon a number of causes. After an exhaustive résumé of the literature on the subject, the author makes the following summary: (1) The blood changes of so-called anemia splenica are those of a secondary anemia. (2) The degree of cachexia, that has been described in these cases, does not always correspond to the blood changes. It is not improbable that the cachexia and other symptoms are produced by a chronic intoxication similar to that produced by carcinoma, tuberculosis, etc., and that the splenic and blood changes are merely two of the results that are thus produced. The source of the intoxication is unknown, and it is very probable that it may come from various sources. (3) The mere interference of function from an overgrowth of connective tissue in the spleen could not produce the symptoms described as characteristic of anemia splenica. (4) If it were possible for fibrous tissue to produce toxic substances, it is difficult to account for the absence of such substances in connection with chronic hyperplasia of the spleen when associated with a variety of well-known causes. (5) It has been stated that the splenic alterations are primary, and precede all of the other symptoms. This statement requires further observation to confirm it. The lesions in the spleen are characteristic of chronic hyperplasia, a condition which is associated with a number of abnormal conditions in various organs, and which frequently gives rise to no symptoms, or in other cases causes such symptoms as may be produced by the size and weight of the organ. (6) The lesions found in the spleen in cases of so-called splenic anemia do not warrant the statement that this condition is related in any way to pseudoleukemia. There is no analogy between the hard glandular form of malignant lymphoma and the lesions of chronic hyperplasia in the spleen. (7) A tendency to generalize from observations made upon 1 or 2 cases is to be deplored. In the case of splenic anemia nothing characteristic of a primary disease has been discovered in any organ or in the blood. (8) The evidence is conclusive that anemia infantum pseudoleukemica are objectionable, because they are it owes its peculiar symptoms and blood changes to the occurrence of severe anemia at an early age. (9) There is little doubt that anemia infantum pseudoleukemica and anemia splenica infettiva are identical conditions, and there is even less proof that anemia splenica infettiva is a primary disease of the spleen than that anemia infantum pseudoleukemica is a primary disease of the blood. (10) There is no apparent connection between the character of the blood and the splenic changes in infancy. (11) All that one is justified in concluding about these secondary anemias of infancy is that in some cases there occurs a chronic hyperplasia of the spleen, and in others the spleen is not altered. (12) The names anemia splenica, primary splenomegaly, anemia splenica infettiva and anemia infantum pseudoleukemica are objectionable, because they are misleading. [J. M. S.]

4.—Thomas reports a case of a lawyer, 60 years of age, who was suffering from a discharge from his left ear, of 20 years' duration. With this exception he had always regarded himself as perfectly well. A few months previous to the occurrence of his present illness, the patient had headaches for the first time in his life; and about 5 months before the symptoms developed, he acted very strangely to his wife, using profane language to her; an occurrence which he afterwards entirely forgot. About 5 weeks before he was seen by the author, the patient began to have intermittent attacks of headache. These headaches became more severe, and were more or less persistent day and night, and, finally, were so troublesome that he was compelled to consult his family physician. Then it was found that the patient had a noticeable difficulty in finding

words to express himself. One thing especially noticed was that on entering into the office he went to the stove, in which a hot fire was burning, and stretching out his hands, asked if there was a fire in the stove. This question was repeated several times by the patient, although the doctor each time gave an affirmative answer. At this time he was able to make out legal documents of complicated nature which were found to be carefully written in every way. The patient's breath was exceedingly offensive; his tongue was dry and heavily coated; the pulse was 90 and weak; the temperature was normal; and the pupils reacted to light. When shown any object and asked to name it, he found it impossible to do so, though he apparently recognized perfectly what the object was, and frequently indicated his knowledge by trying to show its use. Pressure over the left side of the skull revealed a point of great tenderness, about 3 inches above the tip of the mastoid; and deep pressure here provoked almost unbearable pain, which lasted 5 or ten minutes. There was no tenderness anywhere else on the skull. Besides this anomia, the patient was unable in many instances to apply fitting adjectives. The lesion which produced these symptoms was believed to be located in the left temporal lobe, below the angular gyrus. The skull was trephined over the superior temporal lobe and over the left lateral lobe of the cerebellum, with negative results. The patient died on the following day. At the post-mortem, the mastoid antrum and cells were found filled with foul-smelling, inspissated pus, and the bone was necrosed. There was an abscess cavity in the posterior part of the lower left temporal convolution. The abscess was about the size of a walnut, and it was filled with thick, foul-smelling pus of gelatinous consistency. Extending around this area, for a distance of about $\frac{3}{4}$ of an inch in all directions, the brain tissue was found softer than elsewhere. [J. M. S.]

5.—In vault fractures make a large incision to expose the skull freely. Leave all aseptic sub- or epidural coagula, however extensive, undisturbed. All lacerations in the dura mater should be securely closed with fine aseptic gut suture. Reimplantations of trephine buttons of skull bone have invariably failed, and any procedure which will conserve the skull is of great advantage to the adult. In a child under 15 years, as Ollier has correctly demonstrated, the periosteal layer of the dura mater will regenerate ample new osseous tissue to fill a large breach. Silk-worm gut, or *Crin de Florence* fish gut, answers best for suture of the scalp; small wicks of aseptic gauze in the angles of the wound provide for ample drainage. For antiseptic powder over the wound nothing surpasses finely ground fresh mustard. Mauley uses the osteotome instead of the trephine. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 2, 1910.

1. Prostatectomy, the Method of Choice in the Management of Prostatic Obstruction. EUGENE FULLER.
2. Perineal Prostatectomy. PARKER SYMS.
3. Prostatectomy Versus Prostatotomy in the Radical Treatment of Senile Hypertrophy of the Prostate. RAMON GUITERAS.
4. Autoplastic Suture in Hernia and Other Diastases—Preliminary Report. L. L. McARTHUR.
5. The Cosmetic and Visual Results in Sclint. J. MORRISON RAY.
6. Strabismus: Its Treatment. A. EDWARD DAVIS.
7. The Requirements of Modern Surgery. J. H. CARSTENS.
8. A Report of Four Cases of Fat Necrosis in Connection with Gallstones. W. A. EVANS.
9. Fat Necrosis from a Surgical Standpoint. CARL BECK.
10. The Treatment of Typhoid Fever in Children. HENRY E. TULEY.

1.—Fuller points out the great mortality, direct and indirect, of prostatic hypertrophy and regrets the apathy of the community and the medical profession concerning the operative treatment of this condition. A man under 65 is young from the standpoint of prostatic surgery. The majority of the cases are best treated by prostatectomy; they may be grouped as follows: (1) Those not amenable to urethral instrumentation; (2) those demanding vesicle or

perineal drainage as well as relief from prostatic obstruction; (3) those in which renal infection exists; (4) those complicated by phosphatic calculi in which litholapaxy is impracticable; (5) those in which the prostatic mass is not amenable to less radical surgery. Most of the cases of castration which he has seen were not relieved but subsequently submitted to prostatectomy. The Bottini operation is not a radical cure, residual urine almost always remains; it fails to relieve in a good percentage of the cases and the mortality is in the neighborhood of 10%. "If an individual is quite elderly, say around 75 or over, and is suffering from obstruction due to a middle lobe of not great size, it might be, in the absence of contraindicating complications, that the Bottini operation would then be the one of choice." One reason for the fleeting good results after the Bottini operation is the contraction which attends cicatrization following the burning. Fuller states that the mortality of prostatectomy is not over 8 or 10% in individuals not over 65 and who are otherwise healthy.

[F. T. S.]

2.—Syme says the Bottini operation does not appeal to him as a sound surgical procedure. It does not remove the prostate and only partially relieves the obstruction in most cases. The slough must separate and pass through the urethra leaving a burned wound in the presence of infected urine. Prostatectomy will be the favorite operation in the future, if it can be made reasonably safe. The author makes a median incision in the perineum, opens the membranous urethra and through this opening inserts what he calls a "bladder retractor." It consists of a soft rubber tube to the end of which is cemented a rubber bulb. When the bulb is distended with water it measures about 2½ inches in diameter; by pulling on the tube the bladder is brought within satisfactory reach. The capsule of the prostate is perforated and each lobe enucleated separately. The retractor is emptied, withdrawn, and a large drainage tube introduced through the perineum into the bladder. Syme has operated on nine cases ranging in age from 53 to 75 years. All but one had cystitis, two had stone, and the residual urine varied from 3 to 5 ounces. All of the patients have lived and all but one, who was only partially relieved, because the entire gland was not enucleated, are completely cured. [F. T. S.]

3.—Guitarras reviews the various methods of prostatotomy and of prostatectomy, and compares the results of each. Of 753 prostatotomies, 622 were cured, 44 died and 87 were failures; or 82.5% cured, 5.8% died, and 11.5% failures. Of 152 prostatectomies, 110 recovered, 25 died, and 17 were failures; or 72.3% cured, 16.4% died, and 11.2% failures. The results in those that recover from prostatectomy are better and more permanent than those following prostatotomy. The operation to be preferred will be decided according to the age of the patient, the size of the prostate, and the condition of the bladder and kidneys. In very old men if the prostate be of the right variety the Bottini method should be performed. Large glands are favorable for enucleation while small ones are best treated by prostatotomy. If the kidneys be diseased either medically or surgically, the Bottini operation is indicated.

[F. T. S.]

4.—L. L. McArthur has been conducting some experiments upon animals and human beings in the use of the aponeurosis of the external oblique muscle as a suture material for the purpose of closing the inguinal canal in the radical cure of hernia. It is his custom to separate a small portion of the fascia about ¼ to ½ of an inch wide from the internal pillar, excepting at its pubic attachment. A piece of silk with a needle attached is then fastened to the free end. Although flat when first cut, this portion of fascia soon assumes a round shape and can readily be drawn through the tissues by means of the needle and thread attached to its free extremity. Where two layers of sutures are required, as in the Bassini operation, two strips of fascia may be separated, one from the internal and the other from the external pillar. The author had employed this method of suturing in twenty cases of inguinal hernia with perfect primary union in all. The advantages claimed for the method are: (1) "The obtaining of a living suture; (2) lessened chances of failure through avoidance of introduction of dead or foreign tissue; (3) The incorporation in the resisting cicatrix of organized white fibrous tissue; (4) the applicability of the same procedure to other

situations." By his experiments upon dogs McArthur has shown that the tissue is not absorbed, does not slough, but heals *in situ*. In very young children and in some women the external oblique is occasionally so poorly developed that the application of the author's method is unpracticable. The tensile strength of the strips of tendon is sufficient to stand a strain of from 11 to 24 pounds. Sufficient time has not elapsed since the author's operations to render his report final. [J. H. G.]

5.—See Philadelphia Medical Journal, June 15, 1901, page 1139.

7.—J. H. Carstens, in discussing the requirements of modern surgery, refers to the progress surgery has made during recent years and its present requirements. His conclusions are as follows: "(1) A patient brought to the highest state of resistance to microbial infection and made as clean as possible. (2) An operating-room, preferably in a hospital, where everything has been made thoroughly sterile. This includes anesthetizer, assistants and nurse. (3) A surgeon who has a mechanical hand and has received a long, thorough training." J. H. G.]

8.—Evans reports four cases of fat necrosis in connection with gallstones. The first occurred in a woman 45 years of age, who had had attacks of biliary colic for eight years. Only one of these attacks of gallstone colic was associated with jaundice. After the last attack of biliary colic, symptoms of localized peritonitis developed. The patient was operated upon and 250 stones were removed from the gallbladder. The common bile-duct was unobstructed. Yellowish white nodules were found in the omentum. The patient died 36 hours after the operation. At the time of the operation two of these soft yellowish white nodules were excised from microscopical examination. The second case occurred in a man between 30 and 40. Attacks of gallstone colic accompanied by occasional jaundice had occurred during the past three years. During the six weeks preceding the operation which was done for the relief of the gallstones, he had been ailing and his general health was much impaired. During this time jaundice was marked and the gallbladder appeared distended and tense. Death soon followed the operation. A post-mortem examination was made two hours after death, and it was found that the great omentum which was glued to the anterior abdominal wall was the seat of extensive fat necrosis. The mesenteric fat and the perirenal fat were also involved by fat necrosis. The pancreas was in a state of hemorrhagic inflammation. The third case occurred in a man, 59 years of age, who had been ailing for ten days, complaining of jaundice, swelling of the abdomen, and diarrhea. Considerable tenderness existed over the liver. It was ascertained that three previous attacks had occurred during the past five years. Death occurred on or about the fifteenth day of the illness. At autopsy it was found that the peritoneal cavity contained a large quantity of bloody serous fluid and the parietal peritoneum was the seat of petechial hemorrhages. The liver weighed 2960 grams. The surface was irregular, granular, and the common duct was patulous. In the pancreas and around this organ areas of fat necrosis were present. The fourth case occurred in a married woman who had given birth to a healthy child early in May, 1901. On June 20th, abdominal pain developed. Subsequent attacks of abdominal pains occurred which were attended with slight jaundice. A calculus about the size of a half split pea was found in the stools on June 21st. On July 28th, a second calculus was passed. At the operation which was performed on August 3rd, the gallbladder was opened and the appendix was explored. A number of stones were removed from the gallbladder. The common bile-duct was patulous. The peritoneum was studded with numerous white paper like dots and lumps, some of these were removed for microscopical examination. The author next discusses the anatomy of the pancreas and biliary ducts. In referring to the diagnosis of fat necrosis, he emphasizes that pain in fat necrosis is generally located in regions other than that of the gall bladder. Occasionally the pain which attends fat necrosis remains localized to a particular area, but more frequently it is of a shifting character and is difficult to locate. At other times the pain is slight and amounts to only a sensation of discomfort which is most pronounced in the epigastric region though spreading to other parts. Gallstones accompanied

with fat necrosis are as a rule attended with fever. It should be born in mind that, after an attack of biliary colic, general abdominal soreness is present and if this persists it should suggest fat necrosis. [F. J. K.]

9.—Carl Beck reports a case of **fat necrosis associated with gallstones**. The patient was a woman 26 years of age. She had a number of typical attacks of gallstone colic and passed portions of gallstones in her stools. Just before she was operated upon she suffered for several days from a shifting pain in the abdomen. At one time it was present in the appendix region and later it was most marked in the neighborhood of the spleen. At the operation the omentum, the peritoneal coat of the intestines, and the mesentery were found studded with areas of white spots ranging in size from a pin head to five mm. in diameter. These areas were not round like tubercles, but angular, flat and somewhat depressed. The condition closely resembled tubercular peritonitis, but a microscopic examination showed the condition to be one of fat necrosis. The gallbladder was opened, and from it were removed a number of gallstones varying in size. The bile ducts were found free of any obstruction. After operation the patient was fed entirely by the bowel for nine days, and to this treatment Beck attributes the satisfactory recovery which followed. Attention is called to the frequent association of gallstones and fat necrosis. [J. H. G.]

10.—Tuley gives an outline of the **treatment of typhoid fever in children**. He states that the dietetic treatment is a most important division and he believes that milk, kumyss, buttermilk, broths, and concentrated liquid foods are most suitable. Free indulgence in water should be encouraged. The author is an advocate of the tub or sponge bath, or the application of cold in the form of a wet pack. He has found that cold colonic flushing frequently reduces the temperature. He states that on more than one occasion he has used no internal medication whatever, depending entirely upon hydrotherapeutic measures. He recommends bismuth subnitrate, and tannalbin for the diarrhea, turpentine for the intestinal distension, and strychnia for the weakened heart, and finally he advises that whiskey should be reserved as a stimulant to be used late in the course of the disease, and when administered it should be given with regularity and in considerable size doses. [F. J. K.]

AMERICAN MEDICINE.

November 2, 1901.

1. The Influence of Mental Depression on the Development of Malignant Disease. JOSEPH D. BRYANT.
2. Transmission of Tuberculosis Through Meat and Milk. (Concluded). JOHN J. REPP.
3. Clinical Points in Diabetes and Bright's Disease. A. J. HODGSON.
4. Convulsive Tics. OTTO LERCH.
5. The Relative Infrequency of Tuberculosis Among Jews. MAURICE FISHBERG.
6. Should We Burn Our Dead? HENRY D. FULTON.

1.—There is nothing to warrant the assumption that **mental depression** exercises any influence in the causation of carcinoma, except through blood impoverishment which almost invariably exists in melancholia (Steele), a change that appears not to influence the outcome in the male materially, as the percentage of affliction is substantially alike in this sex in all forms of insanity. Hence it appears that the preponderance of **malignant manifestations** in the female should be attributed rather to the broader field of attack than to any form of special vulnerability. [J. M. S.]

2.—The evidence presented in Repp's paper may be summarized as follows: (1) That tuberculosis may be transmitted to animals by feeding them the meat of certain other animals that are tuberculous, or by inoculating them with it. (2) That tuberculosis may be transmitted to animals by the ingestion of the milk of certain cows that are tuberculous, or by inoculating them with it, both when the udder of the cow is diseased and when it is healthy. (3) That, therefore, the meat and milk of certain tuberculous animals contain living, virulent tubercle bacilli. (4) That the tubercle bacilli of cattle are pathogenic for man. (5) That, therefore, the meat and milk of certain tuberculous animals are capable of producing tuberculosis in human beings who use these products as food. It is necessary,

therefore (1) to regard the meat of all food animals, especially cattle, as unfit for food when the animal is highly tuberculous. It may be considered safe as food when the animal is only slightly or moderately tuberculous, especially so if the meat is well cooked and the tuberculous tissues are eliminated. (2) To consider the milk of a cow with a tuberculous udder dangerous for food unless it is well sterilized. The milk of tuberculous cows with healthy udders is also sometimes dangerous for food unless well sterilized. [J. M. S.]

4.—Lerch reports a case of **convulsive tic** in which the patient opened and closed his eyes and rolled the eyeballs. The head was forcibly drawn backward to return with more ease to its natural position. Now and then the movement was so violent that the whole trunk became involved, and was twisted to the right or left. The motions were frequently accompanied by loud, noisy belching, especially morning and night. [J. M. S.]

5.—The external aspect of the **Jew** would lead one to suspect tuberculosis at first sight. His stature is inferior to that of any other European people, and his predominantly narrow girth would give him what is technically known as the "lowest index of vitality." The Jews are also town dwellers. Tailoring appears to be their preferred occupation. A greater proportion of Jews than any other people deal in second-hand clothing, which exposes them to infection by tubercle bacilli. Consanguineous marriages are very frequent among them. These conditions, added to their poverty, constant grief, anxiety, mental exertion, and the ceaseless persecution to which they are subjected, should make them victims to tuberculosis to a greater extent than any other people. But it has long been known to many reliable authorities that the Jews suffer, proportionately, less from the dread disease than any other people. The most plausible explanation of this immunity is the careful selection of the carcasses of food animals in Jewish slaughter houses. Another important factor is the infrequency of alcoholism and syphilis among them. The care that Jews take of their health and the frequency with which they consult physicians, even for slight ailments, have also a great deal to do with their lesser liability to tuberculosis, just as it protects them in times of epidemic ravages from other infectious diseases. [J. M. S.]

6.—Fulton contributes a paper recommending **cremation**. [J. M. S.]

UNIVERSITY OF PENNSYLVANIA BULLETIN.

August, 1901.

1. A Comparative Study of Dysenteric Bacilli. SIMON FLEXNER.
2. Experimental Pancreatitis—II. SIMON FLEXNER and RICHARD MILLS PEARCE.
3. A Teratoma of the Testicle, Showing Extensive Perithelial Angiosarcomatous Growth. WILLIAM F. HENDRICKSON.
4. The Pathology of Bubonic Plague. SIMON FLEXNER.
5. Contributions to the Pathology of Leptothrix Infections in Man. RICHARD MILLS PEARCE.
6. Hepatic Infarctions. WARFIELD T. LONGCOPE.
7. The Increase of Elastic Tissue in the Lung in Chronic Passive Congestion. RICHARD MILLS PEARCE.

1.—Simon Flexner contributes a **comparative study of dysenteric bacilli**. The author has made a study of several cultures of bacilli from cases of dysentery. These were made in the usual manner upon culture media, and the reactions toward blood obtained from cases of dysentery and from immunized animals were noted. The dysenteric blood was obtained from immunized cases of Porto Rico dysentery, from Manila, from Presidio and occurring in the Philadelphia Hospital. Of the various sources, gelatine stabs and plates, agar stabs, slants and plates; glucose-agar; potato (parallel); sugar-free bouillon; saccharose, glucose, and lactose bouillon in fermentation tubes; litmus milk, agar colonies, stroke and slant growths, were practically identical. Bouillon was uniformly clouded and a pellicle was not formed. No gas was formed upon any sugar medium; acid was produced, and with little variation in glucose media; litmus milk was at first very slightly acidified, later to become alkaline again. The potato growths showed very slight differences. As to the morpho-

logy of the bacilli, they show only very minor differences; slight variations in length and thickness, due probably to the medium, the growth, temperature and rapidity of the division. As to motility, Flexner's observations show it to be, at best, but feeble. It does not affect all individuals in the field, and is slow and labored. Brownian movement is active. Flagella are possessed by the bacilli. The serum reactions have been of the greatest importance. They indicate close relationship between the bacilli from Japan, Manila, Porto Rico and Germany, and further render probable the identity of the epidemic dysentery of this country with that of the East and Germany. Positive reaction was obtained in dilutions of 1:10 and 1:50 of human blood. Tests with animal blood were positive in greater dilutions, up to 1:200. [T. L. C.]

2.—Simon Flexner and E. M. Pearce present a further contribution to Flexner's paper on **experimental pancreatitis**. They conclude that: 1. Pancreatitis follows upon a variety of insults to the pancreas, and is capable of developing with great rapidity. The introduction of such a foreign body as gastric juice into the pancreas give rise to degeneration, hemorrhage and emigration of leukocytes within the brief space of one to two hours. 2. Chronic inflammations (scleroses) of the pancreas may result from the more remote effects of agents which, acting with greater intensity, produce fatal acute inflammations. 3. Perversion of normal secretions, whereby they enter the pancreas, as illustrated by the effects of gastric juice and bile, are efficient causes of pancreatitis. 4. The presence of blood alone in the tissues of the pancreas does not set up an acute inflammation; the tendency is for the rapid production of a chronic proliferative and inter- and intra-acinar pancreatitis. 5. The effects of blood are not produced by blood-serum separated from the corpuscular elements. 6. The spleen has no influence upon the development of pancreatitis and the production of fat-necrosis. Fat-necroses attend all forms of pancreatitis, and are more numerous and more widespread, the more acutely the pancreatic lesions develop. They may appear as early as eight hours following injury to the pancreas. 8. Glycosuria appears quickly after injury to the pancreas; it may persist for several days and then disappear, although the pancreas has suffered permanent partial injury. [T. L. C.]

3.—W. F. Hendrickson reports a case of **teratoma of the testicle**, showing an extensive perithelial angiosarcomatous growth. The tumor was removed from the patient, who was twenty-five years of age, by Dr. Martin. A histological description of the growth is given with two cuts. The chief point of interest in the tumor was the presence of an anastomosing angiosarcoma with a perithelial proliferation giving rise to gland-like and papillomatous proliferations, associated with connective tissue and cartilage growth, as well as epithelial-lined cysts of adrenal-like structures. [T. L. C.]

4.—Simon Flexner discusses the **pathology of bubonic plague**, as observed in Hong Kong and San Francisco, describing six cases which came to autopsy. The chief distinctions are afforded by the lymphatic glands, and they will depend upon whether the glands were primarily or secondarily affected. Primary involvement may be of two kinds: of the first order, being the point of original reception of the virus; of the second order, representing the extension to a second, contiguous group of glands. Bubo of the second order are less marked than those of the first. Secondary buboes may be found in any or all glands, within the body, and at a distance from the primary lesions, infection having followed through the blood circulation. Primary buboes of the first and second order are described minutely, as well as tonsillar infections. The spleen in plague is enlarged moderately and the consistence is somewhat diminished. The color is deeper than normal, but it is not the type of the acute splenic tumor of the septiciemias. He emphasizes that, although the spleen in the autopsies made all contained bacilli, often in very large numbers, the cases themselves were examples of the bubonic and not of the septicemic variety *per se* of the disease. The morbid anatomy of the experimental disease in the guinea-pig is also given minutely. Two main types of the plague—bubonic and pneumonic—may be considered as established by the observations, of which a selected number have been given. In places where plague has secured a foothold, evidences of rat infection and probable rat dissemination have been brought forward. It is therefore the more

remarkable that in San Francisco, even after a year's prevalence among the Chinese, no evidence of a similar spread has been obtained. A comparison of the natural disease in man and the experimental disease in guinea-pigs as observed in San Francisco, with a description of the lesions observed in the plague in other places, will supply immediate conviction of the identity of the morbid processes. [T. L. C.]

5.—It. M. Pearce presents a contribution to the pathology of **leptothrix infection in man**, dealing with the leptothrixal necrosis of cartilage of larynx and a case of cholelithiasis and cholangitis. A histological description of the two cases in which these lesions occur are given, as well as an abstract of the literature. In a case of cholelithiasis there were found gall stones in the diverticulum of Vater and hepatic duct, as well as jaundice; slight cirrhosis of liver; fibroma of the kidney, chronic gastritis and arteriosclerosis. Leptothrix was the only microorganism in the concretions, and with the colon bacillus was found in large numbers in the bile. That the leptothrixal infection was of considerable duration, and not secondary to the operation, is indicated by the presence of the threads within the concretions. Experimental observations indicate that a mild catarrhal inflammation, yielding elements which unite with the bacteria to form a nucleus, greatly favors the production of concretions. Such a favorable set of conditions may be assumed to have been set up by the leptothrix, thus giving the basis for the concretion formation. Pearce suggests that these two cases, illustrating unusual and unexpected forms of leptothrixal infection, suggest, in that the members of the group of bacteria do not grow in culture media, or grow only with great difficulty or rarely, that a more extensive study of cover-glass preparations and sections might show the leptothrices to be of greater importance in lesions in man than has hitherto been supposed. In the first case, three processes, etiologically distinct, occurred. 1. Tuberculosis of the larynx second to tuberculosis. 2. Non-tubercular abscess of the submucosa of the larynx rupturing into the cavity of the larynx; probably pyococcal in origin. 3. An invasion of a portion of the posterior wall of the abscess by a leptothrix resulting in the disorganization of the cartilage of the larynx and involvement and perforation of the esophagus. The most difficult question to decide is the significance of the leptothrix invasion; whether the leptothrix caused the disorganization of the cartilage and the perforation of the esophagus, or whether this was due to the extension of the suppuration in the submucosa of the larynx. Pearce favors the former view. [T. L. C.]

6.—W. T. Longcope reports two cases of hepatic infarctions. 1. Thrombosis of the hepatic vein, secondary to metastatic gastric carcinoma with anemic infarction of the liver. 2. Thrombosis of the portal vein, secondary to metastatic gastric carcinoma with atrophic hemorrhagic infarction of the liver. The hepatic infarctions of this organ are rare, but do occur. They are of two types: **atrophic hemorrhagic and anemic infarctions**, the latter being the rarer. A detailed report of the autopsy and histological examination of the types in the two cases is given. Longcope believes that the condition in the first case depended largely upon thrombosis of the hepatic vein, and that the second case belongs to the class of atrophic hemorrhagic infarctions due to a thrombosis of a small branch of the portal vein. [T. L. C.]

7.—R. M. Pearce discusses the increase of elastic tissue in the lung in chronic passive congestion. His study has consisted in the examination, by Weigert's method, of a large number of sections taken from the lungs of healthy individuals and from lungs affected by chronic passive congestion. The tissues were hardened in Zenker's fluid, in alcohol, and in Orth's fluid. Pearce summarizes his studies by stating that in chronic passive congestion, the increase in density of the lungs is due, in large part, to the newly formed elastic tissue. This tissue is found to be increased in the finer structures of the lung in all cases of the disease, and in marked cases an increase is also observed in the pleura, intrapulmonary septa, blood-vessels and bronchi. The increase is progressive, depending on the age and degree of the congestion, and it apparently indicates an effort to strengthen the walls of the air passages, supporting the overburdened capillaries and preventing the collapse of the air-cells. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

July 16, 1901.

1. A Crystalline Product on Immunization.
H. BUCHNER and L. GERET.
2. Experience with Milk Curdled According to the Method
of Van Dungen, for the Nourishment of Healthy
and Diseased Sucklings. F. SIEGERT.
3. Contribution to the Knowledge of the Tenacity of the
Poison of Scarlet Fever. F. LOMMEL.
4. Combined Empyema of the Cavities of the Face.
P. BRAUNSCHWEIG.
5. The Narcosis of Dr. Schnelderlin. B. KORFF.
6. A Case of Congenital Duplex Dislocation of the Sternal
Ends of the Clavicles. F. KLAUSSNER.
7. Surgical Communications. A. HOEPFEL.
8. Replacement of Severe Habitual Kyphosis.
A. SCHANZ.
9. An Opinion Upon the Installation for Lighting in Insti-
tutions for Raising and Instructing Children.
SEGGERL.
10. Septic Endocarditis. LIEBHARTZ.

1.—Hordet first called attention to the fact that the serum of animals that had been immunized to certain albuminous substances, acquired the quality of producing a precipitate when treated *in vitro* with the solution of these substances. Buchner and Geret therefore undertook to test this fact with solutions of pure peptone which they prepared according to Kühne's method. They inoculated rabbits with solutions of this serum, and after a certain number of days withdrew the animal's blood, placed some of the serum in a test tube, and carefully covered it with a layer of peptone solution. This produced a distinct ring at the line of contact. When the solutions were mixed together a diffuse cloudiness was produced. This precipitate consisted of globulites. It was subsequently discovered that not only the serum of rabbits treated with peptone solutions, but also those treated with bovine blood gave the same reaction (the peptone was prepared from the fibrin of bovine blood), and the reaction occurred very much earlier than when the peptone solutions were employed. The method of obtaining the globulite is to inject about 5 ccm. of blood into a rabbit subcutaneously; then within 24 hours the blood is withdrawn, the serum obtained, and covered with a layer of the peptone solution. In about 12 hours a firm ring is formed at the point of contact, which consists of pure globulite. The formation can also be observed by mixing a drop of the serum and a drop of the peptone solution, and examining them in a hollow-ground glass slide. The crystals have a round or oval shape, and are strongly refracting. They vary according to the length of formation, from 2 to 35 *micron*, and in rare cases, after very rapid formation, sometimes, are not more than 1 *micron* in size. They are extremely resistant to all chemical destructive agents, failing to dissolve in boiling hydrochloric or nitric acid; they dissolve very slowly in sulphuric acid; and become yellow when exposed to tincture of iodine. They do not give mellow or the Bluret reactions. When burnt they leave an ash, and when treated with sulphuric acid this produces crystals of calcium sulphate. The authors believe that this substance will throw some light on the nature of immunity. [J. S.]

2.—Siegert, believing that the difficulty in treating infants with cow's milk, is rather due to the form of curds which are produced in the child's stomach, than to any specific difference in the chemical constitution, has experimented by feeding infants upon milk artificially curdled with hydrochloric acid, outside the body, according to von Dungen's method. The milk is thoroughly shaken with the acid, and then given in the ordinary way. He reports 8 cases of children who were either unhealthy or whose mothers had insufficient milk for nursing, and who suffered from various diseases such as pseudo-stenosis of the pylorus, congenital hypertrophy of the three tonsils, atrophy after prolonged dyspepsia, atrophy due to pertussis, rachitis. In some of these children there was obstinate vomiting that could only be controlled by improved diet. In the preparation of the milk Siegert prefers peptin, a preparation of the curdling ferments mixed with milk sugar. The diet occasionally causes constipation which may, however, be relieved by dilution or by massage. [J. S.]

3.—Lommel reports his experience in an institution for the care of deaf and dumb children, in which a boy developed scarlet fever in October, 1900. Five weeks later he

returned to the institute cured. In 21 days his room-companion was also attacked with the disease. He was returned to the institution in 2 months, and no case, apparently, was infected from him. The room was twice sterilized by formalin, and finally, in April, 1901, occupied by a child who 12 days later developed scarlet fever. The period during which the poison maintained its virulence was at least 133 days. The case is an illustration of the frequency with which contagion is carried by a third person. [J. S.]

4.—The commonest cause of the inflammation of the accessory cavities of the face is catarrh of the nose, or, in fact, any suppurative disease of the nasal cavity. In cases of disease of the frontal sinus with perforation into the orbit, the eye may be extensively dislocated without much alteration in its visual powers. Occasionally the cornea or the anterior portion of the eye, as a result of pressure and exposure to purulent secretion, becomes ulcerated. The following case shows the method of treatment in this condition. A man of 22 developed a swelling in the upper internal angle of the right eye, which was incised, and from which a considerable amount of pus was evacuated. Two years later the swelling again appeared, and was diagnosed as dropsy of the right frontal sinus. This was relieved by puncture, but 9 years later, after a severe cold, the swelling suddenly reappeared and was accompanied by extreme pain. Pressure produced purulent discharge into the throat and nose. There was some dislocation of the right eye. Incision was therefore made down to the upper edge of the orbit, the frontal sinus opened with a chisel, and the bone was found to be very thin and soft. The sinus was found to be filled with thick homogenous pus. The opening was then enlarged, the sinus washed and curetted, the ethmoidal sinuses thoroughly cleared out, a drain inserted, and the wound closed. It healed uneventfully and produced very slight, almost imperceptible deformity. [J. S.]

5.—Korff has modified the method of Schneiderlin of producing anesthesia by injections of scopalamine and morphine, using the injections at intervals of 2 hours, for a short time before the operation (.0004 scopalamine, and .01 morphine). Then during the operation a very small quantity of chloroform, perhaps not more than a third as much as that usually employed, is administered. The advantages are that the patients never suffer any anxiety, they never vomit; they can be awakened at almost any time during the operation without feeling any pain, and when they recover from the anesthesia they have no nausea, and can usually take Vichy water followed by soup or coffee, at once. The following night they usually sleep poorly, but are not restless, and the next day everything is normal. He has operated upon 80 cases by this method, and in 7 of these no chloroform was necessary. Much smaller doses should be used for children. [J. S.]

6.—Klaussner reports a case of bilateral congenital dislocation of the clavicles, at the edge of the sternum. There was no disturbance of the functions of the arms, and simply a deformity due to the prominence of the ends of the bone. No attempt was made to reduce them, but he suggests that possibly silver wire could be employed with benefit. [J. S.]

7.—Hoepfl reports some very curious surgical cases. The first, a solitary abscess of the liver, occurring in a woman, 33 years of age, who for some time had had attacks of prostration and a tendency to sweats at intervals of 6 weeks. Finally she developed severe pain in the abdomen and high fever. She was emaciated, the liver was greatly enlarged, and there was some edema over the hepatic region. Aspiration of the liver revealed the presence of pus; the abscess was incised, drawn, and the patient gradually recovered. The second patient, a woman of 33, had had a very difficult birth with application of forceps, leaving a fistula between the bladder and the vagina. Two operations failed to close this fistula, and permanent catheterization being impossible, the patient was directed to lie exclusively upon the abdomen. This resulted in rapid closure of the fistula, and the patient was discharged cured. The third case, a boy of 3 years, developed an enormous accumulation of fluid in the abdomen. At the operation a huge cyst of the mesentery was discovered, filled with dark brown fluid. The contents and wall of the cysts were removed and the patient rapidly

recovered. The 4th case, a child of 4 had swallowed some lye, and thereby produced a permanent stricture of the esophagus. It was impossible to introduce the sound, and therefore an incision was made into the stomach, and after the fistula was reduced, the sound could readily be introduced through the cardia which passed the stricture without difficulty. By this means a thread was passed through, along which tubes of increasing diameter were forced. He believes that the advantage of this operation is that the esophagus above the stricture is usually dilated, and therefore it is difficult to pass the end of the sound through it, whereas below it is contracted and the sound is guided directly to the opening. [J. S.]

8.—Schanz calls attention to the great importance of continually correcting the deformity in cases of habitual kyphosis. It is first important to render the spinal column thoroughly mobile and then to apply the plaster jacket which should be renewed at short intervals until the position of the spine is approximately normal. He reports the case of a girl of 18, treated by this method, in which the stature increased 4.5 cm. [J. S.]

9.—The following appear to be the conditions that should be fulfilled by any satisfactory method of illumination in educational institutions. First, the light should be sufficient in quantity, and well distributed; second, it should not alter the temperature and composition of the atmosphere; third, the source of light should not radiate much heat; fourth, the artificial light should not irritate the eye, and should not produce a sense of fatigue; fifth, there should be neither danger to life nor health from the nature of the light; sixth, the artificial light must be as cheap as possible. Seggel, discussing the methods of lighting, believes that these conditions cannot be fulfilled by petroleum, illuminating gas, and can only be adequately fulfilled by the Welsbach burner or the electric light. The Welsbach light he considers superior to the arc light, because it produces less heat and radiates laterally more satisfactorily. On the other hand, it produces a considerable amount of carbondioxide, and of course absorbs a considerable quantity of oxygen, at the same time requiring more attention on the part of the service. As to whether direct or indirect illumination is preferable, he considers that the former has the solitary advantage of illuminating a definite spot better, but is more blinding and produces more heat. In addition, some parts of the room are badly lighted, so that there is a continual alteration in the degree of illumination, which is exhausting to the eyes. Direct illumination, therefore, can only be used for single lamps, so placed that they throw the light from the left side. It is possible, however, by arranging the desks in a radiating manner around the source of light, to use one lamp for four pupils. Indirect light, on the contrary, has various advantages, producing a more uniform illumination of the room. The arc light covered by translucent shade is probably the best method by which this can be produced. [J. S.]

10.—Lenhartz continues his article upon septic endocarditis, and mentions a number of cases in which the disease followed septic infection of the ordinary nature, that had nothing to do with rheumatism. One of these cases is remarkable for the fact that although the patient was under observation for a number of months, and at the autopsy numerous vegetations were found upon the aortic valve, no murmur had been heard at any time during the course of the disease. He does not believe that we can discriminate between staphylococcal and streptococcal infection by the type of temperature. The diagnosis of the condition is to be made from the presence of symptoms of sepsis and a murmur in the heart; and is confirmed by the existence of a palpable tumor of the spleen. The prognosis, although very grave, is not hopeless, as the 4 cures in the 38 cases observed by Lenhartz, prove. The treatment is in a very satisfactory state. Marmorek's serum is of no value and the other methods that can be employed give little better results. [J. S.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

(Band 42. Hefte 5 und 6.)

1. Concerning Rupture of the Cardiac Valves from External Violence. F. STRASSMANN.
2. Bactericidal Action of the Bile. S. TALMA.
3. Contributions Concerning the Hippuric Acid Metabolism in Man. C. LEWIN.

4. Transudates and Exudates. Their Morphology and Their Differentiation. ALFRED WOLFF.
5. The Influence of Febrile Diseases upon the Glycosuria of Diabetes. L. MOHR.
6. The Fat-splitting Ferment of the Gastric Juice. FRANZ VOLHARD.
7. Acute Articular Rheumatism and Trauma. R. BERNSTEIN.
8. Concerning Alimentary Acetonuria. R. WALDVOGEL and J. HAGENBERG.
9. The Influence of Various Food-stuffs upon the Hydrochloric Acid Secretion and the Osmotic Pressure in the Normal Human Stomach. TH. JUSTESEN.
10. On the Active and Inactive "I." ALBERT ADAMKIEWICZ.
11. On the Etiology of Diabetes Mellitus. A. POLLATSCHEK.
12. The Most Important Advances Concerning the Chemistry and Physiology of the Carbohydrates. CARL NEUBERG.

1.—There has been a general tendency on the part of pathologists to deny the possibility of rupture of the valves in the human heart as a result of external violence. Strassmann records a case which he thinks shows definitely that this can occur. A man of 65, who, so far as could be told, had been previously in good health, was kicked in the chest by a horse. Soon after this he showed signs of marked cardiac insufficiency, and six months after the accident he died of cardiac failure. The clinical signs are not given in detail. The post-mortem showed as the lesions of chief interest healed fractures of the fifth to the eighth ribs on the left, adherent pericarditis, sclerotic patches on the valves and aorta, a rupture of the intima and partial rupture of the media of the aorta, just above the valves, 2 cm. long and 1 cm. wide, in the middle, running obliquely across the vessel, and at one end advancing into the anterior aortic leaflet, the latter showing an irregular tear, with rounded, healed edges. The advance of the symptoms of cardiac insufficiency after they appeared was a very rapid one, an observation which is in accord with reports of similar cases; cardiac lesions supposedly following forcible injury being, as a rule, followed by very rapidly advancing signs of lost compensation. [D. L. E.]

2.—Talma first discusses the previous literature concerning the antiseptic action of the bile. The results of study have been varied. Talma then reports a series of experiments upon rabbits, consisting of direct injection into the exposed gall-bladder of bacteria of various species and virulence. The injections were made through a hollow needle. He recommends carrying out the operation in a warm bath of normal salt solution, as this avoids shock and drying of the peritoneum, etc., and the results are consequently more satisfactory. He found that the bile contained some substance which interfered with the development of most varieties of colon, typhoid and diphtheria bacilli, the different bacteria varying greatly in their susceptibility to the unfavorable influence of the bile. The virulence of the bacteria is, he states, not a term which is synonymous with their power of producing infection of the biliary passages. The bactericidal action of the bile varies at different times and with different animals. One of the most important factors influencing the result of the injections was the number of bacteria that reached the bile passages. The liver cells and the epithelial cells of the bile passages strongly resisted any attempt at entrance on the part of bacteria; this was particularly striking with diphtheria bacilli. In some instances he observed infection of the subjacent tissues about the puncture wound, while the large number of bacilli in the gall bladder had effected no entrance over the surface, where the epithelium was intact. If the bacteria in general were introduced in very large numbers, they usually caused local necrosis, however, and very rapid death; if they were introduced in small numbers the animal lived, and when killed showed some remnants of a more or less slight inflammatory process, but the bile passages were sterile. [D. L. E.]

3.—The knowledge of the normal amount of hippuric acid excreted, as well as that of amounts under various pathological circumstances, has been very indefinite. This led Lewin to investigate normal condition, as well as those under the use of drugs and varied diets and in various diseases. He used the method of Salkowski and Blumenthal, having found that of Bunge and Schmiedeberg unreliable.

With a mixed (though somewhat limited) diet of normal quantity, the daily amount of hippuric acid varied from 0.10 to 0.30 gm. The quantity was increased daily by using glucose in the diet, possibly as a result of increased intestinal decomposition. Large amounts of albuminous food, though increasing intestinal decomposition, increased the hippuric acid. The use of cholic acid increased the hippuric acid, and in many instances the uric acid was at the same time decreased. It is, therefore, possible that there is a parallelism between the excretion of these substances. This portion of the investigation was undertaken because cholic acid forms benzoic acid in the organism, and benzoic acid unites with glycocholic acid to form hippuric acid. It is thought by some authors that glycocholic acid by synthesis with cyanic acid forms uric acid. If this were true the use of any substance furnishing benzoic acid in the organism ought to decrease the uric acid. This was, as stated, found to be the case in some instances. Food rich in nuclein (thymus) increased the output of hippuric acid and at the same time caused an increase in the uric acid; the increase in hippuric acid was attributed to increased intestinal decomposition. In gout and diabetes the hippuric acid was normal, in perityphlitis, owing to intestinal disturbance, it was increased. The hippuric acid was never decreased, and was in most cases increased in febrile conditions. In renal disease it was almost always increased; never decreased. This is a point against the theory that the kidneys are the only seat of the formation of hippuric acid. [D. L. E.]

4.—Wolff directs attention to the imperfections of the usual method of determining whether a fluid in a serous cavity is an exudate or a transudate. He finds that these fluids can be divided into two great classes, on the basis of microscopic examination—(1) Those in which one finds practically only polynuclear white blood corpuscles with a very few red cells. (2) Those which contain no polynuclear leukocytes, or at most very few, but do show numbers of lymphocytes and red blood cells. The first class of fluid occurs with inflammatory conditions; the second with circulatory failure, i. e., in conditions in which one would expect a passive leakage from the vessels. Wolff thinks that microscopic examination is a much better method of distinguishing between exudates and transudates than determining the specific gravity, the amount of albumin and the reaction. The serous fluid formed in tuberculous pleurisy corresponds to Wolff's class of transudates. Such fluid is often found when the pleura itself is free from tuberculosis or any inflammation. Wolff therefore theorizes that the fluid is a transudate, and its escape is due to vascular changes caused by the toxins produced by the tubercle bacillus. [D. L. E.]

5.—Mohr directs attention to the fact that febrile disease may have one of two influences upon diabetic glycosuria; the increase of sugar may increase or diminish. In some cases no influence is exerted. It is always of absolute importance to know exactly what diet the patient was taking before, during and after the intercurrent disease, as otherwise changes in diet may have caused the changes in the glycosuria. Mohr reports six cases in which changes in the amount of sugar-forming food could not have caused the changes in the glycosuria. In all but one instance the diabetes was of the mild form before the occurrence of the complicating febrile affection, and in four instances the latter affection was itself mild in character. In two cases a temporary decrease in the tolerance for carbohydrates was noticed, but the previous conditions soon reappeared. In the other cases the previous tolerance was much reduced, and was regained only after a long period; in one the tolerance was permanently reduced, while in the remaining case, which up to that time had been of favorable course, the occurrence of phlegmonous angina caused a rapid and uncontrollable increase in the glycosuria and general symptoms, and signs of acid intoxication soon appeared. Mohr, therefore, states that in cases in which the glycosuria is increased one must remember that this may be, as it frequently is, only a temporary change, but it may also be a permanent change, and even a mild intercurrent disease may convert a mild diabetes into a severe and uncontrollable case. Evidently in such cases the febrile process directly damages the function of the organs engaged in carbohydrate metabolism. The fact that infectious febrile disease sometimes causes a decrease, sometimes an increase, of glycosuria has been explained by Richter by showing that increased temperature of itself causes hyperglycemia

and glycosuria, while bacterial infection (as distinguished from bacterial fever) causes a decrease of the sugar of the blood. The observations recorded by Mohr as well as previous experimental and clinical records, make it quite clear that we should earnestly consider infectious diseases among the direct causes of diabetes. [D. L. E.]

6.—Volhard reviews the work done concerning the presence of a fat-splitting ferment in the gastric juice, and discusses his own previous work. He has expressed the opinion that in an egg-yolk-glucose mixture the formation of a layer of clear fat on the top of the mixture after exposure to the action of gastric juice was due to a fat-splitting ferment acting upon the emulsion of fats and setting free fatty acids. This, however, he has recently become convinced was erroneous. The formation of the layer of clear fat has nothing to do with the production of fatty acids, and is merely a breaking up of the emulsion and consequent floating of the fat on top, and is the result of the presence of considerable amounts of HCl. By working with dogs, in which a gastric fistula had been established by Pawlow's method, he convinced himself, however, that a fat-splitting ferment (i. e., a ferment that produces fatty acid from neutral fats) is present in pure gastric juice. The method of obtaining the gastric juice excluded any possibility of admixture of pancreatic secretion. The ferment, like pepsin, is produced chiefly in the fundus of the stomach, and may be extracted from the mucous membrane of the fundus by glycerin. The ferment passes through a porcelain filter. It is very sensitive to the action of a strong pepsin-HCl mixture, and if the mixture be sufficiently strong or its action, sufficiently long continued, the fat-splitting ferment is entirely destroyed; the peculiarity possessed by fatty foods of exciting a gastric secretion which is poor in pepsin and HCl is perhaps due to this sensitiveness of the fat-splitting ferment to pepsin and HCl. Volhard thinks that the demonstration of the presence of a fat-splitting ferment in the gastric juice strongly indicates that Pflueger is right in his claim that all neutral fats must be split up before they are absorbed. [D. L. E.]

7.—Bernstein reviews the previous opinions concerning a possible etiological relation between rheumatism and trauma. There has been much doubt about the existence of any such relation, but Bernstein is confident that trauma is active in determining the onset of rheumatism, and in support of his work refers to experimental work concerning infectious arthritis, and also reports seven cases in which a damaged joint soon after an injury showed an acute arthritis, accompanied by fever, and subsiding upon the use of salicylates. The trauma is usually a single severe one—either an infected wound of the joint, an infected skin wound, a subcutaneous injury of the joint or other subcutaneous injury. The infected wounds of joints rarely or never lead to rheumatism, but often cause pyemia; infected skin wounds usually cause pyemia, but occasionally lead to rheumatism. Subcutaneous injuries rarely or never cause pyemia, but very frequently cause an outbreak of rheumatism. In collecting his cases and drawing his conclusions from a study of the literature, Bernstein has confined himself to those cases in which a first attack of rheumatism appeared soon after a trauma; recurrent attacks, as he says, may be only accidentally associated with an apparently etiological factor present at the time, and should, therefore, not be used in any such argument. There are no very marked peculiarities in the cause and symptomatology of traumatic rheumatism, and he does not make the diagnosis from traumatic arthritis very clear. He considers that in legal proceedings for damages following accident it should be recognized that rheumatism may be directly caused by an accident, and consequently heart disease may be indirectly due to the same cause. [D. L. E.]

8.—Waldvogel and Hagenberg report a series of estimations of the acetone in the urine of a number of subjects, and give figures which show a decided increase of the acetone to above even high normal figures, after the use in a normal mixed diet, of additional quantities of butter, ranging from 50 to 150 gm. in the day. This they term an alimentary acetonuria. It is particularly insisted that the diet was sufficient in amount, and that this was, therefore, not an acetonuria of inanition. The authors are inclined to consider the acetonuria as of enterogenous nature, though they admit that there is no proof of this, and it may have been produced from the fats after their absorption. At any rate, there are two very different forms

of acetonuria—one is due to rapid destruction of body fat, the other to the presence of large amounts of fatty acids in the intestine. The authors also state that they compared figures obtained by the Messinger-Huppert method with those given by Waldvogel's method, and found that they differed by only a few milligrammes. Hence they consider Waldvogel's method thoroughly reliable. [D. L. E.]

9.—After a very interesting study of the HCl curve at various periods after varied test meals (coincident studies of the chlorides in the food, the total chlorides in the gastric juice, and then by difference, the total chlorides secreted) and coincident studies of the freezing point of the gastric juice and of the various foods used, Justesen concludes that we may say that gastric digestion goes on much as follows: After brief salivary digestion many soluble substances go into solution. The gastric contents thereby become almost always strongly hypertonic; hence a secretion of water and HCl sets in at once, and, through osmosis also, many substances in solution (such as pepsin, sugar and alcohol) are, to a greater or less extent, absorbed. The first portions of HCl are combined at once, with the albuminous chiefly, afterward with the weaker organic bases, and with bases already combined with CO₂. After this the HCl becomes apparent as free HCl, and this HCl and the NaCl secreted henceforth are (physically) only for the purpose of equalizing osmotic tension. The "vital diluting secretion" of the epithelial cells of the stomach reduces the molecular concentration of the gastric juice considerably below that of the blood. During this latter period properly prepared food portions of the gastric contents are being expelled into the duodenum, while the more solid portions are retained. [D. L. E.]

11.—Pollatschek thinks that previous statements concerning the morbidity of the Jews in relation to diabetes mellitus are of little value, as there is never any statement as to the relative number of Jews and Christians in the clientele of the reporter. Pollatschek states that in ten years he has treated 4714 persons, 2381 of whom were Christians, 2333 Jews. There were 653 diabetes, 289 of these being Christians and 364 Jews; i. e., reckoned by the number per thousand of all patients, 124 Christians and 155 Jews had diabetes. Of four cases of coma three occurred in Christians, and severe complications occurred almost exclusively in Christians. This, he believes, indicates that Christians do not go to sanatoria so early as the Jews, and consequently as bath-physician he saw more bad cases in Christians than in Jews. He also directs attention to the fact that diabetes is common in England, where there are few Jews, and ends by stating that he doubts the truth of the generally accepted statement that Jews are especially susceptible to diabetes. [D. L. E.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

July 4, 1901. (No. 27).

1. Chloracne. BETTMANN.
2. The Influence of Some Substances upon Trommer's Test. COLLINA.
3. The Biological Demonstration of Vegetable Albumin. A. KOWARSKI.
4. A Case of Sepsis with Otitis and Sinus Thrombosis Beginning with the Symptoms of Articular Rheumatism. SCHNELLE.
5. Topography of the Brain. WALDEYER.
6. The System and Therapeutic Employment of Heat Conveyance. S. MUNTER.

1.—Bettmann describes a variety of chloracne which he has observed among a number of workmen in a chemical factory. There was a diffuse formation of comedones over the whole body, a dirty gray pigmentation of the face and a dry rough skin. The cause of the chloracne was attributed to a mixture of tar derivatives with fumes of hydrochloric acid. He states that further observations are required for the purpose of prophylaxis and therapy. [M. R. D.]

2.—Investigations in the Chemical Laboratory at the University at Berlin showed that creatinin is not the only cause for the yellow precipitate of copper oxihydrate, but that concentrated forms of guanidin-carbonate, glykocyanin and glykocyamidin also produce this phenomenon. [M. R. D.]

4.—Schnelle reports a case of sepsis with otitis and sinus thrombosis beginning with the symptoms of articular rheumatism and occurring in a man who had never been previously ill. It was a question whether it was a

case of sepsis of otitic origin beginning with articular rheumatism or sepsis with involvement of the middle ear. Bacteriological examination of the discharge from the ear as well as the thrombosis removed from the jugular vein showed delicate diplococci. In the discharge from the ear some streptococci were also found. The bacteriological examination, however, could not determine whether the sepsis had originated from the ear or not. [M. R. D.]

5.—To be concluded.

6.—To be concluded.

3.—Experiments in the Institute for Medical Diagnosis at Berlin analogous to those performed by Wassermann, Uhlenhuth and others with vegetable albuminous bodies showed that these also give rise to the occurrence of antibodies but that they cannot be as easily differentiated as those belonging to the animal kingdom. [M. R. D.]

July 11, 1901.

1. Demonstration of Preparations from Animals Infested with Tuberculosis and Treated with Hetol and Iga-zol. MAX WOLFF.
2. On the Etiology and Therapy of Deeply Situated Stenosis of the Respiratory Passages. SCHROETTER.
3. The Transitory Mental Disturbances of Hysterical Origin. M. SANDER.
4. The Topography of the Brain. (Conclusion.) WALDEYER.
5. The Method of the Therapeutic Use of Heat and Heat Centralization. S. MUNTER.

1.—Wolff has treated rabbits with subcutaneous and intravenous injections of hetol (cinnaemic acid), and with inhalation of igazol, after having rendered the animals tuberculous. In studying the effects of hetol injections he used direct inoculation of the anterior chamber of the eye, so that he might watch the disease during the cause, and also used injection by inhalation and by intraperitoneal injection. With igazol inhalation infection was used. In no instances could he see that the lives of the animals were prolonged by using the drugs, or that macroscopic or microscopic preparations of the tissues showed any greater tendency toward healing in the animals so treated than in controls. In human subjects he has seen harm rather than good as a result of both forms of treatment, and he also states that in animals igazol inhalation caused severe pulmonary congestion and even pneumonia. [D. L. E.]

2.—Schrötter reports a case in which he found a severe stenosis of the trachea near the point of its bifurcation. Portions of the tissue removed from the diseased area showed the presence of tuberculosis, and, since the patient presented no signs of disease of the lungs, and the stenosis caused severe and distressing dyspnea, portions of the diseased tissue were removed at different sittings, and the patient's condition was much improved. But there was a constant tendency to slight increase in extent, and this and, still more important, the contraction of the scar tissue rendered any attempts at permanent relief fruitless. Schrötter finally had some hollow tubes of slightly conical shape, with a slight, spindle-like constriction, made, and at first introduced one of these, left it free for a short time, and then withdrew it. Much improvement followed this dilatation, and finally he was able, with the aid of a special instrument, to introduce a tube, leave it in the stenosis, with a string attached, and withdraw it only after several hours. Very great improvement followed. The irritation resulting from the treatment and fear of pressure ulceration obliged him finally to stop the treatment, and the patient was sent home and several months afterward reported that she was very comfortable. Schrötter thinks that the main reason a complete cure was not obtained in this case was that the disease was of tuberculous origin. He believes that benign stenosis might be cured by a similar procedure, and that there should be more active effort to treat surgically cases of disease of the deeper respiratory passages by the aid of the tracheoscope. [D. L. E.]

3.—Sander reports four cases in which mental disturbance appeared suddenly without prodromal symptoms, and vanished as suddenly after a few hours or at most days. Physic disturbances were wholly absent both before and after the outbreaks. Two of the patients were young servant girls who had a neurotic family history, and were of neurotic temperament. The third was a nurse also of neuropathic family. The fourth was a young soldier whose mother had some nervous affection, and who was excessively sensitive. In the first three the outbreak oc-

curring after love troubles, in the soldier after being roughly abused for his clumsiness in drilling. Two of the girls attempted suicide, and all three showed great excitement, with entire lack of recognition of surrounding objects or persons. In the nurse, who was injured in her attempt at suicide, a second period of psychic disturbance of two weeks' duration occurred about three weeks after the first attack, and the outbreaks in all the other patients were only of a few hours' duration. The soldier showed only profound stupor, without any period of excitement. None of the patients had the slightest recollection of the attack itself or of what occurred during the attack. One servant girl showed complete analgesia during the attack, and all the girls presented the picture of an acute hysteria. These facts and the character of onset and disappearance of the attacks, the family and personal history and the character of the hallucinations convince Sander that they were all hysterical, and he believes that no other diagnosis is satisfactory in the case of the soldier. He considers that many instances of suicides, particularly in overworked servant girls and in those who have had any emotional excitement, are due to acute hysterical psychosis, and that a proper recognition of such a possibility and the gravity of signs of acute hysteria may prevent many suicides.

[D. L. E.]

REVUE DE MÉDECINE.

June 10, 1901. (21me. Année, No. 6.)

1. Experimental Researches on Intrapleural Pressure in Pneumothorax. L. BARD.
2. The Nervous Disease of Anguish. P. HARTENBERG.
3. Grave Icterus with Acute Hypertrophy of the Liver. E. WOIRHAYE and P. CAZIOT.
4. Clinical Study of Some Infectious Diseases, According to the Observations Made at the Isolation Hospital of the *Porte d'Aubervilliers* During the Year 1900. H. ROGER.
5. A Case of Abscess of the Spleen of Hot Countries with Sterile Pus. E. ALBERT.
6. A Case of Symphysis of the Pericardium with an Isolated Tubercle of the Right Auricle. A. PIC and A. CADÉ.

1.—Will be abstracted when finished.

2.—Will be abstracted when finished.

3.—In the case of a soldier, aged 22 years, who was suffering from grave jaundice, it was discovered that both his mother and his father, as well as a maternal aunt had died of diabetes. The patient had recovered from a left-sided pneumonia with serious infectious symptoms. But, after participating in a series of military maneuvers, he became depressed and complained of erratic pains in his limbs. He lost flesh and finally had a chill, accompanied by a stitch in the right side and vomiting. The examination showed congestion of the base of the right lung with cardiac asthenia and anuria. Later, jaundice appeared, which was at first slight, but which subsequently became marked. The liver became hypertrophied and the spleen was also enlarged. During the progress of the case there was a crisis of eclampsia, subcutaneous hemorrhages in various situations, bloody diarrhea, typhoid symptoms and, finally, death. From a study of the case in the light of autopsy, Woirhaye and Caziot consider that his parents transmitted to the patient a dynamic disorder of the hepatic cells that rendered his liver easily susceptible to infectious influences. The privations of the patient, supplemented by the infectious influence of a serious pneumonia, overtaxed the liver and the toxins that should have been eliminated by that organ were thrown into the general circulation and served to render less resistant an already incompetent liver. Finally, a series of military maneuvers, by producing the toxins of fatigue, exhausted the already overtaxed organ. The infecting agent may have reached the liver either through the hepatic artery or through the bile ducts. The absence of micro-organisms in the blood during life was due to the phagocytosis of the increased number of leukocytes in the blood. There were, however, bacilli in the spleen, in the lymph-nodes at the hilum of the liver and in the liver itself that resembled the bacillus coli communis in morphology and the sub-normal temperature was a further indication that this organism was responsible for the jaundice. Further study

shows that the liver cells were only able to continue their bile-making function, and that their other activities were destroyed. The kidneys were also affected by the disease. The urea, the chlorides, the phosphoric acid and the total nitrogen were reduced. The urine contained bile and albumin, but no sugar. The defense of the organism in the liver was attempted, as shown on histologic examination by congestion, positive chemotaxis, intense diapedesis and phagocytosis and compensatory hypertrophy. The same process was found in the kidney with the exception of the hypertrophy. There was a leukocytosis and an hypertrophy of the lymph-nodes which served as an attempt at the defense of the organism in general. [J. M. S.]

4.—In four patients suffering from severe scarlet fever, Roger discovered pericardial friction sounds. Albuminuria was present as a complication of scarlet fever in 143 individuals. At the isolation hospital of the *Porte d'Aubervilliers* the author observed a case of scarlet fever in a woman in the seventh month of pregnancy. The disease did not interfere with the course of gestation. In one case scarlet fever developed coincidentally with pneumonia and in another case with diphtheria. In one patient suffering from scarlet fever, albuminuria appeared during convalescence and in 10 days no albumin could be detected when a part of the urine for 24 hours was examined. But when the various specimens were examined as they were passed, it was found that some contained albumin while others were free from it. It was then found that, when the patient stood, albumin appeared in the urine. Also, both bread and meat caused albumin to appear in the urine; later, however, bread could be eaten without producing albuminuria, but meat continued to produce the symptom. Again, every time the patient took a bath albumin appeared in his urine. The mortality was 2.5%. In 6 cases death was due to the intensity of the infection. There were 4 cases of puerperal scarlet fever, of which 2 died and 2 recovered. There were 5 cases of measles in the hospital and 117 cases of chicken-pox. In 3 cases of chicken-pox the bullæ reached unusual dimensions. In one of these cases the large bullæ appeared on a portion of the skin that had previously been irritated by a mustard plaster. There was one case of hemorrhagic chicken-pox in a little girl who was convalescent from purpura. The following complications of chicken-pox were noted: one case of laryngitis due to the eruption in the larynx, 2 cases of slight albuminuria and one of otitis media. Six of the patients died, 2 of intercurrent miliary tuberculosis, one of bronchopneumonia, one of furunculosis and intense pyoderma, one of postinfectious cachexia, and one of pyemia. From 1896 to 1900 the death-rate from chicken-pox in this hospital was 3.93%. There were 207 cases of sore throat, of which 70 were cases of diphtheria. Of the latter 17 were complicated by albuminuria and 8 by paralysis. Of the patients attacked by paralysis 4 died. [J.M.S.]

5.—Albert reports the case of a man, aged 17 years, who was employed as a gardener in a city of Algiers. He had had a number of attacks of malaria. Between his malarial attacks the patient had apparently been in perfect health. He had an attack of malaria in January, 1900, and in May of the same year he began to have fever again; but this time the attacks were irregular, without defined type and suddenly were complicated by very sharp pain in the left side. The patient was profoundly anemic and his expression was one of anxiety and pain. In the left side, 3 fingers' breadth below the ribs there was a rounded tumor that evidently contained fluid. On opening this abscess a large quantity of pus was evacuated and the exploring finger entered a cavity in the substance of the spleen. After the operation the patient entered convalescence, which was complicated by an attack of pneumonia. Bacteriologic examination of the pus showed that it was sterile. Histologically, the contents of this abscess of the spleen consisted of small polymorphonuclear, neutrophilic leukocytes. [J. M. S.]

6.—Pic and Cadé report the case of a man, aged 50 years, who had had 2 attacks of pericarditis. He was admitted to the hospital complaining of unproductive cough, oppression, and painful swelling in the region of the liver. The area of cardiac dullness was markedly increased, but not displaced by a change of the position of the patient. On auscultation the sounds were regular, accelerated, dull and distant and with the rhythm of the fecal heart. There were no murmurs. The veins of the neck were swollen; the

pulse was small, rapid, regular and 136 per minute. It presented the character of *pulsus paradoxus*. The liver and spleen were enlarged. The urine was pale, but contained neither albumin nor sugar. The authors made a diagnosis of *symplysis of the pericardium*. The administration of digitalis was not beneficial, edema of the lower extremities and of the scrotum appeared and, in spite of treatment, the patient's condition grew worse and he died. At autopsy the diagnosis of *symplysis of the pericardium* was confirmed. The pericardium was attached to the thoracic wall, to the neighboring lung and to the tissues of the mediastinum by numerous adhesions. The nerve fibres which passed through the connective tissue were more or less sclerosed. Although there was no valvular lesion, the walls of the heart were thickened and its cavities were dilated. In the neighborhood of the anterior wall of the right auricle there was a rounded tumor. The portion of the superior vena cava near this tumor presented thickened walls so that its opening into the auricle was perceptibly narrowed. The heart and pericardium weighed 520 grams. Microscopically, there was a thick layer of fibrous tissue on the surface of the heart, due to the pericardial disease. Beneath this fibrous tissue there were extensions of the sclerotic process into the myocardium producing atrophy, fragmentation and thinning of the muscle fibers. The tumor of the right auricle presented the histological character of *tuberculous inflammation*, although no tubercle bacilli could be demonstrated in it. The authors believe that the *symplysis of the pericardium* was due to a tuberculous process. [J. M. S.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

June, 1901. (Volume 60, Nos. 1 and 2).

1. Tumors of the Kidney. B. GROHE.
2. The Occurrence of Tuberculous Hernia. FRIEDRICH JUSTIAN.
3. Some Cases of Angioma and Arterial Aneurysm. R. STIERLIN.
4. Mixed Tumors of the Testicle. ADOLF GESSNER.
5. Further Communications Upon Subphrenic Abscess. JULIUS WEBER.
6. The Technique of Rhinoplasty. ERWIN PAYR.
7. Exarticulation of the Larger Joints. FERDINAND SCHULTZE.
8. A Remarkable Case of Resection of the Stomach. KELLING.
9. The Etiology of Carcinoma and Sarcoma. CARL RITTER.
10. Fracture of the Coronoid Process of the Ulna. CARL BECK.
11. Upward Dislocation of the Patella. GEORGE MAILLEFERT.

1.—Operation for tumor of the kidney is now the usual treatment. The main operation performed is *nephrectomy*. This was done by Riedel in Jena by the transperitoneal method, in 13 out of 15 cases. Five of these cases died. Six of the tumors were immovable, in two lumbar operation was performed, with one death. Three of them died a short time after the operation. Seven tumors were movable. The diagnosis was comparatively easy in 13 cases. In the two other it was exceedingly difficult, as tumors of the upper and middle half of the kidney are not palpable. The 15 case-histories are given in full. Pathologically, out of 11 tumors which were examined, seven were composed of suprarenal tissue, many containing cysts. There were one cystadenoma, one diffuse carcinoma, one papillary carcinoma of the pelvis, and one adeno-carcinoma of the pelvis of the kidney. Symptoms had existed in one case for three years, in a floating kidney; in two cases for two years; in six cases, from one-half to one year; and without any symptoms in three cases. The tumors varied from the size of a goose egg to a child's head. Hematuria occurred in six cases out of seven with suprarenal struma, and in two of the other cases. It is striking that none of these renal tumors occurred in children, and that none of them were sarcomata. In the clinic books, six cases of children with tumors of the kidney were found, but they had advanced too far to be operable. Metastases existed in other adult cases, so that operation was contraindicated. The lasting results are as follows:

Of one case, nothing is known; five died from one-quarter to two and a half years since operation; three are yet living, from one to five years since operation. After thus discussing tumors of the kidney from a therapeutical, clinical and pathological standpoint, Grohé insists that when hematuria occurs, the physician should consult a surgeon immediately, in order that *nephrectomy* may be performed as soon as possible, should it become a necessity. [M. O.]

2.—Justian reports a case of *tuberculosis in a right-sided inguinal hernia*. This is the twenty-ninth case reported. A soldier, in his second year of service, 22 years old had noticed the hernia two weeks before. Pleurisy with effusion appeared on the left side. An exploratory puncture was made, the liquid containing mononuclear leukocytes. Thoracotomy followed. Tubercle bacilli were never found. Two months later, the Bassini operation was performed, a *tuberculous sac* being extirpated. This tuberculous exudate in the hernial sac was probably secondary to that in the pleura. Three varieties have been differentiated, the commonest, with miliary tubercles; next, with nodules formed of coalesced tubercles; and rarely with the formation of septa. The diagnosis has only rarely been made before operation. Twenty-four of the 29 cases were treated surgically. Of the 24 operations, 16 cases recovered. If the testicle is also affected, it should be removed. [M. O.]

3.—Stierlin reports the case of a man of 25, with a *racemose arterial angioma* of the supraorbital region. It was about the size of half a plate, and many modes of treatment had been unavailing. It was soft, and pulsated. He ligated its entire circumference, each suture being put in place before the preceding one was secured. The bleeding stopped when the sutures were tightened. Ten days later, Stierlin excised the tumor. It healed and has not recurred. His next case was a *traumatic aneurysm* of the left femoral artery, in a man of 26, following a shot in the thigh. The tumor was as large as an orange. The aneurysm was extirpated. The preparation showed that the inner wall of the artery was not perforated by the bullet, the outer wall of the artery forming the sac of the aneurysm. He rapidly recovered. The third case was an *aneurysm* of both common iliac arteries, in a man of 49. The pulsating abdominal tumor grew enormously until death occurred. At the autopsy it was seen to be 36 cm. long and 19 cm. wide and deep. It was probably arterio-sclerotic in character, for plates of atheroma were found in the abdominal aorta only. But few such cases are seen early enough for operation. [M. O.]

4.—After a short review of the literature, Gessner reports the results of his examination of eight tumors of the testicle. Four of them were sarcomata, the other four, *teratomata*, containing embryoidal tissue. The case-histories and pathological examinations are given in detail, with drawings. Three tumors were very similar. While the tissue was irregularly arranged, there were many small lobules, with septa of fibrillar connective tissue. About the testicle the tumor seemed benign, about the epididymis, malignant. Products of all three embryonal layers were seen in these lobules. Nervous tissue, representing the ectoderm, was seen in two of the tumors, as were cysts with cylindrical and columnar epithelium; the endoderm was represented by intestinal glands and follicles; and the mesoderm, by unstriated muscle, cartilage, bone, and fibrillar connective tissue. The fourth case was different, not at all embryoidal in character. It was full of canals, cysts, with mixed epithelium, almost adenomatous. But all four tumors arose from the corpus Highmori; all are divided into more or less well recognized lobules, containing signs of the three embryonal layers, in the first three tumors only. The fourth case showed typical carcinomatous degeneration. All were congenital. They were malignant of themselves. There may be metastasis and recurrence, and all three embryonal layers occur. The best differentiated tissue is found toward the edges of the tumor. Much such tissue exists, so that products of the three embryonic layers develop, proliferating unlimited. A brief report of yet another embryoidal tumor is appended. [M. O.]

5.—Weber reports ten more cases of *subphrenic abscess*, five of which followed appendicitis. In two cases the subphrenic abscess was retroperitoneal, in four others intraperitoneal in position. Subphrenic abscess may develop

in one of four ways—along the ascending colon; along the appendix; as a secondary abscess in general peritonitis; or extraperitoneally, from the retrocecal tissue. Prompt operative interference in appendicitis will prevent the development of subphrenic abscess. One case followed a bullet wound; one, a perforated gall bladder; another, a suppurating echinococcus cyst in the liver; and the last, a putrid bronchitis. The last was the only fatal case. The case-histories are given in full. [M. O.]

6.—Payr describes fully a rhinoplasty performed upon a man of 60, who had cancer of his nose. The tip of the nose, the major part of both alae nasi and of the septum were removed with the tumor. The technique of the flaps cut and the details of the operation are described and illustrated by excellent drawings. This remarkable case, in a man with a full beard, presented many difficulties. Yet the result was splendid. [M. O.]

7.—Schultze reports three cases of **exarticulation of the larger joints**. The only danger is hemorrhage. He used the large forceps of the Richelot-Doyen pattern, seizing each separate muscle with them, thus stopping all bleeding. His results have been satisfactory. (M. O.)

8.—Petersen, in performing gastroenterostomy, says that the piece of the jejunum used must be very short (3 to 10 cm.). But in this case the gastroentero-anastomosis must lie deeper than the duodeno-jejunal fold; there must be something to show that the length chosen is correct; and some cause to prevent the intestinal contents from flowing backward. Now Kelling believes that it is rarely possible to fulfill these conditions. When cicatrization occurs, the position of the gastroentero-anastomosis will be above the duodeno-jejunal fold. A longer piece of the jejunum should be selected, to prevent the backward flow of the intestinal contents, by making the loop larger; that another bit of small intestine does not enter the loop and obstruct it; and that digestion may not be hindered so much, *thereby* the food does not pass through the duodenum. Kelling reports a case, a woman of 48, in whom half of the stomach had been resected for cancer of the pylorus. Gastroenterostomy was performed by the Hacker method, with a Murphy button. Through a fistula which resulted from the removal of gall-stones, later, it was seen that bile and pancreatic juice flowed backward, up to the stomach, whenever any food was ingested. This showed that the intestine (over 50 cm. long) of the gastroentero-anastomosis was filled with stomach contents. After great care, the fistula healed and the patient recovered. [M. O.]

9.—There are but three methods of determining the etiology of carcinoma and sarcoma. Neither bacteriology nor clinical observation has given satisfactory conclusions. Ritter believes that it remains for pathology to solve the problem. For certain facts exist in pathology which point directly to an infection as the cause of malignant tumors. Actinomycosis, tuberculosis, etc., were considered tumors before their infectious nature was discovered. While carcinoma and sarcoma may be the result of the reaction of normal tissue to an infection, this is impossible in the metastases. The chromatin in the nuclei of malignant tumor cells is the same as in normal tissue. Nor is karyokinesis a sign of malignancy. The asymmetrical mitosis figures simply show sick tissue, not necessarily malignant tissue. Nor can malignancy or benignancy be determined from the cells, histologically. The literature is full of examples of adenomata, in which no secretion, but degeneration fills up the cavities. In carcinoma there is no secretion, as in normal tissue, except when inflamed. Degeneration and necrosis only occur when the blood-supply is in any way cut off, sometimes very late. Necrosis, as in the infectious diseases, is found in the center of the tumor, surrounded by inflamed tissue, but the occurrence of metastases cannot be explained by the infectious theory. After repeating numerous theories, Ritter states that, from the pathological findings, the possibility that carcinoma and sarcoma are infections cannot be denied. The analogy seems probable in sarcoma, but there are many objections to it in carcinoma. The degenerations back up this view. He thinks it possible that the bacteria which cause these tumors have already been found, but were not recognized. [M. O.]

10.—Beck reports three cases of fracture of the coronoid process of the ulna, a condition which he believes occurs

frequently. The case-histories, with Röntgen photographs, follow. [M. O.]

11.—Mallefert reports a case of **upward dislocation of the patella**, which occurred 15 years ago, in a man then 40 years old. Examination now shows that the ligamentum patellae was not separated, as it can yet be felt crossing the knee-joint, lengthened and hard, with the patella upon it, above the joint. [M. O.]

VRATCH.

July 28, 1901. (Vol. XXII, No. 30.)

1. Pentose in the Animal Organism and the Origin of Pentosuria. N. P. KRAFKOFF.
2. The Significance of the Theories of Acid-Intoxication in Relation to Internal Pathology, and Especially to the Origin of Hematuria. V. F. ORLOWSKI.
3. The Casuistic of Traumatic Injuries to the Brain. A Case of Motor Aphasia. M. S. MASLOWSKI.
4. A Rare Case of Hysteria. I. A. R. MAROWSKI.

1.—Will be abstracted when concluded.

2.—Orlowski performed a number of experiments which seem to disprove the theory held by a number of authorities that hematuria as well as some forms of auto-intoxication are the result of an abnormal accumulation of acids in the blood. Having produced artificial hematuria in dogs by ligating the ureters, he examined the alkalinity of the blood by the accurate method of Lowey. He found, as did the adherents of the acid-intoxication theory, that the alkalinity of the blood was markedly diminished, owing to an accumulation of acids. But this diminution is the result and not the cause of the hematuria. To prove this, he adduces the following observations: In 3 cases of hematuria in man he found that the diminished alkalinity of the blood followed and not preceded the attack. Moreover, in diabetes and cancer the alkalinity of the blood is markedly diminished, and yet no hematuria is produced. He, therefore concludes that various observers have mistaken the effect for the cause. With regard to acid-intoxication, the author denies that the presence of ammonium salts in the urine have any significance. The presence of acetone and diacetic acid, substances but slightly poisonous, is only a secondary manifestation of disturbed metabolism. There are only two conditions indicative of acid intoxication: (1) The presence in the blood and urine of B. oxybutric acid and (2) the improvement following the administration of alkalis. These conditions have been observed only in diabetic coma. [A. R.]

3.—Maslowski reports a case of traumatic injury to the brain, involving the cortical portion of the posterior division of the 3d frontal and the middle portion of the central convolutions on the left side. The bone was depressed and it was evident that a clot formed subdurally. This injury was followed by paralysis of the muscles of the face and arms and aphasia from which the patient recovered without any surgical intervention. [A. R.]

4.—Marowski reports a rare case of hysteria in a girl, 19 years old, of a neurotic disposition. The mother was an alcoholic. The patient as well as the other members of the family suffered from periodical epistaxis. Having received news of the death of her father, she fainted and upon recovery discovered a numbness and weakness in her legs and spine, rendering locomotion and standing difficult. This gradually increased and in a few days she was neither able to stand, walk or sit. There was complete paralysis of both legs, loss of muscular sense, anesthesia in the region of the legs, gluteal muscles, perineum, around the anus, external genitals and sternum. In other parts of the body there were hyperesthetic areas. Both the sphincters of the rectum and bladder were paralyzed and defecation and urination were involuntary. The clinical picture was that of transverse myelitis. By means of hypnotic suggestion the diagnosis of hysteria was established and the patient finally cured. [A. R.]

Society Reports.

MEETING OF THE NEW YORK MEDICAL ASSOCIATION.

(Continued from Page 733).

Dr. Wood referred to a differentiation between cardiac manifestations of arteriosclerosis in patients, first, who have cardiac disease, and secondly, in those who have primary cardiac disease, valvular disease. Some young men have a form of arterio-capillary fibrosis. That is an advancing disease. Cases of 26 and 36 years have been observed without any evidence of primary interstitial nephritis. These cases do not seem to yield to the remedies that control the other cases spoken of, and their causation will be found to differ from the causation of arterial disease spoken of to-day. These persons are under high tension and continued strain; in fact, they *actually sleep under high pressure*. Diet and prophylaxis are important to observe. Coffee irritates and contracts the arterioles, throwing the blood back into the larger arteries. The Nauheim treatment was mentioned.

Dr. Alleman did not agree with Dr. Rochester in condemning digitalis. While it may not be so appropriate in the first and second stages, yet it is good in the terminal stage, or digitalis combined with mercury. "Strenuous life," as was referred to in the President's case, has a great deal to do with this disease. The doctor did not believe in these cases as being neurasthenic, but true arteriosclerosis.

Dr. Rochester, in closing, said that he had very little use for digitalis in arteriosclerosis where there is accompanying heart disease, on these grounds: "We have a condition in arteriosclerosis in which, by the use of digitalis, the greater strain is thrown on the heart by the action of the vessel walls. Where the heart is dilated, digitalis is useful; it is useful for a temporary time. But what do you do? You give that heart a rest and digitalis does not do that. You should put your patients in bed and keep them there, giving them that physiological rest and the heart will quiet down. Digitalis is absolutely wrong in those cases. Given regularly, 1, 2 or 3 minims every night gives a wrong sense of strength to the individual, when he ought to be in bed."

Dr. Sturgis asked Dr. Rochester what kind of cactus he used, to which he replied that there is only one good preparation of cactus, and that is Merrill's fluid extract of cactus. Dr. Rochester believed that cactus was particularly useful, as it did not have such a deleterious effect upon the arterioles as does digitalis. Cactus should not be used continuously. Nux vomica improves the heart-tone and helps better than anything else. Dr. Rochester did not believe that heredity played so great a part in the pathogenesis of the disease, but rather the *mode of life*. He had three cases in which the pain was epigastric, where there was discovered to exist serious disease of the myocardium, and of the coronary artery.

Dr. Le Fevre used small doses of digitalis for nutrition of the heart.

Blood Examination from the Standpoint of the General Practitioner. Dr. Frank W. Higgins, Cortland.

The doctor referred to the technic and instruments necessary. Specific gravity has an important bearing to the disease. He laid stress on the importance of microscopical examinations in certain diseased conditions and the uses of the urinometer. Routine examinations of the blood may be profitably made by the general practitioner.

Dr. Richard C. Cabot, Boston, said that every one could study the blood and make it useful in his general practice. He spoke of the iodophilic reaction of the blood and recommended the hemoglobinometer, which, he said, was accurate for any clinical purposes. He pays more attention to the hemoglobin than to the specific gravity. It is false to suppose that leukocytes mean pus. They rather represent a toxemia, produced by a purulent condition or uremia. It is not a specific indication of pus.

Conservative Surgery in the Treatment of Tubercular Glands of the Neck. Dr. Parker Syme, New York. The doctor did not believe that radical surgery in this tubercular

affection was the best. Operations are not well borne by tubercular patients, they should not be performed, except where absolutely necessary, and then made as light as possible. Operation produces shock to the patient's physical strength and lowers the vital powers. Complete removal should only be practiced where the disease has resisted all other treatment. Systemic infection from tubercular adenitis is rare. When the glands are broken down, they should be curetted. When a gland remains large for some time and does not decrease in size, it should be removed. The author, however, does recommend removal when the case is neglected and there is evident degeneration of the glands. Patients should live an out-of-door life, never be over-fatigued, much time spent in the actual sun, should sleep in a well-ventilated room, with windows wide open, but with a warm room to dress in. He likewise advocated the cold bath and a nutritious diet. Drugs are seldom necessary. If the patient is anemic, iron should be given. Hygienic conditions and the best environments with local treatment should be observed.

Dr. John Allan Wyeth, who is president of the American Medical Association and of the New York State Medical Association, read his address, entitled: **Comments on Some New Surgical Methods.**

His paper was divided into four parts: (1) Anesthesia of the lower half of the body by injections of hydrochlorate of cocaine into the subarachnoid space of the spinal cord. (2) The obliteration of bloodvessels by injection. (3) Prostatectomy. (4) The effect of removal of the ovaries upon carcinoma of the breast.

1. The doctor gave to Dr. August Bier, of Kiel, Germany, the credit for the new method of spinal anesthesia; also referred to Dr. J. Leonard Corning's method of employing cocaine as a general anesthetic. The author believed that the new method of anesthetizing would find a permanent place in surgical practice. The doctor cautioned against its indiscriminate employment, the importance of making a proper selection of cases, and of commencing with the minimum quantity, 1/5 of a grain. It is especially adapted to patients afflicted with certain forms of nephritis. He recommended the technique as given by Dr. Wm. R. Stone, of New York, who suggests an aseptic aqueous solution of 1/5 of a grain of hydrochlorate of cocaine to be used at one injection. The spinous process of the 4th lumbar vertebra is accurately located and the point of the needle introduced just outside of the spine between the 4th and 5th lumbar vertebrae, at an angle of about 30 degrees, from without inward, and from below upward. The patient should be in the exaggerated bicycle position, or Sim's position, with the back bent forward as far as possible. In his own practice, the author sterilizes the skin for 2 or 3 inches around the point of puncture, and cocaineizes the integument and the deeper tissues entirely down to the lamina with 2% or 4% solution. The skin is punctured with a bistoury so that the needle may be carried directly into the muscular substance, avoiding even the smaller danger of carrying the *staphylococcus epidermidis albus* into the subarachnoid space.

2. Dr. Wyeth had observed the results of Professor Darwin's operations, where he excised the external carotid arteries and their branches for the purpose of cutting off the blood supply to inoperable tumors in the nasopharynx. In January, 1901, Dr. Wyeth made experiments on dogs, into the iliac artery of one of which he injected pure alcohol; into another, heated liquid paraffine, which was coagulable at 108° F., into another, boiling water. In the first experiment the artery was still pervious; in the second, the vessel was occluded down to vessels of about 1/20 of an inch in diameter; in the third, there was complete arrest of circulation, and gangrene ensued. The doctor then cited operations performed, using his experiments as a basis thereto.

3. Prostatectomy. "Recent developments in the operative surgery of the prostate have done much to remove the opprobrium from the surgical art which the long and deplorably unsatisfactory treatment of obstructive prostatic hypertrophy justified. Parents are now no longer condemned to years of suffering and annoyance." The first real advance in prostatic surgery was the operation which consisted in the exposure of the prostate by a perineal incision, with the piece-meal removal by scissors, or by enucleation of the hypertrophied portions of that

organ. For the final radical procedures we are indebted to Nicol, Samuel Alexander, Eugene Fuller, Parker Synms, and others. Various techniques were then described. In conclusion Doctor Wyeth said that it is a matter of great satisfaction to note that the death rate following prostatectomy has gradually diminished, as the operation has been more thoroughly developed. "I do not hesitate to express the opinion that this operation is one of the most valuable contributions which has been made to surgery within the last decade."

4. The effect of removal of the ovaries upon carcinoma of the breast. Mr. George T. Beaston's (Glasgow) experiments of extirpating the ovaries with coincident diminution in breast cancer and ultimate disappearance were then related. Dr. Robert Abbé had likewise performed successful oophorectomies in this country, with atrophied changes in already present nodules and their final abolition. Dr. Wyeth looked very hopefully to this means of eradicating cancerous growths.

AFTERNOON SESSION, OCTOBER 23, 1901.

The Value of Bacteriological and Pathological Research in Diagnosis, Prognosis and Treatment in Practical Surgery.

Dr. Richard C. Cabot, of Boston, presented the subject of *Iodophilia*. This solution consists of iodoform 1 part, iodid of potash 3 parts, water 100 parts, and then enough gum-arabic to make a thick syrup. The doctor then reviewed the various tests of *Iodophilia* where it demonstrated the presence of certain surgical and pathological affections, appendicitis, peritonitis, empyema, etc. The doctor showed lantern-slides, giving the leukocytes, red corpuscles, etc., with their various positive and negative reactions. While the doctor did not say that the *Iodophilia* test was absolute in every case, yet its evidence was sufficiently conclusive on the whole to warrant its general use.

Clinical Laboratory in Surgical Diagnosis, was the title of a paper presented by Dr. Simon Flexner, Philadelphia. The Doctor referred to the importance of making laboratory work effective, and that the demonstration of different kinds of bacteria in surgical disease would modify our diagnosis. Making cultures of the blood, the Widal reactions, and especially the examination of the blood for parasites, as in malarial cases, are of the greatest assistance. To make a laboratory valuable and to carry out laboratory diagnosis, the necessary equipment is required. Laboratory diagnosis is most valuable when correlated with clinical diagnosis; its true purpose is to aid and supplement clinical diagnosis, to correct any methods, to connect the specific causes and effects of disease, and thus to contribute a more scientific and rational treatment.

(To be Continued).

Meeting of The Research Society, Cincinnati, O., October 17, 1901. Dr. S. P. Kramer read a paper entitled *Experimental Notes on Shock*. He showed that the effect on the circulatory and respiratory systems of irritation of a sensory nerve depended on the state of the cerebrum. The effect varies under varying degrees of anesthesia. When a sensory nerve is irritated in animals that are not anesthetized, the blood pressure rises, the cardiac rhythm and the respiration increase in frequency and amplitude. The same amount or even a greater amount of irritation under complete anesthesia is practically without effect on the circulation or respiration. With semi-anesthesia, in which the corneal reflex was present, irritation of a sensory nerve was followed by a marked fall in blood pressure—vasomotor shock. In another series of experiments, he showed that the spinal ganglion tends to inhibit or modify sensory impressions on their way to the central nervous system. Electrical irritation applied to the posterior root of a spinal nerve central to the ganglion, of such intensity as to produce the above effect on the circulation and respiration, failed to produce the effect on the same animal under the same conditions of anesthesia when applied peripheral to the ganglion. Dr. William Muhlberg fully agreed with him in regard to the difficulty of working out the pathology of shock by

experiments on the lower animals. They show only a slight tendency toward this condition, and this becomes more marked the lower down the scale of life we go. He believes that not only do the ganglia modify nerve impulses, but that this influence is most important both physiologically and pathologically. It is possible in Dr. Kramer's experiment that the ether so changed the conductivity of the ganglia-cells that ordinary impulses were no longer able to pass through them. If this is true, it throws much light on the manner in which ether causes anesthesia. But another explanation is possible. The conditions of the experiment rendered necessary the cutting of the sensory nerves peripheral to the ganglion. In so doing damage was inflicted to the neurons whose cell-bodies are in the ganglion and it is not unreasonable to suppose that this injury, by exerting a shocking influence on the cell, lowered the conductivity of the ganglion. In demonstrating before classes at college the effect on blood-pressure of stimulating the central end of the sciatic nerve, he has frequently noticed that the rise was much more marked when the electrodes were applied to the unsevered nerve, i. e., when the afferent conducting neurons had in no way been injured. The difference in the pressure was much too great to be accounted for by the local constriction in the limb resulting from stimulation of the efferent vaso-constrictors in the uncut nerve. If the assumption of neuron-cell shock is correct, it will assist in elucidating many problems in nervous pathology. As for instance, we know that transection of the spinal cord causes "shock" of that portion of the cord behind the lesion. This so-called shock is, however, not in the cord itself but in the posterior spinal ganglia, for when an attempt is made to elicit a reflex response by stimulating afferent nerves peripheral to the ganglia, no result follows, while stimulation of afferent nerves between the cord and the ganglia causes normal responses. In this case, the posterior spinal ganglion cells have, in all probability, been shocked by the section of their protoplasmic prolongations which run up the cord in the columns of Goll, Burdach, etc. Dr. M. L. Heldingsfeld said that it would be easy to determine whether or not this inhibitory influence attributed to these ganglia was due to any inherent property or to shock following injury, by performing the same experiments on animals with uncut sensory nerves. He then presented a paper on *generalized vaccination eruption*, (*vaccinia généralisée*), reporting a case in a child of five years. The eruption appeared three weeks after vaccination, and spread in the form of vesicles and bullae, in successive crops, over the entire body, beginning on the ankles and wrists. The duration of the eruption was about three months. His deductions were: that the disease bears the same relation to vaccination as vaccination does to smallpox; that some of the cases are due to direct inoculation of the virus by means of the finger nails, garments, etc.; that others are due to misdirected virus through the lymph and blood circulation; others are the expression of the reaction of the system against the general intoxication from vaccination; all cases require a special idiosyncrasy on the part of the patient; and that the blood examination reveals a very low eosinophilia, which moves the affection from the general bullous eruptions, while the leukocytosis and other changes bring the disease among the acute infections. Dr. Friedlander, who had made the blood examination in the case reported, found a moderate leukocytosis and this differential count: polymorphonuclear neutrophils 81%, small lymphocytes 9%, large lymphocytes 6%, and eosinophiles 5%. The small number of eosinophiles he considered to be important because of the question of diagnosis. In other bullous eruptions, especially in pemphigus, which this case resembled, one would expect to find marked eosinophilia. The blood count would therefore seem to rule out this condition. Another point of interest was the relative increase in the polymorphonuclear neutrophils, to 81%, as in the infectious diseases. The explanation of the case that Dr. Heldingsfeld has given possibly explains this part of the blood finding. Dr. Kramer suggested that the case was in reality smallpox. Dr. Heldingsfeld concurred with Dr. Kramer, in as much as variola is the same as vaccination, modified only in degree.

Special Articles.

THE EXECUTION OF CZOLCOSZ.

By CARLOS F. MacDONALD, A. M., M. D.,

of New York.

The execution by electricity of Leon F. Czolgosz, which took place in the State Prison at Auburn, New York, on the morning of October 29, 1901, terminated the earthly existence of the most monstrous magnicide of the age. Every precaution was taken by the Warden of the Prison, under whose immediate supervision and direction the execution was conducted, to minimize the opportunity for notoriety, as well as to insure that the taking off of the prisoner should be effected in an orderly and dignified manner.

The official witnesses, consisting of prominent New York State officials, several physicians, representatives of the respective press associations and two official physicians,—Doctor John Gerin, Prison physician, and myself,—having been assembled in the execution room and received the usual admonition from the Warden as to the maintenance of order and quiet during the execution, the prisoner was conducted to the room by a guard on either side a few minutes after 7 A. M. As he entered the room, his head was erect and his manner self-possessed and defiant. Immediately after being placed in the fatal chair the binding straps were quickly adjusted on his arms, legs and body, the head and leg electrodes were placed *in situ* and connected with the wire which was to transmit the lethal current through his body. The criminal offered no resistance whatever, but during the preparations addressed himself to the witnesses in the following significant language: "I killed the President because he was the enemy of the good people—the good working people. I am not sorry for my crime. I am sorry I could not see my father." At this juncture, everything being in readiness, the Warden gave the signal to the official electrician in charge of the switch, who immediately turned the lever which closed the circuit and shot the deadly current through the criminal's body. The instant the contact was made, the body was thrown into a state of extreme rigidity, every fibre of the entire muscular system being in a marked condition of tonic spasm. At the same time consciousness, sensation and motion were apparently absolutely abolished.

Czolgosz was pronounced dead by the attending physicians and several of the other physicians present, in four minutes from the time he entered the execution room, one minute of which period was occupied in the preliminary preparations, one minute and five seconds in the electrical contacts and the remainder of the time in examinations by the physicians to determine the fact of death.

Two electrical contacts were made occupying in all one minute and five seconds. In the first contact the electro-motive pressure was maintained at 1800 volts for 7 seconds, then reduced to 300 volts

for 23 seconds, increased to 1800 volts for 4 seconds, and again reduced to 300 volts for 26 seconds, when it was broken. The second contact was maintained at 1800 volts for 5 seconds. That conscious life was absolutely destroyed the instant the first contact was made, was conceded by all of the witnesses.

Immediately after the execution, the lay witnesses having departed, an autopsy was made by Dr. Edward A. Spitzka, of New York, under the direction and supervision of the official physicians and in the presence of several of the visiting physicians who were invited to attend. The autopsy occupied more than three hours and embraced a careful examination of all the bodily organs, including the brain, all of which were found to be in a perfectly normal state,—a conclusion which was concurred in by all the physicians present.

In compliance with the expressed wish of the relatives of the criminal, the Superintendent of State Prisons, who was present, and the Warden, declined positively to allow any portion of the body to be removed from the prison. Consequently, and regrettably, it was impossible to retain honorable possession of any portion of the brain for future examination and study. Accurate drawings, however, and detailed anatomical descriptions of the brain were made by Dr. Spitzka for subsequent study and report. A careful, naked-eye examination of the brain in all of its parts was also made and full notes taken thereof. The organ and its appendages appeared to be absolutely healthy and free from any abnormality whatever, thus corroborating the opinion of the mental experts who had examined the criminal during life, namely, that he was perfectly sane.

Respecting the question of Czolgosz's mental condition, it appears that all of the mental experts at his trial, on either side, namely, Doctors Putnam, Fowler and Crego for the people, and Arthur W. Hurd and myself for the defence, after repeated examinations, concurred in the opinion that he was sane. A final examination of the criminal, with reference to his mental condition, was made by Dr. Gerin and myself at the Auburn Prison on the evening before his execution with entirely negative result. In fact, none of these examinations disclosed, in the opinion of any of the experts, the slightest evidence of mental disease or mental degeneracy. On the contrary, he was regarded as exceptionally intelligent for one in his walk of life.

Furthermore, this conclusion was fully corroborated by his manner, appearance and declarations in the execution room as well as by the post-mortem findings. Moreover, Czolgosz's bearing, conduct and declarations from the time he murdered the President down to that of his execution have been entirely consistent with the teachings and the creed of Anarchism and stamp him as an Anarchist of the deepest dye.

OFFICIAL REPORT OF THE EXPERTS FOR THE PEOPLE IN THE CASE OF THE PEOPLE VS—LEON F. CZOLGOSZ.

By JOSEPH FOWLER, M. D.,
of Buffalo, N. Y.

FLOYD S. CREGO, M. D.,

Professor of Insanity and Brain Diseases in University
of Buffalo.

and JAMES W. PUTNAM, M. D.,

Professor of Nervous Diseases in University of Buffalo,
N. Y.

September 28, 1901.

Hon. Thomas Penney,

District Attorney, Erie County, N. Y.

Sir:

Complying with your request to examine into the mental condition of Leon F. Czolgosz and report to you the result of our findings, we respectfully submit the following:

In conducting the examinations of the prisoner, we eliminated all bias and personal revenge, which so revolting a crime might suggest, to reach a just conclusion as to his mental state.

The early opportunity afforded us to examine Czolgosz, such examinations beginning but a few hours after the commission of the crime, while he was still uninformed of the fate of his victim, or had time to meditate upon the enormity of his act, aided us materially in our work.

As will be seen from our report, the prisoner answered questions unhesitatingly during the first three examinations.

After this he became more cautious and less communicative when interrogated as to the crime. From September 10th until after his trial he never volunteered any information to the examiners, and answered only in monosyllables, except to his guards, to whom he talked freely.

Leon F. Czolgosz is 28 years old, born of Polish parents, at Detroit, Mich., single, five feet 7 5/8 inches high, weighs 136 pounds, general appearance that of a person in good health, complexion fair, pulse and temperature normal, tongue clean, skin moist and in excellent condition. Pupils normal and react to light, reflexes normal, never had serious illness. He had a common school education, reads and writes well. Does not drink to excess, although drinks beer about every day, uses tobacco moderately, eats well, bowels regular. Shape of his head normal as shown by the diagram obtained by General Bull, Superintendent of Police, with a hatter's impress.

The face is symmetrical, one eyebrow was apparently asymmetrical, and elevated, as it had been cut some years ago by a wire while he was working in a wire factory. There was also a small scar on left cheek due to slight injury while at work.

At our first interview, held September 7th, he made the following statements during a lengthy examination by all three examiners: "I don't believe in the Republican form of government, and I don't believe we should have any rulers. It is right to kill them. I had that idea when I shot the President, and that is why I was there. I planned killing the President three or four days ago after I came to Buffalo. Something I read in the Free Society suggested the idea. I thought it would be a good thing for the country to kill the President. When I got to the grounds I waited for the President to go into the Temple. I did not see him go in, but someone told me he had gone in. My gun was in my right pocket with a handkerchief over it. I put my hand in my pocket after I got in the door; took out my gun, and wrapped the handkerchief over my hand. I carried it that way in the row until I got to the President; no one saw me do it. I did not shake hands with him. When I shot him, I fully intended to kill him. I shot twice. I don't know if I would have shot again. I did not want to shoot him at the Falls; it was my plan from the beginning to shoot him at the Temple. I read in the paper that he would have a public reception. I know other men who believe what I do, that it would be a good thing to kill the President and to have no rulers. I have heard that at the meetings in public halls. I heard quite a lot of people talk like that. Emma Goldman was the last one I heard. She said she did not believe in government nor in rulers. She

said a good deal more. I don't remember all she said. My family does not believe as I do. I paid \$4.50 for my gun. After I shot twice they knocked me down and trampled on me. Somebody hit me in the face. I said to the officer that brought me down "I done my duty." I don't believe in voting; it is against my principles. I am an Anarchist. I don't believe in marriage. I believe in free love. I fully understood what I was doing when I shot the President. I realized that I was sacrificing my life. I am willing to take the consequences. I have always been a good worker. I worked in a wire mill, and could always do as much work as the next man. I saved three or four hundred dollars in five or six years. I know what will happen to me,—if the President dies I will be hung. I want to say to be published—"I killed President McKinley because I done my duty." I don't believe in one man having so much service, and another man should have none."

On the second day's examination we covered about the same ground as on the previous day in order to test his memory and to compare his statements. We found his memory perfect and his statements almost identical. On this examination we gained some further information, that for many months he had been an ardent student of the false doctrines of Anarchy; that he had attended many circles where these subjects were discussed. He related how a friend of his had broken away from the circle because he had changed his views and did not agree with him and the others in their radical ideas of government. He had heard Emma Goldman lecture, and had also heard lectures on free love by an exponent of that doctrine. He had left the Church five years ago because, as he said, "he didn't like their style." He had attended a meeting of Anarchists about six weeks ago, and also in July. Had met a man in Chicago about ten days ago who was an Anarchist, and had talked with him. One Friday before the commission of this crime, he had spent in Cleveland, leaving Buffalo, where he had been for two or three weeks, and going to Cleveland. Said he had no particular business in Cleveland. "Just went there to look around and buy a paper."

The circle he belonged to had no name. They called themselves Anarchists. At every meeting they elected a Chairman and usually it was one man (mentions name). "He was a sort of spokesman for the crowd. This friend of mine who left the circle, I don't think much of. I don't like a man who changes around like he did. I like a man to have a fixed purpose, and one who sticks to his belief. ... this circle we discussed Presidents, and that they were no good, but didn't say they must be killed; just said they were no good." During this examination the prisoner was very indignant because his clothing was soiled at the time of his arrest, and he had not had an opportunity to care for his clothing and person as he wished. He refused to demonstrate again how he covered his weapon with a handkerchief because his was soiled and bloody. When given a clean one he showed at once the method of concealing the weapon, and how he held it. His desire to keep himself tidy, demonstrated that he was not careless in dress and appearance, as are most insane persons. He requested clean clothing, and as he had a small amount of money, a shirt and two handkerchiefs were purchased for him with it. When they were brought in the change was shown him. He instantly turned to the officer and said, "How is that? Don't I get more change? The cost of the articles was told him, and he said, "Oh, that's all right then." Said he would have slept well last night but for the noise of people walking about. He had heard several drunken people brought into the station at night. Said he felt no remorse for the crime which he had committed. Said he supposed he would be punished, but every man had a chance on a trial; that perhaps he wouldn't be punished so badly after all. His pulse on this occasion was 72; temperature normal; not nervous or excited.

On September 9th we observed a marked change in his readiness to answer questions. Many of the questions asked he refused to answer. He denied that he had killed the President or that he meant to kill him. Seemed more on his guard, and refused to admit that he shot the President. He persisted in this course until nearly the close of the interview, and until we told him that it was too late for him to deny statements that he had made to us. He then said, "I am glad I did it."

At all subsequent interviews he declined to discuss the

crime in any of its details with us, but would talk about his general condition, his meals, his sleep, and how much he walked in the corridor of the jail, or upon any other subject not relating to the crime. From the daily reports filed with us we note that he talked freely; that his appetite was good; that he enjoyed his walks which he took in the corridor of the jail. He told his guards he would not talk with his lawyers because he did not believe in them, and did not want them.

In conclusion, as a result of the frequent examinations of Czolgosz, of the reports of his watchers during his confinement in the jail, of his behavior in court during the trial, and at the time he received his sentence, we conclude that he was sane at the time he planned the murder, when he shot the President, and when he was on trial. We come to this conclusion from the history of his life as it came from him. He had been sober, industrious, and law-abiding; till he was twenty-one years of age, he was as others in his class, a believer in the Government of this country and of the religion of his fathers. After he cast his first vote he made the acquaintance of Anarchistic leaders who invited him to their meetings. He was a good listener, and in a short time he adopted their theories. He was consistent in his adherence to Anarchy. He did not believe in Government, therefore he refused to vote. He did not believe in marriage, because he did not believe in law. He killed the President because he was a ruler, and Czolgosz believed as he was taught that all rulers were tyrants; that to kill a ruler would benefit the people. He refused a lawyer because he did not believe in law, lawyers or Courts.

We come to the conclusion that in the holding of these views Czolgosz was sane, because these opinions were formed gradually under the influence of Anarchistic leaders and propagandists. In Czolgosz they found a willing and intelligent tool; one who had the courage of his convictions, regardless of personal consequences. We believe that his statement, "I killed the President because I done my duty," was not the expression of an insane delusion for several reasons. The most careful questioning failed to discover any hallucinations of sight or hearing. He had received no special command; he did not believe he had been especially chosen to do the deed. He always spoke of his motive for the crime as duty; he always referred to the Anarchists' belief that the killing of rulers was a duty. He never claimed the idea of killing the President was original with him, but the method of accomplishing his purpose was his, and that he did it alone. He is not a case of paranoia, because he has not systematized delusions reverting to self, and because he is in exceptionally good condition, and has an unbroken record of good health. His capacity for labor has always been good, and equal to that of his fellows. These facts all tend to prove that the man has an unimpaired mind. He has false beliefs, the result of false teaching and not the result of disease. He is not to be classed as a degenerate, because we do not find the stigmata of degeneration; his skull is symmetrical; his ears do not protrude, nor are they of abnormal size, and his palate not highly arched. Psychically he has not a history of cruelty, or of perverted tastes and habits. He is the product of Anarchy, sane and responsible.

Respectfully,

Signed,

JOSEPH FOWLER, M. D.
FLOYD S. CREGO, M. D.,
JAMES W. PUTNAM, M. D.

LA PRESSE MEDICALE.

July 10, 1901. (No. 55).

1. New Experience in Smallpox.
HENRI ROGER and EMILE WEILL.
2. The Treatment of Injuries of the Sinuses of the Dura.
GEORGE LUYSS.

1.—Roger and Weill give in detail their latest experiments upon rabbits with the pus of smallpox. An eruption developed, about the point of inoculation, consisting of a few papules, as in new-born infants. Thus their latest experiments confirm their earlier ones, in showing the resemblance between small-pox in the rabbit and young infants. [M. O.]

2.—The treatment of suspected injury of the sinuses of the dura mater is immediate operation. The skull must be

trephined at the point of traumatism immediately. The hemorrhage can be stopped by digital compression, packing, with gauze or with catgut, permanent pressure, ligation, or lateral ligation. But one of two grave accidents may occur, sinus-thrombosis or the entrance of air into the sinus, with death following at once. [M. O.]

July 13, 1901. (No. 56).

1. Congenital Lymphadenoma in the New-born.
E. BONNAIRE and DECLOUX.
2. The Elimination of the Pigment in Pigmented Diabetes.
RABÉ.
3. The Treatment of Urinary Infiltration, Abscess, and Fistula. H. HARTMANN.

1.—Bonnaire and Decloux report the case of an infant admitted to the hospital when two days old. It looked hereditarily syphilitic, had a huge abdomen, ascites, and edema of the legs. The liver was found enlarged and regular on palpation. A large smooth tumor filled the left hypochondrium. It was firm, and suggested a hypertrophied spleen. The diagnosis made was congenital syphilis. Pemphigus, cyanosis, fever, bronchopneumonia, and death followed. The autopsy showed that the tumor filling the left hypochondrium was a lymphadenoma of the left suprarenal capsule. The liver, pancreas, right suprarenal, and lungs were filled with lymphatic tissue, and enlarged lymph-glands existed throughout the body. They believe that lymphadenoma is probably a malignant tumor.

[M. O.]

2.—In hypertrophic cirrhosis of the liver with pigmentation of the skin, of diabetic origin, the red blood corpuscles are dissolved, and the hemoglobin is set free in the blood, whence follows the pigmentation. Rabé discusses the elimination of this pigment, hemosiderin. He reports a case, in a man of 47, of associated diabetes mellitus and Addison's disease, which ended fatally. Full autopsy notes are given, which show the universal distribution of the pigment. After a discussion of the subject, Rabé concludes that the epithelium lining the excretory ducts of the liver, pancreas, salivary glands, etc., may become impregnated with this iron pigment; that this may also occur in the trachea, bronchi and alveoli; that the pulmonary capillaries may contain pigment emboli; and that these conditions show the modes of elimination of the pigment. Thus, the glandular cells have two ways of eliminating this pigment, by the excretory ducts of the gland, and by the lymphatic or venous channels through the lungs. Here the fine particles fall into the alveoli, and are exhaled. The rest of the hemosiderin reaches the circulation, and is excreted through the kidneys. [M. O.]

3.—Hartmann states that the point of rupture of the urethra in urinary infiltration is always along the side of the urethra, just in front of the median aponeurosis. The urine reaches the inferior perineal cavity, and infiltrates the abdominal wall, the penis, and the scrotum. If this urine is septic, it forms a urinary abscess. The first treatment indicated is numerous small incisions to evacuate the urine. Then a perineal incision should be made, above the anus, to the urethra, and a drainage tube left in place. For acute urinary abscess, Hartmann advises simple incision and drainage; when the abscess persists, the entire abscess sac should be extirpated. The treatment of urinary fistula is the same. Operation for the cause of these conditions should be left until all chance of sepsis has passed.

[M. O.]

A Case of Separation of the Mucous Membrane of the Esophagus following Poisoning with Caustic Alkali.—Zembrzshuski (*Gazeta lekarska*, March 17, 1901; *Vratch*, Vol. XXII, No. 18) reports the case of a girl of 18 who took some caustic alkali with suicidal intent. The amount taken was not enough to have the desired effect but was sufficiently large to disable her from swallowing even liquid food, the ingestion of which caused vomiting. On the fourth day the vomited matter contained a piece of what she called "intestine," 18 cm. long, which on microscopical examination proved to be the entire mucous membrane of the esophagus. By the introduction of sounds of various sizes contraction was prevented and the patient was soon able to swallow liquid food. [A. R.]

Original Articles.

THE ULTIMATE RESULTS OF OPERATION FOR
CANCER OF THE UTERUS.By CHARLES P. NOBLE, M. D.,
of Philadelphia.

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During the century which has just closed surgery has made marvelous progress in many directions, and in no department is this more true than in that of gynecology. Methods of cure have been discovered and perfected for ovarian tumors, fibroid tumors, vesical and intestinal fistulae, lacerations of the pelvic soft parts and inflammatory diseases of the uterine appendages. Unhappily this brilliant record has not extended to the cure of cancer of the uterus. The status of the treatment of cancer is much better and more hopeful than it was a century ago, for we are now able to cure a certain percentage of cases. Nevertheless, for the greater proportion of cases of cancer of the uterus surgery is still helpless. As medical science has led to the prevention or control of the great epidemics which formerly decimated the race, and as now the causation of tuberculosis is known and its curative treatment in much better understood, the greatest problem which confronts the medical world in the twentieth century is to learn the causation, prevention, or cure of cancer.

It is my purpose in this communication to review briefly the present status of the treatment of cancer of the uterus, and to report my own experience in this connection. The question of the results of treatment of cancer of the uterus has recently been widely discussed not only in our country, but also in France and Germany. The following is a brief summary of some of the views which have been expressed by prominent men:

Richelot (Richelot, L. Gustave, *Sur le Traitement du Cancer Uterin par l'Hysterectomie Abdominale*, Congrès Français de Chirurgie, Paris, 1899,) after carefully studying all his own cases and those of other surgeons concludes that vaginal hysterectomy in cases of cancer of the uterus, in which the organ remains mobile and the disease is apparently sharply circumscribed, has a mortality of almost zero, and at least ten per cent. of permanent cures.

Winter (Winter, G. Genügt die vaginale Uterus-exstirpation als radicale Krebsoperation? *Zeits. f. Geb. u. Gyn.*, Bd. xliii, S. 509) states that at the Berlin Clinic, of 300 cases of cancer of the cervix operated upon before 1892, 30 per cent. were cured—that is, were free from recurrence at the end of five years. Of 30 cases of cancer of the corpus, 53 per cent. were cured. Combining all cancers of the uterus, 33 per cent. of cures were obtained. Eighty-five of these cases have remained free from recurrence from five to fourteen years. In Berlin up to 1892 28.7 per cent. of all cancers of the uterus presenting themselves were operated upon by vaginal hysterectomy. Of these 33 per cent. were cured (free from recurrence at the end of five years). This represents 9.6 per cent. of the total number of cases including the inoperable cases. In the last few years in Berlin 48 per cent. of the cases have been

operable. If the results of operation in recent years prove as good as prior to 1892, about 15 to 20 per cent. of all cases will be cured. This improvement in results has been made possible by educating the Berlin public to a recognition of the necessity for an early diagnosis.

Olshausen (Olshausen, R. Discussion on Cancer of the Uterus and Its Surgical Treatment, Thirtieth Congress of the German Surgical Society, Berlin, 1901; *British Gyn. Jour.*, 1901, May, p. 13) usually employs vaginal hysterectomy for cancer of the uterus. Formerly he operated upon about 30 per cent. of the cases presenting themselves. He now operates upon about 50 per cent. Recurrence is most often met with before the third year, it is not uncommon between the third and fifth years, but is very rare later. He has met with one recurrence at the end of twelve years. Operating upon 50 per cent. of the cases that present themselves in his clinic, he finds that 47 per cent. are alive five years after the operation, and 18 per cent. are free from recurrence at that date. Accepting five years as a standard of cure, this would give 18 per cent. as permanent cures to be obtained by vaginal hysterectomy.

Waldstein (Waldstein, Edmund. Ueber die Erfolge der operativen Behandlung des Gebärmutterkrebses, *Archiv. f. Gyn.*, Bd. 61, H. 1) in a study of 274* cases of cancer of the uterus, operated upon by Professor Schauta by vaginal hysterectomy, in the clinics at Innsbruck, Prague and Vienna, up until January, 1899, including also Schauta's cases operated upon in private practice, gives the following results: (reports were received from 164 cases) At the end of one year, in cases in which the cancer was localized in the uterus, 5.7 per cent. had died; of those in which the cancer had extended to the glands, 42 per cent. had died. At the end of the second year, of the localized cases, 20.8 per cent. had died; of the cases involving the glands, 60 per cent. had died. At the end of six years, of the localized cases (42 cases, 24 deaths), 57.1 per cent. had died; of the cases having glandular involvement (62 cases, 54 deaths), 87.1 per cent. had died. Or, to express the matter positively, at the end of six years, in the favorable cases of cancer, 42.9 per cent. were alive, and in the cases having glandular involvement at the time of the operation, 12.9 per cent. were alive. He compares these results with those of other surgeons. At the end of five years Olshausen's statistics show in 188 hysterectomies for cancer of the cervix, 51 cases were traced, of which 17.6 per cent. were cured; in 26 cases of cancer of the corpus, 6 cases were traced, of which 66.7 per cent. were cured. Kaltenbach, in 77 cases of cancer of the cervix, 36 cases were traced, of which 13.9 per cent. were cured. Fritsch, in 65 cases of cancer of the uterus, 11 cases were traced, of which 36 per cent. were cured. Leopold, in 104 cases of cancer of the uterus, 47 cases were traced, of which 53.2 per cent. were cured. Schauta, in 154 cases of cancer of the uterus, 113 cases were traced, of which 31.5 per cent. were cured.

Pfannenstiel (Pfannenstiel, J. Ueber die Heiler-

* Schauta operated upon about 11 per cent. of the cases of cancer presenting themselves.

folge bei Krebs der Gebärmutter, *Centralb. f. Gyn.*, 1901, No. 15) reports that of the cases presenting themselves in the Breslau Clinic, 19.5 per cent. have been operated upon by vaginal hysterectomy. At the end of five years 36.2 per cent. of those traced (47 of 116 cases) were free from recurrence, which is equivalent to 15 per cent. (17 cases) of all cases operated upon, and 7 per cent. of all cases presenting themselves in the clinic. He is an advocate of vaginal hysterectomy, and believes in abdominal hysterectomy only under definite indications.

Among German gynecologists the advocates of abdominal hysterectomy for cancer of the uterus are Freund, Wertheim, Amann and Mackenrodt. (Discussion on Cancer of the Uterus and Its Surgical Treatment, Ninth Congress of the German Gynec. Soc., Giessen, 1901, May; *British Gyn. Jour.*, 1901, August, 81). One hundred and thirty-four radical abdominal operations are reported, with a primary mortality of 24.6 per cent. Schauta and Winter have each had one fatal case, and Wertheim two, from necroses of both ureters. The advocates of abdominal hysterectomy claim that the ultimate results should be much better than from vaginal hysterectomy, because of their ability to remove glands and to remove the parametria along with the uterus, but as yet sufficient time has not elapsed for them to show by statistics that this contention is valid.

Wertheim (Discussion on Cancer of the Uterus and its Surgical Treatment, Thirtieth Congress of the German Surgical Society, Berlin, 1901; *British Gyn. Jour.*, 1901, May, p. 14) states that for the last two years and a half he has invariably operated by the abdomen, and removed the ganglia, believing that the best method to augment the chances of a radical cure. He has treated in this way fifty cases, but they are too recent to found any definite conclusions upon them. So far he has not met with any recurrence. The mortality has been high. In the first thirty operations there were eleven deaths; in the following twenty operations three deaths. Having had two deaths from necroses of the ureters, he no longer denudes these so thoroughly. The removed ganglia were in all cases submitted to minute examination, and in eighteen they were found to be cancerous. He attaches greater importance to the extirpation of the broad ligament than to that of the ganglia, because it is in the parametria that recurrence most frequently takes place.

Jacobs, of Brussels (Jacobs, C. 1906 Laparotomies, *Bulletin de Gynecologie et d'Obstetrique*, No. 3, Juin, 1899) is an ardent advocate of abdominal hysterectomy for cancer, on the ground that having performed eighty-two vaginal hysterectomies for cancer, without a single death from the operation, in all of the patients recurrence took place a year after operation, and that at this time not a single patient is living. His cases operated upon by the abdominal route are too recent for definite conclusions, but he anticipates better results.

The status of operation for cancer of the uterus was discussed by the American Gynecological Society, Session of 1901 (*Amer. Jour. Obst.*, August, 1901).

J. M. Baldy wishes to call especial attention to the difference of prognosis of operation for cancer of the cervix with that of cancer of the body of the uterus. He states that practically all cases of cancer of the cervix eventually die of the disease, and that practically all cases of cancer of the body remain well if operated upon. He claims that less than 5 per cent. of cases of cancer of the cervix are cured, no matter what line of treatment is followed, whereas 75 per cent. of cases of cancer of the corpus are permanently cured by operation.

Cyrus A. Kirkley quotes Dr. Pryor as having collected a total of 98 cases operated upon by the Rumpf-Ries-Clark operation, with a mortality of 11.2 per cent., which we may contrast with the German results of 134 cases, with a mortality of 24.6 per cent. After discussing this operation and vaginal hysterectomy for cancer, preference was given to electro-cauterization as practised by John Byrne, of Brooklyn.

Hunter Robb states that his personal experience and observation are practically in accordance with those of Dr. Baldy.

Kelly's statistics are the most carefully worked out of any American surgeon (Cullen, T. S. *Cancer of the Uterus*, pp. 683, *et seq.*). Of 61 cases of epithelioma of the cervix, operated upon at the Johns Hopkins Hospital and Dr. Kelly's private sanatorium, 13 are living and well; but of the thirteen only two have been operated upon more than five years, so that the apparent cure of 20 per cent. is actually reduced to about 3 per cent. Only four cases have been operated upon more than three years; the remaining nine are more recent. Of twelve cases of hysterectomy for adenocarcinoma of the cervix, only two are still living. These may be considered cured, as one has been operated upon five years and three months, the other four years and seven months—18 per cent. of cures. Of 30 hysterectomies for adenocarcinoma of the uterus, 20 cases are free from recurrence; but of these only four are of over five years standing; eight of more than three years standing. Thus of the cases of carcinoma of the body it may be considered that 13 per cent. have been cured. In this report, of a total of 103 cases of hysterectomy for cancer of the uterus, eight cases are free from recurrence five years after operation, and may be considered cured—or 7.7 per cent. It may be reasonably expected that this percentage will be increased in the future, as the majority of the cases are of less than five years standing; therefore it is probably a conservative estimate that at least 10 per cent. of these cases will be permanently cured.

This review of the recent literature concerning the status of operation for cancer of the uterus is intended to be suggestive rather than exhaustive, but it is quite evident that the following conclusions may be drawn:

1. The majority of cases of cancer of the uterus, when they consult the surgeon, are too far advanced for the hope of a radical cure. German statistics indicate that this is less true now, than it was ten years ago. This is a hopeful indication, as showing that the teaching of surgeons concerning the neces-

sity of early diagnosis and early operation for cancer is beginning to bear fruit.

2. The percentage of cases of cancer of the cervix remaining free from recurrence at the end of five years, after vaginal hysterectomy, is variously given, but it may be claimed confidently that at least 10 per cent. of the cases operated upon remain free from the disease at the end of five years and may be considered cured. Much better results are claimed by some. Jacobs is the only authority who is absolutely pessimistic. His experience that all of his patients operated upon by vaginal hysterectomy have died of recurrence, although the operative mortality was zero, is as striking as it is unique.

3. The results of hysterectomy whether vaginal or abdominal for carcinoma of the corpus uteri are much more satisfactory. Whenever this point is brought out in statistics it is evident that about 75 per cent. of the cases are permanently cured; hence, for timely operations for carcinoma of the corpus a good prognosis may confidently be given.

4. The abdominal radical hysterectomy for cancer of the uterus, involving the removal of the pelvic glands and the parametria along with the uterus, is still upon trial. Its primary mortality is probably double that of vaginal hysterectomy, and it has not been practiced long enough for permanent conclusions as to the results which may be thus secured. Theoretically it should give better results than vaginal hysterectomy, because the parametria and at least some of the lymphatic glands of the pelvis are removed. In practice this end is not always reached. Aside from theoretical considerations the most encouraging report concerning the operation is the statement of Wertheim, that after two and a half years' experience he has not met with recurrence.

My own experience in the treatment of cancer of the uterus has been far from satisfactory. This has been less true of the results obtained from operation than of the results of treatment of all the cases of cancer coming under observation. While accurate statistics are not available to determine the exact percentage of operable cases, I am satisfied that this has been much less in my own experience than the average—probably it has been less than 20 per cent. The fact that the great majority of patients are absolutely beyond the hope of cure when first seen by the surgeon is the most discouraging feature of the whole matter. So long as the cure of cancer must depend upon operation, the hope of improvement in the results of treatment must depend more upon securing early diagnosis and early operation than upon extending the limits of operation.

For the purposes of this paper I have but thirty-two cases to report, those that have recovered from either vaginal or abdominal hysterectomy for cancer.* Of these twenty-three were cases of cancer of the cervix and nine of the corpus, two of the latter being cases of syncytioma. Of the 32 cases, 11 have since died, 10 of recurrence and 1 of pneumonia. Of the 21 cases remaining, 2 cases of cancer of the cervix are known to have recurrence, 6

cases have been lost sight of, and the remaining 13 are free from recurrence at the present time. The following table gives the length of time free from recurrence:

Cancer of the Cervix.		Cancer of the Corpus.	
1	12 years.	1	9 years.
1	9 "	1	7 "
1	8 "	1	5 "
2	3 "	1	4 "
1	2 "	1	3 "
1	1½ "		
1	1 "		

Thus of the 32 patients there are 6 living and free from recurrence at the end of five years, which is equal to 18 per cent. There are nine patients living and free from recurrence at the end of three years. Two of the additional three being cases of cancer of the body of the uterus, it is a fair conclusion that between 20 and 25 per cent. of the cases have been permanently cured.

Of the nine cases of cancer of the corpus, five are accounted for in the table, one has been lost sight of, and one died of recurrence at the end of four years and five months. The remaining two cases are of syncytioma, a condition quite distinct from adeno-carcinoma of the corpus. Of the two cases the first died of recurrence, and the second was so advanced at the time of operation that the removal of the cancer was necessarily incomplete.

These results make me reasonably hopeful of the benefits to be derived from hysterectomy in cases of cancer not too far advanced; but the rapid recurrence which has taken place in the more advanced cases, together with the more important fact that the large majority of all cases seen have been inoperable, strongly support the view already referred to, that there is far more opportunity for improvement in the treatment of cancer in the direction of early diagnosis and early operation than in improvements in the operation itself.

This brings up for our consideration the early diagnosis of cancer. The great majority of cases of cancer of the uterus first come under the observation of the family physician, and therefore in this field he has not only great opportunities, but great responsibilities. It is unfortunately true that the teachings of the profession in the past concerning cancer were such as to distinctly discourage the early recognition of the disease. This is true especially in two respects: 1. The teaching that cancer is incurable. This belief is still held not only by a large proportion of the laity, but also by a not inconsiderable percentage of the profession. 2. The classical teaching concerning climacteric hemorrhages. This one fallacy does more than anything else to prevent an early diagnosis of cancer. Women as a rule believe that it is natural and to be expected that they should have irregular discharges of blood and abnormal menstruation at or about the time of the menopause, and as this period is very indefinite in their minds, when such hemorrhages take place at any time after the thirty-fifth year, women are apt to comfort themselves with the thought that nothing is wrong; hence, instead of seeking professional advice, they avoid it. It is the duty of the profession to recognize that cancer

*Eighty cases of cancer have been admitted to the Hospital for hysterectomy, curettage, etc.

is curable by radical operation if promptly resorted to. Certainly from 10 to 20 per cent. of cases of cancer of the cervix, and at least 75 per cent. of cases of cancer of the body, can be cured by timely operation. This fact should not only be recognized by the profession, but should be taught to the laity.

The falsity of the doctrine of climacteric hemorrhages should also be appreciated and taught to women. They should be made to realize that irregular discharges, whether at or between the menstrual periods, and especially subsequent to the menopause, whether bloody or not, are due to disease of the uterus. The realization of this fact would prompt them to seek instead of avoid professional advice.

The diagnosis of cancer of the uterus may be either easy or difficult. In advanced cases there is usually a history of bloody, foul discharges, and upon examination the characteristic infiltration of the cervix, with breaking down of the cancerous mass, is easily made out. Unfortunately, while diagnosis under these circumstances is easy, a cure is usually hopeless.

In early cases hemorrhage may be present or absent. The same is true of leukorrhea. Pain is almost, if not invariably, absent, and if present is accidental. The clinical diagnosis must be made by the character of the infiltration in the cervix and upon the friability of the new growth under pressure with the finger. If infiltration is not marked and friability is not present, the disease is not sufficiently advanced for a clinical diagnosis. In such cases it is necessary to remove a section of the growth for microscopic diagnosis. Cancer of the body of the uterus is much more difficult of diagnosis. The use of the curette and a microscopic study of the scrapings is almost invariably essential. In dealing with suspected cancer conservatism does not consist in temporizing until the diagnosis becomes conspicuously manifest clinically. On the contrary, in such cases the patients should be given the benefit of the special training of the gynecologist and the pathologist. This very class of early cases is that in which the best results of treatment in the future will be obtained.

The Search for the Typhoid Bacillus in Drinking Water.

—Professor A. Chantemesse believes that typhoid bacilli often exist in drinking water which is examined without the micro-organisms being discovered. He describes in full the technique of a new method of searching for typhoid bacilli, in which six liters of the suspected liquid are used. The microbes, by passing through a Chamberland filter, are collected upon it. They are then washed off in 200 g. of sterile water containing 3% peptone. By using a very complicated apparatus, the sediment is drawn off, fresh nutriment added, and all the microbes cultivated at 37° C. They are then centrifuged and decanted. They are grown upon peptone-gelatin. The colonies of colon bacilli are removed, 16 to 17 hours later. The typhoid colonies appear from 18 to 24 hours, surrounded by a clear, translucent, transparent periphery, easily distinguished from the colonies of micrococci also present. They grow upon lactose-peptone, which will ferment, proving that the bacilli are true typhoid bacilli. Chantemesse has also used this method for finding typhoid bacilli in the stools. He believes that it should be used to make frequent examinations of the sources of all drinking water, at regular intervals, so that no water from such a source will be employed after typhoid bacilli have been found in it, even before any case of typhoid fever has resulted from its use. (*La Presse Medicale*, June 5, 1901, No. 45). [M. O.]

CHRONIC ULCERATION OF THE STOMACH SIMULATING CANCEROUS DISEASE; RELATION OF A CASE OF GASTROENTEROSTOMY WITH THE MURPHY BUTTON, RECOVERY.

By JAMES F. W. ROSS, M. D.,
of Toronto, Ont.
and E. B. O'REILLY, M. D.,
of Hamilton, Ont.

In the short paper presented, an effort will be made to impress upon the profession the fact that even after the abdomen has been opened it is difficult, if not impossible, to make a differential diagnosis between chronic ulceration and cancerous disease of the stomach. Our methods of diagnosis are very faulty and insufficient. Early diagnosis in either of these conditions is as yet almost out of the question.

Fagge says, "A case in which well marked symptoms have existed for eighteen months, or longer, may generally be pronounced to be one of simple ulcer of the stomach and not a case of malignant disease. On the other hand, cancer of the stomach may, for the most part, be diagnosed whenever the characteristic tumor is discovered accompanying the usual symptoms met with in these cases. Cases of simple ulcer affecting the pylorus have now been placed on record in which this part has been so thickened and indurated that the presence of a scirrhus mass has been simulated."

Miss D. W., act. 28. From the patient's own statement it appears that she consulted a doctor regarding the condition of her stomach, with which she has been troubled for about three years. At times she felt perfectly well and then again suffered from considerable discomfort after eating food. The discomfort frequently ended in vomiting. The vomited material was very sour and had an unpleasant odor. She found that raw fruits and any acids disagreed with her. She craved for sweet things. Her skin felt dry; the bowels were constipated. She entered the training school of a hospital in April, 1899, and the gastric condition grew worse.

In August, '99, she found it necessary to go home. She was then treated until December, but without benefit, in fact she seemed to be steadily growing worse. The abdomen became distended and pains set in in the back and there was a great deal of soreness about the waist. Shortness of breath came on and she found it necessary to sit up in order to get her breath. The patient then came under the care of Dr. E. B. O'Reilly, Hamilton, Ontario, whose notes are now given.

"The patient first came under observation in December, '99. It was found that she had been, for some months, under treatment for dyspepsia. She was emaciated and complained of suffering and pain whenever food was taken. Opium had been administered to relieve the pain and the opium habit was already formed. Physical examination revealed nothing. Food was peptonized. In spite of this and the careful medication the symptoms again became aggravated.

In January, 1900, after consultation with Dr. Griffin, the patient was sent to the Hamilton Hospital. Efforts were made to prevent fermentation of the stomach contents, rectal alimentation was persevered in with considerable benefit. The pain subsided and the patient gradually gained in weight. On March 24th, '00, she was discharged from the Hospital and remained fairly well for two weeks, but, as soon as food was passed into the stomach, the symptoms again became aggravated, the pain returned and the flatulence and nausea became troublesome. Great rigidity of the right muscle was noticed. There were several profuse hemorrhages from the stomach and bowels. Exploratory incision was strongly urged. There were five severe hemorrhages in all.

In April the patient grew worse daily. About the middle of May, '00, as Dr. Ross was in town, I asked him to see

the case with me. He also advised exploratory operation. The urinalysis showed the urine to be pale in color; Sp. Gr. 1018; alkaline reaction; no sugar or albumin; slight mucoid sediment with a few pus cells."

Dr. Ross' notes are as follows: "The patient was found, in May, '00, extremely emaciated, rigidity of the right rectus muscle was noticed, and an indefinite thickening could be felt in the epigastric region. As the patient was only twenty-eight years of age, and as malignant disease of the stomach is rather rare at this period of life, there appeared to be good ground for hesitating before making an exact diagnosis. Diagnosis of ulcer of the stomach had been made when the patient was in the Hamilton Hospital in January.

The symptoms pointed to obstruction of the pyloric end of the stomach and it was not possible to say whether this obstruction was due to the presence of cancerous growth or to some other cause. The symptoms had extended over such a period of time that they pointed to the presence of an ulcer, but the thickening that could be distinctly made out led to the belief that, in all probability, malignant disease had been grafted onto the former condition of ulceration.

There was no history of cancerous disease in the family. Some dilatation of the stomach could be made out, but there was not the enormous dilatation so frequently found in cases of cancerous obstruction of the pylorus. The rhythmic muscle waves, so characteristic of pyloric obstruction, were not observed.

On the 5th of June, '00, operation was performed by Dr. Ross, assisted by Dr. White. The abdomen was opened above the umbilicus and the stomach drawn out. A large growth was found at the pyloric end. The perigastric lymphatic glands were enlarged, and the whole stomach wall looked exactly as it does in cases of cancer. The case was looked upon as hopeless and a decision was arrived at not to attempt to remove the growth but to give temporary relief by means of a gastroenterostomy.

The operation was rapidly performed by means of a large Murphy button and an anastomosis effected between the stomach and duodenum. The patient was not in a good condition, owing to the previous starvation. The operation had to be performed rapidly to prevent collapse. Great care was taken, however, notwithstanding the necessity for haste, to carefully apply supporting sutures to prevent leakage. After the operation there was not much elevation of temperature or pulse. Patient made an uninterrupted convalescence.

On the 2d of May 1901, eleven months after operation, the patient weighed 140 pounds, looked the picture of health, and was just returning to complete her training as a nurse. On examination of the abdomen no mass could be felt. The patient was not suffering from any gastric symptoms.

Fagge says further, "That even when the symptoms point clearly to the existence of serious organic disease of the stomach, there always remains the question whether this disease is a simple chronic ulcer or cancer. Between these affections the diagnosis is often perfectly easy," and he might have added that it is sometimes extremely difficult.

In the case here recorded there was no perforation with the formation of abscess cavity, such as is occasionally found to simulate cancer very closely.

An extremely interesting case is recorded by Sidney Martin and Bilton Pollard of hour-glass contraction of the stomach with pyloric stenosis. This case helps to throw considerable light on the condition under discussion. The stomach was completely divided so that there was a larger right pouch and a somewhat smaller left pouch, formed as a consequence of the constriction across from the greater to the lesser curvature about its middle. A careful examination, post mortem, showed the presence of a chronic ulcer at the hour-glass con-

striction, that apparently had excited persistent contraction of the circular muscular fibres and lead, with the formation of fibrous tissue, to permanent structure similar to those strictures of the rectum produced by small ulcers. The pyloric stenosis that was also present seemed to result from the presence of a small duodenal ulcer with perforation, and the consequent formation of a small abscess and a large amount of cicatricial tissue between the pylorus, the duodenum and the transverse colon. The symptoms in this case lasted for over a period of ten years.

In the case of Miss D. W. the stomach was drawn out and was not adherent.

In a very interesting article Moynahan says, "The induration in some cases of ulcer may be of such density that the appearance and characteristics of the malignant growth may be mimicked with remarkable intensity. In one case of my own, which I submitted to the operation of gastroenterostomy, believing the pyloric mass to be malignant and not removable, the patient gained so rapidly in health and has so stoutly maintained his improvement for a period extending over two years, that I am skeptical as to the accuracy of my diagnosis."

Thayer, Hirsch, Lindstrom, Kammerer and others have mentioned examples precisely similar, and Mayo Robson has recorded a case of pylorectomy for supposed malignant disease which, on minute examination, proved to be chronic inflammatory thickening."

In an interesting article by Satterthwaite a description of the ulcers is given. He says "A large number of gastric ulcers have rounded contour, sharply cut edges, surrounded by a zone of tough fibrous tissue. A puckering of the gastric walls about them is present and bands of fibrous tissue radiate outwards."

This variety has been called the acute. In contradistinction to this is the chronic variety which has greatly infiltrated walls and ragged, shelving edges, forming a sort of inverted cone, the apex being at the peritoneal covering of the stomach. When exposed to the eye, there can scarcely be much mistaking such an ulcer, though it might be taken for a cancer or sarcoma. A microscopic section of such a mass might be taken for a round celled sarcoma, because in both sarcoma and gastric ulcer there is a great similarity of the character of the round cells. But if the non-malignant ulcer is brought into view the peculiar excavated centre should indicate its true character."

Scatterthwaite's observation in this connection may be quite correct, but it must be difficult for a surgeon to get such a view at the time of operation, unless a very large opening is made into the stomach wall.

Symptoms.—The ordinary symptoms of ulcer of the stomach are localized pain after eating, vomiting, hematemesis or melena, or both.

Pain.—The pain at first is often only an epigastric distress. Later on it becomes of a boring character going through the back. When the stomach is empty there is little, if any, actual pain, but when filled with food there is apt to be some immediate distress, and after a couple of hours pain increases and is no doubt due to increased acidity from the

pouring out of hydrochloric acid. The patient often obtains relief after vomiting or after the food has been carried on through the pyloric end.

In many cases hematemesis is the first sign of gastric ulcer. It must be remembered that hematemesis may occasionally be fatal apart altogether from the presence of gastric ulcer or gastric cancer, in such cases arising from chronic alcoholism and cirrhosis of the liver.

Many cases of perforation of gastric ulcer are on record in which none of the symptoms of the condition were present previous to the sudden onset of the symptoms of perforation.

Dr. Soltan Fenwick thinks that anemia, with progressive emaciation and great loathing for food, with signs of subacute gastritis, are generally suggestive, at an early period, of cancer of the stomach. He says that in 100 cases of carcinoma of the stomach 60 affected the pyloric end, 30 the walls, and 10 the cardiac end. Pain was present in 90 per cent. of the cases. It was generally constant and scarcely relieved by vomiting, and was very liable to severe exacerbations. The vomiting varied a great deal with the seat of the disease. Hematemesis was usually slight and repeated melena rare. In physical examination auscultatory percussion was especially valuable.

Diagnosis.—The period of greatest frequency of ulcer is from the ages of twenty to thirty years. There can be no doubt that cancer of the stomach is met with at an early age. The age of the patient cannot, therefore, be considered as of much assistance in making a diagnosis.

In the differential diagnosis of these cases but little advance has been made, as has already been stated. All that can be said regarding the absence of hydrochloric acid is that it makes us suspicious of cancer. Hydrochloric acid is found sometimes in excess in cases of gastric ulcer. Lactic acid only appears late and as a consequence of pyloric obstruction.

The greatest aid to early diagnosis is exploratory incision. Kocher advocates a more extensive use of the exploratory incision in doubtful cases of gastric diseases. He says that he has often regretted the delay in operating, but has never regretted doing the operation itself. He considers that the indications for operation in simple ulcer are repeated hemorrhages, even if small, especially if dilatation of the stomach is present; secondly, for violent pain and for frequent vomiting when caused by retention from pyloric obstruction; thirdly, for perforation, and fourthly, for the possibility of the condition being not simple but cancerous.

It would be well to add "for the possibility of the condition being not cancerous but simple." Surely this is a more important indication for operative interference.

Guinard holds that, on two conditions, exploratory operation is justifiable: first, when there is distinct modification of gastric chemistry, especially apepsia, and the presence of lactic acid after a test meal, and, secondly, complete failure after careful dietary and medical treatment to keep up the weight of the patient's body to its normal standard, or to restore lost weight.

The indication for operation, given by some, is

that it should be performed in the absence of hydrochloric acid when lactic acid is present and when there is reduction in the amount of albumen digested.

It seems to be apparent that before long the practice will be to perform an exploratory operation in all cases of doubtful stomach affections.

Operation.—Chronic ulcers, with thickening simulating malignant disease, are cured by a simple gastroenterostomy. The removal of cancerous growths is a very formidable procedure and not a very satisfactory one. To be satisfactory it must be performed very early in the disease, before lymphatic infection has taken place.

Barling condemns the proposal to excise gastric ulcer which has not perforated.

Kuster opened the stomach in two places and applied the actual cautery to the ulcer and then performed gastroenterostomy. The performance of gastroenterostomy, without the application of the cautery, would no doubt have been sufficient to effect a cure. His operations were performed for what I have described as the acute ulcer and not for the form under consideration, chronic ulcer with tumor mass. The excision of such a mass is an unjustifiable procedure.

It would be well to attempt to cure the simple acute ulcer by plication of the stomach wall. In this way the irritation of the food would cease to be a factor, and the ulcer would be given an opportunity to heal. The operation would be an extremely simple one and would be accompanied by very little danger.

After-Results of Gastroenterostomy. After gastroenterostomy the stomach, if previously largely dilated, reduces in size in a very short time. There may be difficulty produced by a narrowing of the new orifice, but if the operation is properly performed, this is not likely to occur. As a consequence of the operation both bile and pancreatic juice must find their way into the stomach but they evidently do no harm.

Pyloric spasm is produced as a consequence of the presence of a gastric ulcer. After gastroenterostomy the hyperacidity of the stomach disappears and the ulcer heals as a consequence of the rest obtained by the organ and the cessation of the spasm.

A Case of Myelogenous Leukemia.—Triboulet and Delcoux report a case of leukemia in a man of 46. (*Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris*, May 30, 1901, No. 18). His spleen had been enlarged for about six months. There were no other symptoms at all. He was in excellent physical condition. He had had gonorrhea, and syphilis. Lately edema of the legs developed. There was edema of the penis, followed by sexual impotence since. The spleen reached the anterior superior spinous process of the ilium, passed 3 cm. to the right of the umbilicus, and up to the eighth intercostal space. Its greatest vertical diameter was 28 cm.; transversely it measured 27 cm. The mitral systolic sound seemed prolonged. In the urine was a trace of albumin. He was constipated. Blood examination revealed 2278500 erythrocytes, 514600 leukocytes, and 30% hemoglobin. There were great numbers of neutrophilic, basophilic and eosinophilic myelocytes, some nucleated erythrocytes, and mast-cells. There was intense leukocytosis, with all the characters of myelogenous leukemia. Widal and Rendu reported having seen similar cases, in the discussion which followed. [M. O.]

THE SURGERY OF PULMONARY ABSCESS, GANGRENE AND BRONCHIECTASES FOLLOWING PNEUMONIA.

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We can divide the history of pulmonary surgery into two periods. The first begins at the time of Hippocrates, and ends about thirty years ago. The most active part began two hundred years ago, when Baglivi opened an abscess following a stab wound of the lung. A number of reports of cases of abscess treated by surgical intervention appeared during this time. The second period dates from the time that Mosler, in 1873, attempted to cure pulmonary abscesses by intraparenchymatous injections of antiseptics. Gluck, Schmidt and Biondi (1882) showed by animal experiments that extensive pneumectomies were well borne. In 1882 Bull reported 32 cases of abscess which had been healed by operation. From that time to the present the subject has received a great deal of attention and a large number of valuable monographs have appeared, as well as the reports of individual cases. The field has been extended so that it now includes the treatment of abscess, gangrene, echinococcus, neoplasms, removal of foreign bodies, actinomycosis, and the drainage of bronchiectatic and tubercular cavities. Those who deserve especial mention in this field are Park, Tuffier, Murphy, Quinke, Godlee and Runeberg. Quinke deserves great credit for calling attention to the vast number of cases of chronic pulmonary suppuration which have been benefited by operative intervention.

It would be impossible for me to take up all of the various branches of this already extensive subject, so that I have confined this paper (in order to bring out the chief points in a particularly instructive case which occurred in my practice during the past year) to the discussion of pulmonary abscess and gangrene and bronchiectases occurring after pneumonia. I have purposely excluded the consideration of cases of any of these lesions due to any other cause. This being the first effort to classify the cases according to the etiology, it has necessitated an immense amount of tedious research into the original records of cases.

In regard to the etiology, all authors agree that abscess is far more frequent than gangrene as a sequence of ordinary croupous pneumonia, but that the opposite holds true for influenza. Laennec has stated that abscess following pneumonia is very rare. Sello, in 750 cases, of fibrinous pneumonia, found abscess 11 times, or in 1.5 per cent. Aufrecht in 253 cases, found it in 2, or 1.2 per cent., or in approximately 1,000 cases, about 1.3 per cent.

In regard to the frequency of gangrene, Grisole found no cases of gangrene in 305 cases of pneumonia, and in 70 cases of gangrene which he collected he found that pneumonia preceded the gangrene only five times. A. Fränkel found that 7.5 of all cases of influenzal pneumonia terminated in gangrene. Sello, in 750 cases of croupous pneumonia, found it only three times. Aufrecht, in 1,501 cases, never observed it.

In regard to the frequency of bronchiectasis following pneumonia, there are no statistics, so far as I can learn.

The organisms concerned in abscess formation are the pneumococcus, the colon bacillus, the influenza bacillus and the Friedländer pneumonia organism. It is believed that some of these can be directly the cause of gangrene as well as abscess formation. Gangrene of the lung may be the result of aspiration of a portion of the contents of a putrid bronchiectatic cavity, as was probably the case in my own patient. Some authors have described epidemics of pulmonary gangrene in which it would seem as though there were a separate organism concerned, but there are no reliable facts in regard to this. Pulmonary gangrene following pneumonia is especially apt to occur in diabetics, alcoholics and in the insane.

With reference to the pathology, I will state briefly that abscess may be single or multiple, and that the same is true for gangrene. The latter may be circumscribed or diffuse. The walls of the cavities in the early stages are soft, but as the disease progresses they become firm, and this pathological factor is of the greatest value in determining the healing of pulmonary foci if attacked in a surgical manner in the early stages.

The bronchiectases may be divided into the cylindrical and sacculated, the former being usually in the middle and finest bronchi. The sacculated generally arise at the expense of the lung. The bronchus itself may be closed. It may join adjacent ones so as to occupy the entire lung. They are seldom associated with tuberculosis. They are accompanied quite early by deformities of the thorax, and clubbed fingers, and are frequently associated with abscesses as well as with gangrene. The great danger in pulmonary gangrene is the frequency with which it is followed by secondary cerebral abscesses, and by putrid bronchitis and catarrhal pneumonia.

Before taking up the discussion of the symptoms and diagnosis, I would like to call attention to the fact that in this paper I have followed as closely as possible the classification proposed by Quinke of acute simple abscesses, chronic simple abscesses, with or without bronchiectases, acute gangrenous abscesses and chronic putrid abscesses with bronchiectases. This seems the most logical division of the subject which has been proposed hitherto.

Symptoms.—The history of pulmonary abscess is frequently the following: A patient who has had pneumonia, for example, of the lower lobe, will have his crisis, the physical signs begin to clear up, the temperature drops, when suddenly the temperature goes up again, becomes of a remittent type, and the sputum becomes more purulent. There may be a distressing cough accompanied by the expectoration of pus in large quantities. Some elastic fibers may be present, but are rare. There are often paroxysms of coughing with expectoration of several ounces to a cupful of pus. If the abscess cavities do not communicate with a bronchus, there is but little expectoration. There is in all cases emaciation, loss of appetite and a rapid decline in strength. If the abscess becomes chronic, there may be recurrent attacks of fever, with a great deal of expectoration. Physical examination is rather disappoint-

ing; there are few cases in which there are cavity signs present, either due to an indirect manner in which the abscess communicates with the bronchus, or to its not opening into one at all. The pulmonary lesions following pneumonia are most frequently in the lower lobes, and this is of some aid. There are no typical physical signs, owing to the fact that the cavities (be they due to abscess, gangrene or bronchiectasis) may be near the surface, or quite deeply situated, and may or may not communicate with a bronchus. Dullness, decreased respiratory murmur, vocal resonance and fremitus are present in the majority of cases, but we may have bronchial breathing. The most reliable sign is the presence of rales, large moist ones, not infrequently metallic in character. Another striking feature is the variability of the physical signs, once dullness, then tympany at the same spot. A pus cavity surrounded by aerated lung tissue and not communicating with a bronchus gives no auscultatory phenomena. Clubbed fingers develop quite early, as do also pressure symptoms on the heart, liver and spleen. If, after a pneumonia, the fever either does not disappear, or begins a few days after a crisis, and the sputum and breath become fetid, and divides itself into the characteristic three layers, gangrene must be suspected. This, as Fränkel has shown, is a frequent sequel of influenza pneumonia. In the sputum of gangrene one can usually find elastic fibers. In bronchiectasis following pneumonia the sputum may be fetid at times, but the odor is not so penetrating and there are no elastic fibres. The physical signs of both gangrene and bronchiectasis are most frequently the same as those of abscess. In a patient with bronchiectasis there is usually a history of long-continued expectoration with sudden expectoration of large quantities of pus. This, however, is not characteristic, for the same may be true of chronic simple abscess. There is said to be more mucus in the sputum of a bronchiectasis, but if there are cavities in the lung tissue due to ulcerations of bronchiectases, there may be just as much pus as from a simple abscess, and if there is associated gangrene, just as much fetor as in a gangrene.

The frequency of hemoptysis in cases of gangrenous process is due to the fact that the vessels are more apt to pass freely through the cavity, owing to the more rapid destruction of tissue.

Diagnosis.—From what has just been stated, we can say that the history is of the greatest aid in making a diagnosis, especially if a pneumonia has immediately preceded the onset of abscess or gangrene symptoms. Both are frequent after influenza pneumonia. Gangrene is also quite frequent after pneumonia in alcoholics, diabetics, and in the insane. The examination of the sputum is also of great value in making a diagnosis. In abscess it is purulent, at times of a chocolate color, and occasionally contains elastic fibers. In gangrene it is more and more offensive as the case progresses. It separates on standing into three layers, and contains elastic fibers, which the sputum of putrid bronchitis, with which it may be confounded, does not.

In bronchiectasis the sputum is at first odorless, but usually becomes foul from the stagnant pus.

In abscess the cough is often very frequent, and the amount of expectoration raised each time is small, while in bronchiectasis it is large, and the cough infrequent. It is much easier to make a diagnosis of the nature of a lesion than its seat. Exploratory puncture is both dangerous and unreliable. Cases have been reported of fatal hemorrhage (Israel) following it, and there is great danger of infecting a healthy pleural cavity. It is also difficult to determine whether the pus is intra or extra-pulmonary.

There are no absolutely reliable physical signs to assist in localization of the process. The frequency of lesions in the lower lobes after pneumonia should suggest a most careful examination of these parts. If a lesion does not communicate with a bronchus, it may give rise to no physical signs. On the other hand, the focus may be deeply situated, and the intervening lung tissue obscure the physical signs. If cavity signs are present, they are of value, but not absolute. Impaired resonance varying with tympany and the presence of moist rales, especially if coarse and metallic, are perhaps the most valuable signs. The more experience one has in abscess, gangrene or bronchiectases, the more one is convinced (especially if the cases are studied at autopsy) that the physical signs are misleading. The best clinicians make mistakes in determining the seat of lesion.

In addition to localizing the focus, we must try to ascertain its extent, and whether there are foci elsewhere. It is almost impossible to differentiate an encapsulated empyema from an intra-pulmonary focus. General disturbances and fever are more characteristic of pulmonary lesions. Differentiation from tuberculosis can be made from the presence of tubercle bacilli in the sputum, and from the previous history, greater diffusion of the tuberculosis, and its greater frequency in the upper lobes. The physical signs may be the same for both.

In regard to the X-ray, much was hoped for, but the results have not been gratifying. Its value is only relative, and a shadow may be obtained in a thickened area quite distant from the actual seat. It is no certain guide to the focus, or whether there are one or several foci. Nevertheless, if it is possible, it should be used as a matter of routine, as it may be of some value. In a recent article by Tuffier, he quotes eight cases which were examined with the X-ray by him. In five of these the pictures showed a distinct shadow at the seat of the focus. In one of the cases (bronchiectases) the physical signs pointed to a cavity higher up than the shadow in the picture, but the latter proved to be correct, and he was obliged to operate at a lower point. In another case the shadow was a little higher than the focus. In three cases the radiograph was of no value. In one the shadow was in the lower, but the focus in the upper lobe. In a second a cavity the size of an orange gave no shadow. In a third the shadow of the heart obscured that of the lesion in the lung. Other authors report similar experiences, so that we may now regard it as an aid to diagnosis, but not as a final proof of the seat of the lesion.

Prognosis.—Medically treated, the prognosis of meta-pneumonic pulmonary abscess is fair only. That a certain number of cases do heal spontaneously

there can no longer be any doubt. Cases of this kind have been frequently reported. Quinke speaks of three in his own clinic; Jacobson, of Berlin, reports six cases, of which four recovered spontaneously, one was operated and recovered, and one died. But in quite a large number of these cases of simple abscess the patients continue to expectorate pus, and the condition becomes a chronic one, and is sooner or later complicated by the development of bronchiectasis. In acute gangrene following pneumonia, there are, as in simple abscess, some spontaneous recoveries, but the outlook is generally very grave, and those afflicted die soon after its onset of sepsis. In chronic non-putrid and putrid abscesses, with or without bronchiectases, the patients are doomed to a life of chronic invalidism, and gradually die of the effects of the chronic intoxication. Since the field of lung diseases has been invaded by surgeons, the effects of surgical interference have been so striking that the day will soon come when every case should be so treated. Even in acute abscess, if no improvement follows after three to four weeks of medical treatment, they should be referred to the surgeon. Especially in the cases following pneumonia is the prognosis good. In acute gangrene the cavity should be drained as soon as a diagnosis is made. In the chronic cases the prospect of recovery is not as good as in the acute, but the majority show a complete relief of symptoms, and many are cured, so as to be able to work again. The tendency to heal, either spontaneously or after operation, in acute cases is much greater than in chronic, owing to the fact that the surrounding parenchyma is still quite elastic, and tends to close in upon the cavity. In chronic cases, especially in bronchiectases, the walls are so rigid that all one can hope for is drainage. But even in these cases there are more and more reports being published in which either the bronchi were cauterized or that portion of the lung excised or a portion of the chest wall resected, so as to cause the cavity to close by compression. An interesting case of the latter kind has been recently reported from Krause's clinic by Gross. The prognosis is better again in acute cases, and in younger persons, because there is less intoxication and emaciation and better recuperative powers.

In order to demonstrate the value of surgical interference in pulmonary lesions following pneumonia, I have collected the records of 93 cases following pneumonia, results of operative treatment of which are as follows:

25 cases of acute simple abscess: 24 recovered, 1 improved, no deaths.

28 cases of acute gangrene: 20 recovered, 2 improved, 6 died.

14 cases of chronic simple abscess with bronchiectasis: 6 recovered, 3 improved, 5 died.

26 cases of chronic putrid abscess, with bronchiectasis: 13 recovered, 4 improved, 9 died.

No similar effort having been made to classify the cases following pneumonia which were surgically treated, a comparison cannot be made. The reports of every case of such lesions of the lung hitherto published were carefully searched, and only those chosen in which there was a clear history of pneumonia preceding it. When the totals are computed

as to percentage of recovery, the result is quite striking, especially in the acuter cases.

	Rec'd.	Imp'd.	Died.
Acute simple abscess, 25 cases	96%	4%	
Acute gangrenous abscess, 28 cases	71.4%	7.2%	21.4%
Chronic simple abscesses, 14 cases	42.8%	21.4%	35.8%
Chronic putrid abscesses, with bronchiectases, 26 cases	50%	15.3%	34.7%

M. Recluse, in his address to the French surgical Congress, 1895, gave statistics from various sources of 117 cases of all varieties operated on between 1879 and 1895, with 68 recoveries, a mortality of 42 per cent. His own statistics between 1885 and 1895 comprise 14 cases, with 12 recoveries, a mortality of less than 15 per cent.

Schultz collected 31 acute cases due to all causes, of these 22 recovered, 73.3 per cent., and 8 died, 26.7 per cent. Of chronic cases he collected 51; of these 26 recovered, 51 per cent., 12 were improved, 23.5 per cent., and 13 died, 25.5 per cent. These were not cases following pneumonia exclusively, but from all causes. Quinke collected 47 cases.

	Rec'd.	Imp'd.	Died.
Acute simple abscesses, 7 cases,	6		1
" gangrenous abscesses, 13 cases,	7		6

We thus see that in his acute cases (simple abscesses) there were 85 per cent. recoveries and 15 per cent. deaths; in the acute gangrenous cases, there were 53 per cent. recoveries and 47 per cent. deaths.

	Rec'd.	Imp'd.	Died.
Chronic simple abscesses and bronchiectases, 8 cases,	1	5	2
Chronic putrid abscesses and bronchiectases, 19 cases,	4	7	8

This makes the percentage in his chronic cases 12 per cent. recovery for the simple cases, 60 per cent improved, and 24 per cent. died. For the chronic putrid abscesses and bronchiectases, the percentage of recovery is only 21 per cent.; percentage of improvement, 36 per cent., and 43 per cent. deaths.

In Tuffier's article he gives the following as the result of his observations:

	No. of Cases.	Cures.	Deaths
Acute simple abscesses,	18	14	4
Acute gangrenous abscesses, following pneumonia,	54	39	15
Chronic simple abscesses,	5	3	2
Chronic putrid abscesses, with bronchiectases,	4	1	3

I do not think that Tuffier's statistics of acute gangrenous abscesses following pneumonia were all due to this cause, as in looking over many of the histories I find that there is considerable doubt about the etiology, and have consequently not included such cases in my own list. The percentage of recovery thus would be, in acute simple abscesses, 77 per cent.; of deaths, 23 per cent. In the acute gangrenous abscesses the percentage of recovery would be 70.9 per cent., and of death 29.1 per cent. In the chronic simple abscesses the percentage of recovery would be 60 per cent., of deaths

40 per cent. In the chronic putrid abscesses, with bronchiectases, the percentage of recovery is 25 per cent., of deaths 75 per cent.

When these statistics are compared with those which I have collected, the marked increase in percentage of recoveries both in the acute and chronic cases is very striking, and this is entirely due to the fact that the diagnosis has during the last ten years, and especially during the past five, been made at a much earlier stage than formerly, so that the indications are now clear that, if a case of simple or gangrenous abscess of acute origin is diagnosed, and its localization determined as accurately as possible, there should be no delay in operating as soon as a reasonable time, say four weeks, has been given for a decrease in the amount of expectoration and fever. The period of time in which lung abscesses can heal spontaneously varies from three to ten weeks, and it would seem as though a judgment in regard to their spontaneous healing could be formed in four to six weeks. By operating early we will constantly improve the already favorable statistics. In the chronic cases, like the one which I am about to report, the conditions for healing are far more unfavorable than in the acute, the lung changes are more likely to remain permanent, and in addition there has been a chronic intoxication with expectoration of large quantities of pus, emaciation, and in general an unfavorable condition for the success of operation. Hence the apparently large percentage of unsatisfactory results and deaths in such cases. But when we compare statistics at the present time with those of five and even ten years ago, the improvement can already be noted. The amount of relief to these patients far outweighs the risks of the operation.

In regard to the technique of pneumotomy, the most important point to decide is whether there are adhesions present or not. The duration of the process, as Quincke has pointed out, is no criterion of the presence or absence of adhesions, and up to the present time, in spite of many rather ingenious devices and suggestions, there is no way of diagnosing their presence. It can, however, be stated, as I have ascertained from personal observation and from the statistics, that in fully 90 per cent. of all of the cases they are present. In the 25 acute simple cases which I collected, they were present in 24; in the 28 acute gangrenous cases they were present in 24, or a little over 90 per cent. for the latter, and 96 per cent. for the former. In the chronic cases adhesions were present in 11 out of 14 cases of chronic simple abscesses, or almost 80 per cent., and in two others they were produced artificially before operation, and may have been present before (Quincke). In the chronic putrid abscesses, they were present in 18 out of 26, and were produced in one artificially. In 6 they were absent. We thus see that in the majority of cases, both acute and chronic, they are present.

The Technique of Pneumotomy.—Various methods have been proposed to produce adhesions artificially, e. g., Quincke makes an incision, resects a rib, and lays zinc chlorid gauze in the intercostal space. In some cases he has even applied zinc chlorid paste, but this latter method has been quite painful. It

requires several weeks for the adhesions to form, under these circumstances, and its use has been quite limited. The two methods most employed are the suture and tampon, or a combination of both. The suture method was proposed by Roux, in 1892, and consists in suturing the parietal and visceral pleura with a round, non-cutting needle. There is but little if any danger of puncturing a superficial abscess, for in such cases there are usually adhesions. The tampon method consists in opening the pleural cavity and walling off the area which it has been proposed to drain by strips of iodoform gauze similar to its use in appendicitis, and then allowing time for adhesions to form, usually about forty-eight hours. In order to avoid opening the pleural cavity until the focus has been found, Tuffier advised an extra-pleural palpation of the lung. This has been given up as unreliable and unsatisfactory. A good way is to combine both sutures and tampon, as suggested by Krause, by sewing the strip of iodoform gauze around the edges of the wound. The pneumotomy can thus be done in one stage. A great danger, of course, in every pneumotomy is pneumothorax, with consequent collapse of the lung. When this occurs during the operation, the dyspnea may interfere to such an extent as to render an interruption necessary. If left to itself, pneumothorax usually absorbs within a few weeks. It can be avoided, or rather the lung collapse, by using one of the methods of intralaryngeal insufflation, either the Fell-O'Dwyer apparatus, or the Parham-Matas method. After the pleural cavity has been opened and the lung exposed, then it is justifiable to use the exploring needle, but not before. It can be inserted in all directions, until pus has been found, and left in place to be used as a guide. Even the use of this instrument is not without its dangers. Israel reports one case of fatal hemorrhage resulting from the puncture of a large vessel with his instrument. In regard to the incision in the chest wall, the best is the flap incision, with the convexity downwards, and as extensive a thoracotomy as possible. If we have reason to suspect bronchiectases, and especially in the case of older chronic abscesses, and when the local diagnosis is not positive, it is better to resect two to four ribs. If we have reason to suspect a contracted lung, it is better to remove the periosteum of the ribs also, so as to enable the cavity to close more readily. If the pleura is greatly thickened in the chronic cases, much time can be gained in the healing by removing it. At the present time the knife is preferred to the cautery for opening the lung itself, and then blunt dissection with the finger to explore the interior. Pus may not appear immediately, but may pour out through the drains in the course of a few days. The cavity can either be tamponed with gauze or a rubber tube used, surrounded with gauze, to prevent the pressure on blood vessels. There is danger of hemorrhage from pressure in the use of both. If there is secondary empyema present, the operation is greatly simplified. Irrigation should not be employed, as there is great danger of carrying the pus to other portions of the lung. If large bronchi communicate with the cavity, and a fistulous tract

remains, it is best to open the wound, cauterize the bronchi, and remove that portion of the lung itself (pneumectomy) which forms the wall of the abscess cavity. This has been successfully done in several cases. If the cavity shows no tendency to heal, resection of a number of ribs and compression of that side of the thorax has aided in closing the same. If the fistula remains open, patient can wear a bottle containing an antiseptic solution.

In regard to the anesthetic which should be used, chloroform is preferable to any other, and as complete an anesthesia as possible; a partial anesthesia is only justifiable when the case is in a grave condition. The patient should never be placed on the sound side, on account of the danger of pus running over from the infected side.

The following case illustrates a number of instructive features in the surgery of pulmonary lesions following pneumonia. The history is the following:

G. U., 57 years old, male, had an attack of pneumonia two years ago. Since that time he has coughed up from two to three pints daily of muco-purulent sputum, with fetid odor, so it was impossible to remain in the same room. He has lost weight and strength so that he was greatly emaciated when I first saw him. I saw him in consultation with Dr. B. F. Flannigan, of this city (Chicago); respirations were 60; the lower border of the right lung, the one which had been affected in the attack of pneumonia, was at the fifth intercostal space in the mammary line, at the sixth rib in the axillary line, and apparently perfectly movable. Anteriorly, on the right side, there was no change in percussion; behind, from the scapula downwards, there was an area of dullness about the size of the palm of the hand, and some bulging of the intercostal spaces. One could also hear a few moist rales over this area of dullness. It was decided that this was a focus of what was suspected to be a chronic putrid abscess, two ribs were resected, the eighth and ninth, just below the scapula in the posterior axillary line, the pleural cavity was opened, and the lung collapsed (upper lobe). By palpation one could feel that the lower lobe was adherent to the anterior wall of the chest, and the incision was increased anteriorly until a portion of the ninth and tenth ribs were resected in the anterior axillary line. On opening the pleural cavity, a localized small empyema was found, which opened directly into a cavity in the lower lobe, from which some fetid broken down material escaped. At the edge of the empyema a small pus cavity in the lung was opened, apparently separate from the gangrenous cavity. Patient returned from the operation in fairly good condition; pulse and respiration both remained high; he died nine hours after the operation.

The autopsy showed that there had been quite a severe hemorrhage into a gangrenous cavity in the lower lobe, which had been opened; that there was also a slight amount of free blood in the pleural cavity, which had escaped through a tear in the adhesion at the lower edge of the wound. There were firm adhesions binding the right lower lobe to the chest wall, but the remainder of this lung was non-adherent; the latter was collapsed. On section it was seen that I had opened into an area of gangrene in the lower lobe, and had opened one of a series of bronchiectatic abscesses in the lung parenchyma of middle lobe.

This case is instructive in two ways. It shows, first, that physical examinations are apt, even though carefully made, to be misleading; secondly, that, as Korte has experienced in several of his cases, lesions may be coexistent; there may be a gangrenous cavity in one lobe, and a system of bronchiectatic cavities in another adjacent one, only one of which may be opened by operation. It also illustrates what I have attempted to bring out before, that the most favorable cases for operation are the

acute ones, when the patients are in good condition for pneumotomy.

CONCLUSIONS.

1. Both acute and pulmonary abscess and gangrene following pneumonia may develop immediately, and chronic and simple putrid abscesses, with or without bronchiectases, are more remote sequelae of both croupous and influenzal pneumonia, especially the latter.

2. The most valuable points in the history are the etiology; the sudden expectoration after an apparent crisis of pure non-odorous pus in the simple abscess cases, or of fetid pus in the gangrenous variety. In the chronic cases there is usually a history of a pneumonia having preceded the condition at some considerable time previously, followed by expectoration of large quantities of pus, with exacerbations of fever, accompanied by emaciation and frequently clubbed fingers, etc.

3. Signs of cavity are seldom present. The moist rales, especially of large metallic character, are the most reliable physical signs. The character of the sputum is also of great value, whether purulent or fetid. Elastic fibers are more frequently found in gangrene than in abscess, being comparatively rare in the latter.

4. The X-ray is only of confirmatory value, as it shows chiefly thickened areas of lung, and should not be absolutely relied upon. When it shows a shadow at the same point where the physical signs are present, it is of value.

5. The prognosis of abscess and gangrene following pneumonia, medically treated, is not very favorable. Many cases of both varieties can be successfully treated in a surgical manner by pneumotomy. One of the greatest difficulties is the exact localization of the focus. The statistics which I have gathered show a marked increase in the percentage of recoveries, especially in the cases which have been reported within the last five years, over that of the preceding five or even ten years. The prognosis for the chronic cases is not so favorable. The patients are usually operated upon when in an emaciated condition, and the walls of the cavity are often rigid, so that they do not contract well after being drained, and the free communication of a bronchus with such cavities is also a great barrier. But statistics in this variety are also improving, especially when combined with excision of the affected portion of the lung.

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REPORT OF SEVENTY CASES OF ACUTE LOBAR PNEUMONIA.

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Acute lobar pneumonia has, I believe, been more frequent in Colorado during the present winter than ever before. I can speak personally for the past eighteen years, and the general prevalence of the disease elsewhere confirms my position. I wish to give my conclusions derived from a study of seventy cases seen between September 1st, 1900, and April, 1901.

I will preface my paper with the statement that these must not be taken as typical of the cases of

this disease in Colorado, since many were seen in hospital and consultation work, and were naturally the severer forms of the disease.

Every case that could not be strictly classed as acute lobar pneumonia has been excluded, including many cases of broncho-pneumonia and hypostatic pneumonia.

Forty of the cases occurred in my service at the Arapahoe County Hospital, seven in that at St. Anthony's Hospital, eighteen were seen in consultation, and five were in my private practice. Of the first class, seven died within twenty-four hours, and eight more proved fatal later, twenty-five recovering. Of those in St. Anthony's Hospital, one died within twenty-four hours and six recovered. Of those seen in consultation, seven died and eleven recovered, while of the five private cases but one died, a man of seventy-one years of age.

The total deaths were twenty-four, a percentage of 34.3, far beyond the normal for the reasons above indicated.

Excluding the eight cases dying within twenty four hours, after admission to the hospital, we have a percentage of 25.8, still abnormally high because of the serious cases seen with other physicians.

Of the seventy cases, fifty-six were males, fourteen females. The disproportion is in part due to the fact that more men than women enter hospitals.

Arranged in decades, the cases were as follows:

1st decade.....	3
2nd "	16
3rd "	22
4th "	13
5th "	5
6th "	6
7th "	3
8th "	2
Total.....	70

Of the three in the first decade all recovered.

Of the sixteen in the second decade five died, a death rate of 31 per cent.

Of the thirteen in the fourth decade, six died, a percentage of 46.1.

Of the sixteen beyond forty years of age, 7 died, a percentage of 43.7.

By the sexes we have the following mortality:

Males, 22 out of 56 died, 39.3 per cent.

Females, 2 out of 14 died, 14.3 per cent.

In several cases post-mortem examination confirmed the antemortem diagnosis, in two such cases insufficiency of the mitral valve from old endocarditis being found.

Although the histories are often incomplete, previous attacks of pneumonia were noted in six of them, one man having had four attacks, one two, and four one attack each.

Distinct crisis was noted in twenty-six cases. It fell upon the fourth day in one case, fifth day in five, sixth day in four, seventh day in eight, eighth day in seven, and ninth day in one. Many cases declined by lysis, and of many more I have no record.

Three of the cases were abortive, one being preceded by a streptococcic sore throat.

The lobes involved were as follows:

Total number of lobes in the seventy cases, one hundred and sixteen.

The right lower lobe, as usual, was most frequently affected, sixteen times alone and eighteen times in various combinations with other lobes, or thirty-four times in all. Thus in practically half the cases the right lower lobe was involved.

The left lower lobe was affected ten times alone, and twenty-two times in combination, or thirty-two times in all.

The right upper lobe was the part solidified alone in eight cases, with other lobes in fifteen cases, being affected thus in twenty-three cases all told.

The left upper lobe was alone affected three times, with other lobes twelve times, or fifteen times in all.

The right middle lobe was involved alone in one case, with other lobes eleven times, or twelve times in all.

Other diseases were associated as follows:

Tuberculosis, seven times; typhoid fever, three times; erysipelas once, general sepsis once, acute rheumatism once, cerebral thrombosis once, traumatic pneumothorax once, Bright's disease (much albumen and many casts) twice, advanced emphysema once, organic mitral regurgitation (as proven by autopsy) twice.

One fatal case, noted above as having much albumen and many casts, had been exsanguinated by bleeding from the radial artery, while intoxicated.

Complications were as follows:

Empyema* five times, in two of these cases the pneumonia having practically cleared up at the time of my visit in consultation.

One case was admitted with empyema after the attack of pneumonia had subsided under the care of another physician. He had found pus with the needle, but delayed operation, and the effusion broke into the lung and caused her death within a short time after her admission into the County Hospital. Dr. Lyman, at my request, resected a rib very promptly, but it was too late. The other four cases were operated upon by resection of a rib, by Drs. Freeman, Hawkins and Fleming, and made uneventful recoveries.

In two cases serum was withdrawn from the left pleura in small amounts, the pneumonia in both cases being the predominant feature.

In thirteen cases, not including any of the seven with effusion, dry pleural friction was found, in several on both sides, and in two cases extending from the left lung to the pericardium. One of these latter cases was bled when deeply cyanotic and apparently almost moribund, nearly collapsed several days later from dilatation of the heart with loud mitral systolic murmur, but made a good recovery.

Temporary mitral leakage was noted in several other cases, and tricuspid regurgitation twice; doubtless it existed in other cases without being detected, either for lack of examination at the right time, or because of feebleness of the murmur.

*Three of these cases were seen really as sequelae of pneumonia, but are included because of their interest.

Albumen is mentioned as present in the urine in eight cases in addition to the two of Bright's disease noted, and as absent in twelve cases.

Delirium tremens occurred twice, one patient recovering. Otitis media was once noted.

Delayed resolution was found three times, the dulness remaining seven weeks, four weeks, and twenty-three days in the three cases respectively. In the last case the right chest was explored with the needle on the seventh day, because of a suspicion of fluid, but none was found. All of the cases made excellent recoveries.

The highest temperature, 106°, was in a young man who recovered.

The case with traumatic pneumothorax followed a gunshot wound of the left chest, involving the lower left lobe, with dulness, sharp bronchial respiration and high fever following. The man made a complete recovery.

Petechiae were found in a case, seen with Dr. C. P. Conroy, complicated with general sepsis, presumably in connection with septic endocarditis. The boy died on the 8th day.

One of the three cases associated with typhoid fever, seen with Dr. W. E. Shotwell, was a case of true pneumo-typhus, the right upper lobe being affected. A pseudo crisis occurred on the seventh day, followed by a continued fever, abdominal symptoms, typical Widal reaction on about the seventh day, and later by a suppurative inflammation of the hip joint, fatal soon after operation.

In one other typhoid patient, death occurred, the left lower lobe being involved about the seventh day. In a third, a man of twenty-three years, in the seventh week of the fever, after double phlebitis has occurred, the right lower, right upper and left lower lobes were successively involved. The man was desperately ill for four weeks, but made a complete recovery. Digitalis repeatedly brought his pulse from 140 or 150 per minute down to even less than 50, and I think was chiefly instrumental in saving his life.

Two of those curious cases, of which several writers have made note recently, of pneumonia simulating appendicitis, were encountered. In one the right lower lobe, in the other the whole left lung was involved. In both the abdominal pain and rigidity, with tenderness over the region of the appendix, were much more prominent during the first two or three days than the pulmonary signs. The latter patient had just recovered from smallpox when taken with pneumonia, had pericarditis by extension from the left pleura, in which friction existed, and is the one referred to above who was bled, and who had cardiac dilatation with mitral regurgitation. I think the bleeding and the infusion of digitalis saved his life.

In one case, a broken down man of 45 years, the whole left lung was affected, and erysipelas followed the attack. Subsequently he had phlebitis of the veins of the left side of the neck, with nodules in the arms and legs, regarded by Dr. F. E. Waxham, my successor at the County Hospital, as of embolic origin. A mitral systolic murmur existed. No petechiae were found, and the man to-day seems

to be recovering his health, though not ready for discharge.

A man of twenty-five years, with the whole right lung affected, and, on the seventh day, the lower lobe of the left lung, with pleural and pleuro-pericardial friction, developed phlebitis of the left leg on the ninth day, and of the right on the twenty-fifth, but recovered. At the time of the extension to the left lung, oxygen was used with great apparent benefit.

Herpes labialis, bloody sputa, dilatation or contraction of one pupil and unilateral flushing of the face were frequently seen, but the notes are too incomplete for introduction here.

Before speaking of the treatment of these cases, it seems to me proper to remark that this disease is one in which, in many instances, recovery is scarcely to be hoped for, much less expected, under any line of treatment. I speak of this because in pneumonia, as in other diseases, new methods of treatment are constantly being brought forward and as constantly discarded by a certain class of therapeutic enthusiasts. As usual, such men claim 100% of recoveries. The outcome is always the same, and is identical with a certain much vaunted treatment for typhoid fever, of which we have read so much for several years. When tested in a separate ward of a Government Hospital by its originator, not only did some of his cases die, but more died than the average for the whole institution, with a dozen other physicians in attendance. Fortunately, after such an outcome, we are spared a repetition of the mode of treatment in the journals.

Pneumonia should be recognized as a common cause of the fatal termination in several classes of patients. Those advanced in years should be placed first in the series. Those suffering from tuberculosis, from serious heart disease or kidney disease, from chronic affections of the digestive tract, from extensive emphysema, from alcoholism, and from exhaustion by recent acute disease, follow. It is not reasonable to expect recovery in a large proportion of such cases, and he who claims such a result must certainly demonstrate his claim in an unequivocal manner, or be distrusted, to use no stronger language, by those of extensive clinical experience. In large series of cases a mortality of less than 20% is exceptional unless the statistics deal with special classes, as, for instance, the young healthy men constituting an army.

The increasing number of deaths from pneumonia in years past does not necessarily signify that the disease is becoming more malignant. The disease is particularly one of advancing years. The decreasing mortality from tuberculosis, diphtheria, typhoid fever and other infectious diseases leaves more individuals to grow older and thus die of the diseases peculiar to more advanced ages. It is entirely probable that the mortality from pneumonia will continue to increase, for the disease will continue to be the final infection in those escaping death from other causes, and will increase in importance with their decrease. This factor is overlooked by too many writers.

Treatment.—The immense relief to the right heart and the pulmonic congestion by judicious venesection

is so striking in certain instances that I feel that it should oftener be employed. Of the two patients bled, one, a feeble old woman, died, although temporarily relieved. One recovered who certainly had every appearance of dying within a few hours, and a third patient, not included in this series, in the service of Dr. H. B. Whitney, whom I saw bled, recovered from an even more desperate condition. My experience leads me to bleed more frequently, from ten to twenty ounces, in selected cases, when the circulation is seriously embarrassed, for the occasional successful result justifies many attempts.

As regards local applications, sinapisms and turpentine stupes were often used during the early painful stages, and generally a cotton jacket with camphorated oil later. I certainly do not expect to return to the use of the jacket poultice. Ice bags were frequently applied to the chest and at times to the head in great pyrexia, with benefit. Occasionally cold bathing was used, but no medicinal antipyretics.

Sleeplessness demands an opiate rather than the more depressing hypnotics. Dover's powder and hot whiskey in combination were frequently found very effective for this symptom, as well as for painful cough.

I believe many physicians withhold opiates too much in the beginning painful stages. The fall in respirations from 50 to 60 per minute to 30 from a hypodermic injection of morphine in one suffering from the painful complicating pleurisy so often seen this winter is wonderfully striking, and equally reassuring to the patient. The abdominal symptoms spoken of may entirely disappear under this treatment. The quieting effect upon the heart, especially in beginning pericarditis, is equally advantageous.

I believe the free use of strychnia in recent years is a distinct gain. Most of these patients who suffered from cardiac distress received one-thirtieth grain every four, three, or even two hours, subcutaneously if the circulation was not good.

Aconite and veratrum were used in a very few cases with bounding, hard pulse and flushed face, and probably with some benefit. More commonly liquor ammoniac acetatis or the sweet spirits of nitre was used, and I think with equally good result. I have no doubt that very early free venesection is better than any of these remedies in selected cases, but very few if any of these were suitable ones.

In cases with increasing heart weakness, digitalis, generally the infusion, was used freely. During the height of the febrile period, doses of half an ounce every two hours frequently failed to lower the pulse-rate, but, with the fall of temperature, the slowing was notable; I have already stated that, in several instances, the recovery seemed to me more due to this drug than to any other.

Alcohol, generally as whiskey, has been frequently used where demanded, often in combination with strychnia and digitalis, and often with apparent benefit.

I think the use of oxygen, which we have employed frequently, tided over one of the patients already mentioned in this list, and also one seen a

year ago. In the vast majority of patients I think it is nearly useless. I have certainly seen it used in some private houses where the effort might well have been spent in obtaining better nursing and in hydrotherapy.

In a few of these cases and in others which I had the privilege of watching, in the practice of my colleague, Dr. G. E. Tyler, at the Arapahoe County Hospital, antipneumococcic serum was freely used. Dr. Tyler has published his conclusions in a recent number of the *Journal of the American Medical Association*, with my own views, brought out in the discussion of his excellent paper. I feel like emphasizing more strongly at this time the ideas there set forth. Until we deal with a disease more uniform in its bacteriology, we cannot expect any results from serum therapy comparable to those in the treatment of diphtheria.

A study of these cases, with casual observation of many others seen during the Winter in the practice of my hospital colleagues, leads me to believe that the pneumonia of this season has been less typical than during any period of my practice. It has been accompanied with more of the pain-producing pleural element than usual, with frequent palpable friction, in two cases extending to the pericardium. Para-pneumonic empyema has been more frequent than I have seen it heretofore. This statement is not based altogether upon the seventy cases reported in this series, since some of these were, in a sense, selected cases, but, in part upon the statement to me by several surgeons of this city that more operations for this disease have been made here of late than ever before, and generally in cases following pneumonia.

The course of the disease has been very irregular in many instances, and termination by crisis less frequent than usual. I regret that owing to the fact that about one-third of the cases were seen but once, no exact statement can be made as to the frequency of this termination.

The high mortality, 34.3%, is, of course, far beyond the just percentage for all cases, since many moribund cases are sent to the hospitals, and the cases seen in consultation are the especially severe ones. The mortality of the disease is better shown by the vital statistics of the whole country, showing that many more cases than usual proved fatal.

The high mortality of pneumonia in certain winters since 1889-90 has been attributed rightly to the epidemic presence of influenza. During the present winter another factor has been present, although I cannot offer any direct bacteriologic evidence as to its influence. I refer to the abnormal frequency of streptococcic sore throat, and of streptococcic pyemia. Thus in one case mentioned, a physician recovering from the former trouble was sent on a vacation, to recuperate, but returned on the fifth day with an abortive lobar pneumonia. Two patients having entered with other diseases, were stricken in the same ward on the same afternoon, at the time of the great prevalence of the sore throat mentioned. In view, however, of the lamentable

lack of evidence as to the bacteriology of the pneumonic inflammation, I shall not pursue this part of the subject further. In extenuation I may say that the physician who did what was absolutely necessary for his patients during the winter months past had little time or strength for unessential details, however interesting.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended November 1, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	San Francisco	Oct. 13-20	2	
INDIANA:	Evansville	Oct. 19-26	7	
KENTUCKY:	Lexington	Oct. 19-26	1	
MASSACHUSETTS:	Cambridge	Oct. 19-26	1	
MINNESOTA:	Minneapolis	Oct. 19-26	1	
NEW JERSEY:	Newark	Oct. 21-28	15	1
NEW YORK:	New York	Oct. 19-26	8	3
NORTH DAKOTA:	Bottineau Co.	Sep. 15-Oct. 15	10	
	Cass Co.	Sep. 15-Oct. 15	1	
	Edmond Co.	Sep. 15-Oct. 15	6	
	Mayville	Oct. 18-25	1	
PENNSYLVANIA:	Norristown	Oct. 19-26	5	
RHODE ISLAND:	Newport	Oct. 19-26	7	
WISCONSIN:	Green Bay	Oct. 19-27	4	

SMALLPOX—Foreign.

BELGIUM:	Antwerp	Sep. 28-Oct. 5	3	2
	Ghent	Oct. 5-12		2
BRAZIL:	Rio de Janeiro	Sep. 1-15		109
CANADA:	Halifax	Oct. 5-12	7	1
	St. John	Oct. 19-26	6	
COLOMBIA:	Cartagena	Sep. 29-Oct. 6		2
	Panama	Oct. 14-21	125	
FRANCE:	Paris	Oct. 5-12		3
GREAT BRITAIN:	London	Oct. 5-12	175	6
INDIA:	Bombay	Sep. 17-Oct. 1		2
	Calcutta	Sep. 14-28		2
	Madras	Sep. 14-27		
ITALY:	Naples	Oct. 5-12	54	5
MEXICO:	City of Mexico	Oct. 6-13		1
RUSSIA:	Moscow	Sep. 28-Oct. 5	15	1
	Odessa	Oct. 5-12	2	
	St. Petersburg	Sep. 28-Oct. 12	15	

PLAGUE—United States.

CALIFORNIA:	San Francisco	Oct. 13-20	1	1
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PLAGUE—Insular.

PHILIPPINES:	Manila	Aug. 31-Sep. 7	6	3
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PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro	Sep. 1-15	13	
CHINA:	Hong Kong	Sep. 7-14	11	
INDIA:	Bombay	Sep. 18-Oct. 1	454	
	Calcutta	Sep. 18-21	27	
	Karachi	Sep. 15-22	15	8
ITALY:	Naples	Oct. 5-12	2	2
TURKEY:	Smyrna	Sep. 28	1	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Sep. 1-15	9	
COLOMBIA:	Bocas del Toro	Oct. 28	1	
CUBA:	Havana	Oct. 5-12	1	
	Trinidad	Sep. 30	1	
MEXICO:	Progreso	Sep. 28-Oct. 5	1	
	Vera Cruz	Oct. 12-19	20	7
WEST INDIES:	Curacao	Sep. 28-Oct. 6	2	1

CHOLERA.

INDIA:	Bombay	Sep. 17-Oct. 1	7	
	Calcutta	Sep. 15-28	19	
	Madras	Sep. 14-27	99	
JAPAN:	Yokohama	Sep. 23-30	1	
JAVA:	Soerabaya	Aug. 1-31	1800	1400
	Samarang	Aug. 1-31	1050	600

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The Surgery of the Ureters.—The omission of two words and a date from a recent editorial comment in this journal on "Ureteral Implantation," transformed a harmless criticism into an inaccuracy that would have been absurd were it not unjust to the eminent men identified with this line of pelvic surgery. Since the older days, but a quarter of a century ago, when injury to a ureter meant extirpation of the associated kidney, the surgical treatment of disease or injury of the ureter has been revolutionized. The conservative tendency which has pervaded the entire field of surgery is nowhere better exemplified than here. No longer, save in extreme cases, is Simon's method of nephrectomy the only resource when the ureter has, in the course of a hysterectomy, been torn or severed by the knife. There have been numerous devices suggested and put into actual practice to remedy this grave accident without sacrifice of a healthy functioning kidney. Implantation of the injured ureter into the bladder, rectum, vagina, and elsewhere has been attempted, not always with success in the individual cases, but ever with an onward movement toward ultimate success in the development of the method. The operators identified with this brilliant advance in abdominal and pelvic surgery are many. Time and space would forbid here a complete record of the names even of the men in this country alone who by experimental research on dogs and other animals, or who by actual performance on the human being, have saved valuable lives without loss of organs that would otherwise have been invariably sacrificed. Van Hook, Kelly, Baldy, Boldt, Bovee, Emmet, Baldwin, Penrose, Fullerton, Krug, Noble, and many others—all eminent authorities in their chosen field of work—are included among these bold and successful pioneers in ureteral surgery; and Laphorn Smith, of Montreal, has just contributed a paper on this subject to this journal. While it will not be convenient nor advisable to give here a complete historical review of the development of this line of surgical intervention, mention should be made of the various methods that have been resorted to in the effort to save an injured ureter. These may be grouped under two great

headings, namely, those involving a reunion of the severed segments of the ureter—uretero-ureterostomy in its four main forms of transverse end-to-end, oblique end-to-end, the end-in-end, and the lateral implantation or end-in-side—and the various methods of implantation of the proximal extremity of the ureter into other viscera, mainly the bladder—ureterocystostomy. The operations performed by these divers methods now number very many, and the results have in the main been most gratifying. The anastomosis of the ureter is decidedly the most difficult in its technique, but if there has not been much loss of tissue, this is the proper treatment to pursue. The oblique end-to-end method probably gives the best results, with less danger of ultimate ureteral stenosis. Implantation into the bladder is a much easier operation than ureteral anastomosis, hence its popularity among abdominal surgeons. It should also be noted, however, that in many of the operations the primary injury to the ureter had resulted in a uretero-vaginal fistula which could more readily be remedied by this method of operating. These secondary implantations have far outnumbered those performed intraperitoneally at the time of the original injury to the ureter. Vesical implantation is indicated when there has been much loss of ureteral tissue, in the presence of ureteral fistulæ, or when the ureter is so disorganized that the methods of anastomosis cannot be applied. It is preferably performed by the abdominal route. Implantation into the rectum or colon is apt sooner or later to be followed by infection of the ureter and kidney with subsequent death of the patient; it should be employed only when other methods are impracticable, as in ectopia vesicæ, or in grave injury or involvement of the ureter and surrounding parts from cancerous and other changes. Implantation of the ureter into the vagina or onto the skin surface of the abdomen are both open to disadvantages that are obvious, such as the necessitating the wearing of cups and other apparatuses. Bovee states that skin-grafting of the ureter has been done but ten times, and vaginal implantation but three times.

It will be seen therefore, from this condensed

summary of ureteral surgery that a new field of considerable dimension has been opened in surgical technique. Already the surgery of the ureter has won for itself an established place, and its literature commands the respectful attention of the general as well as the pelvic surgeon. Its annals are full of magnificent successes and all honor is due those who by their untiring efforts have developed a new means of aiding afflicted humanity.

Tetanus From Antitoxine Serum.—The recent calamity in St. Louis, by which a large number of children lost their lives from lockjaw following the injection of diphtheria antitoxine, is capable of but one interpretation. The serum was contaminated with either the bacilli or the toxine of tetanus. Just how this happened, and who is responsible, are questions upon which we do not venture an opinion. The reports thus far obtained are from the newspapers, and the official investigations must be completed before blame can be attached to any one; but the bare facts speak for themselves.

The facts appear to be these. The horse from which the serum was taken was inoculated on August 10th with the diphtheria poison and the antitoxine was withdrawn from the animal on August 24th. It is this serum that is accused of causing the trouble. But this same horse was inoculated again with diphtheria on September 22d, and several days later he developed tetanus, and was shot on October 3d. After this second inoculation, and at the time when he must have had in him the germs of tetanus, he was bled in order that another supply of diphtheria antitoxine might be obtained. But this latest supply of serum, it is claimed, was not used. Hence the inference is that the horse must have contained the poison of lockjaw before August 24th, although he did not exhibit the disease until more than a month later. This seems highly improbable.

We believe that this is not the first time that tetanus has followed the administration of antitoxine serum. An instance is reported in Italy in which a group of patients thus treated all developed tetanus. But whenever and wherever it happens, it always points to a faulty or careless technique. The poison (germ or toxine) of diphtheria does not cause tetanus, unless it is contaminated with the specific germ or toxine of tetanus. In other words, the two diseases are distinct, and it is the business of the manufacturing bacteriologist to keep them separate.

Next to the immediate sacrifice of life the worst thing about this St. Louis disaster is the loss of popular confidence which it will involve. The peo-

ple, even the most intelligent of them, will not readily overcome the horror of antitoxine serum which this holocaust will inspire in them. The physician himself will not like to feel that he is running a risk of giving lockjaw to a patient when he uses the antitoxine of diphtheria. It will be a new and very disagreeable idea to many physicians that such a thing is possible.

Of course, reason tells us that this was a mere accident, and that it should not count for too much in the face of the tens of thousands of injections that have been given harmlessly, and of the good that has resulted. While this is true, the members of the medical profession will look for a satisfactory explanation of this calamity. St. Louis owes it to herself and to the world to make the investigation thorough and complete.

The Army Canteen Again.—Lieutenant-General Miles, Commander-in-Chief of the U. S. Army, has recently declared himself in favor of the law abolishing the canteen. He has thus reversed his former opinion on this subject, and is hailed by the prohibition people as an important convert to their cause. His principal argument in favor of maintaining the present law is that the abolition of the canteen has not prevented enlistments in the army or increased the number of desertions. With all due respect for General Miles we cannot help thinking that this argument is a very inadequate and unconvincing one in such a matter as the canteen. No one would seriously suppose that the question was to be decided by the number of enlistments and desertions in the army. Such an argument for such a subject is indeed far-fetched.

We have believed from the beginning that the abolition of the canteen was an unwise measure, and we have not hesitated to say so. For some time past, however, we have thought the country at large would do better to await further reports from the War Department before again consenting to the agitation of this question. Figures and statistics sometimes tell a plainer tale than over-heated rhetoric. Fortunately the forthcoming report of the Surgeon-General contains some eloquent figures on the subject.

The admission-rate for alcoholism in the army for the year 1900 was 15.34 per thousand of strength, as compared with 14.49 in 1899, and with 28.67, the mean rate for the decade, 1889-98. Troops serving in the United States in 1900 had a rate of 22.42. "The steady decrease of late years in the admissions for alcoholism among the men of the Regular Army is a matter of congratulation." This decrease, it is to be observed, was during the period before the

abolition of the canteen; and, according to the report, military officers are almost unanimous in their opinion that this was mainly the result of the establishment of the canteen. The following are the figures in detail: Mean annual rate for the decade 1879-88 per thousand of strength, 56.68. For 1889, 41.41; for 1890, 40.73; for 1891, 40.01; for 1892, 37.23; for 1893, 33.97; for 1894, 30.94; for 1895, 30.11; for 1896, 29.06; for 1897, 27.86. The record was here interrupted by the Spanish-American War; but so far as it goes it is significant of a steady improvement in the habits of the American soldier.

Let us now await the returns since the abolition of the canteen.

The Physical Stigmata of the Criminal.—Dr. W. Norwood East, the deputy medical officer in the Convict Prison, at Portland, England, believes, evidently, that the criminal carries with him some physical signs of his degeneracy. In the *Journal of Mental Science*, for October, he contributes a carefully written paper on "Physical and Moral Insensibility in the Criminal." Dr. East, like every sensible man, knows that there are criminals and criminals. In other words, the various criminal classes must be distinguished and differentiated. The accidental criminal is one kind; the occasional criminal is another; and the professional criminal is still another. These facts are, of course, patent to scientists, but the average declaimer against "sin" and "materialism" fails to distinguish them. A case in point is that of the assassin, Czolgosz, who was an "occasional" criminal and in no sense a "professional" one. He offended on one particular occasion only and then in obedience to a vicious dogma which had been preached into him. He was in every sense sane and responsible, and has been pronounced so by every alienist who has studied him or his history. In such a criminal the stigmata of degeneracy would not necessarily be found, and, even if they were found, would not necessarily indicate his irresponsibility.

Dr. East found in 100 convicts at Portland Prison that the three classes, (1) accidental, (2) occasional, and (3) professional criminals, represent three degrees of moral and physical sensibility, and that the difference in these respects is on the whole greater between the first and second than between the second and third for moral sensibility, and the reverse for physical sensibility. Dr. East's general conclusion is that sensibility is impaired in the criminal, and most so in the professional criminal; and this is quite in accord with the inexpert observation of most persons. In the brain of the professional criminal the number of conscious sensory

elements is reduced, and hence the range of ideation is less. The paper has value as a contribution to both the physiology and psychology of crime.

The Wrath of the Antivivisectionists.—A journal published in Philadelphia in the interests of a local antivivisection society, has assailed us in choice language for not having yet published a letter which was addressed to us recently by the President of the American Humane Association. The letter referred to was written ostensibly in reply to an editorial comment in the *Philadelphia Medical Journal*, but in effect it was merely a continuation of the method of controversy which Mr. James M. Brown adopted in his disastrous encounter with Dr. Keen. The pith of the letter is in a series of quotations from medical literature—but the accuracy of the antivivisectionists in their statement of alleged facts and in their use of quotations has been so seriously discredited by Dr. Keen's criticisms (published in former numbers of this journal) that we are unwilling to enter into a controversy on such unreliable grounds.

If, however, it is any satisfaction to the antivivisectionists, we are quite willing to acknowledge that there have been some reckless men and some mistaken men in the medical profession; that there have been some men who have committed errors, and others who have performed useless operations, and others, again, who have mistreated cases, and still others who have performed improper experiments. There have even been physicians who have been guilty of crime. We do not claim that the whole profession is immaculate. But all this is no reason for the indiscriminating opposition to scientific medicine which a few clamorous extremists are forever setting up.

If Dr. Keen, on his return, wishes to resume this subject (for which we candidly think there is no necessity), we shall, of course, open our columns to him and to his opponents. In the meantime the antivivisectionists may find what comfort they can in calling us hard names.

Municipal Control of Smallpox.—While it is of great importance, when smallpox actually exists in a community, to care for the disinfection of all persons and things that come in contact with the patient, the real control of smallpox depends upon the thoroughness with which vaccination and revaccination are carried out in that community. There is great danger that we shall forget this essential prophylactic feature and that the statistics of vaccination and of revaccination in relation to smallpox in the German army shall have become so familiar that they shall be treated with contempt. In 1890, the

year in which the eleventh census was taken, there were but 398 deaths from smallpox in the United States, and the number of deaths since that has been small. During the present year, however, owing to the fact that the immunity conferred by vaccination is gradually being exhausted, several municipalities have seen the beginnings of smallpox epidemics. The one way for these communities to control this pest is by insisting that every individual who has not been successfully vaccinated within the past 5 years shall submit himself to vaccination at once.

Cataract Extraction in Extremely Advanced Age.

—At one time the operation of "reclination" of the cataractous lens in advanced age, was frequently performed, but it has been almost entirely supplanted by the operation of "extraction." Mendel, the second assistant at Hirschberg's clinic, observed that among the 34 patients who were over 80 years of age among the 1645 operated on for nuclear cataract by means of extraction, unfavorable results were obtained in but one case. Notwithstanding these valuable statistics, it must not be lost sight of, that in individuals over 80 years of age, a corneal section constitutes not only an exquisitely delicate procedure, but one coupled with many difficulties, such as atrophic thinning of the tissues, arteriosclerosis, and constitutional involvements, embracing the lungs, heart, genito-urinary system, and even the brain. Complications, such as prolapse of the iris, loss of vitreous, and infection, are necessarily more liable to occur, and in one of Mendel's cases pulmonary edema in consequence of an existing heart lesion followed a cataract extraction. With scrupulous care, however, extreme old age does not materially influence the prognosis of cataract extraction.

The *Lancet* announces in an authoritative way that the rumors about the ill health of King Edward are unfounded; that the King has had no surgical operation performed, and that his health is not seriously impaired. These rumors have been persistent and have seemed to have something authentic in them. Perhaps it would be better if our English friends adopted the American custom of taking the public fully into the court confidence in the matter of the health of the ruler of the State. Let us hope sincerely that the English people are to be spared the horrors that have been threatened in these reports.

Most persons will concede that the barrel (with a woman inside of it) which recently went over Niagara Falls, displayed great powers of endurance. But why the woman herself should claim any great

merit for the feat, is not evident. She risked her life, as many suicides have done at Niagara, and was no more brave than they. In fact, she was not so brave, for she had a barrel and they had none. From the standpoint of physical endurance the venture proves nothing of practical value, for it is supposable that anybody else in like circumstances, and in a like barrel, would have pulled through. The next barrel that tries it may strike an extra hard rock and go to pieces—and then there will be one barrel and one fool the less in this country or in Canada.

Current Comment.

THE ELEVATOR DISEASE.

It looks as though people with weak hearts had, after all, better climb ten flights of stairs than effect the ascent by means of the lift. This convenient institution is becoming ubiquitous. We soar up to the topmost story of the sky-scraping flat, we descend through geological strata to the twopenny tube by its assistance. We thought we were thereby saving our vital energies and lengthening our lives. The doctors seem to hold another opinion. Lift attendants have died sudden deaths; people with weak hearts have noticed ominous sensations when in the elevator. We are told the sudden transition from the heavier air at the foot to the lighter air at the top is extremely trying to the constitution. Even millionaires and bishops and aldermen are now voluntarily tramping up stairs and avoiding the swifter but insidious route. In fact, a new disease has swung into our ken, 'lift-men's heart.' We have all of us been risking this malady without knowing it. It is true most people have experienced the singular sensation of internal collapse when the lift floor sinks beneath the feet, but none of us suspected the result might be so serious. Every new notion for health and comfort seems to bring its particular Nemesis.—*The London News*.

THE "COWARDLY" ALIENISTS.

Since the murder of President McKinley we have been watching carefully for the editorial and expert opinions of certain alienists and neurologists concerning the responsibility of the sane criminal. When the public conscience is not aroused it is very easy to be as bold as a lion with dogmatic denials of freewill, and with dogmatic assertions that structure (of the brain, for instance) absolutely rules function. If this is so the criminal is impelled to do his deeds by his neurologic and cerebral mechanism, and the conclusion is inevitable that he is irresponsible and that the asylum should be his reward, not the death sentence. Punishment must be out of the question when the criminal is irresponsible, and there can be no responsibility when there is only fatalism and materialism. Strangely enough the materialistic alienists and the determinists have not said a word about this highly important fact since Czolgosz committed his crime. They should have the courage of their philosophy. We are glad, however, that they are wisely, if cowardly, silent. *Vox populi* is, in this case, truly *vox Dei*, and righteous public sentiment, outraged by a science so ultra that it becomes unscience, might too easily visit on the whole profession the punishment of the sins of a very few hobby riders.—*American Medicine*.

SCIENCE AND POETRY.

Rather foolish discussions are sometimes raised as to which has been of the most benefit to the world—poetry or science. One man has gone so far as to declare that if the question were put to England, "Who is your greatest man? Whom would you choose if forced to decide between the shining names in science, art, statesmanship, or invention?" the answer would be "Shakespeare," that

his would be the one influence, the one great light England would not lose for all her other acquisitions and achievements put together. With the Darwin letters and scientific victories fresh in our minds there would be hesitancy in subscribing to this sweeping assertion.

Coleridge said that the antithesis to poetry is science. Darwin sustains the statement when, in his autobiography, he tells us that when young he was fond of reading books and used to sit for hours reading the historical plays of Shakespeare, and the poems of Byron and Scott. "Later in life," he says, "I wholly lost, to my great regret, all pleasure from poetry of any kind, including Shakespeare."

This is a heavy price to pay even to be the discoverer of the principle of natural selection.

—*The Indiana Medical Journal.*

THE DOCTOR'S BILL.

The physician himself is at fault for the remissness of his patrons in paying their dues. Indeed, our profession has been brought under contempt through the adage—"As hard to collect as a doctor's bill." Tradesmen are promptly paid the entire amount of their bills. The doctor would be, too, if he would only put up a little fight for it; but, without a particle of business insistence, with childlike timidity, he humbly submits, without pretest, to being paid at any odd time, in a haphazard way, at long intervals, and then, usually, only a part of his bill, instead of the whole of it. Eventually, payments become more and more remote, while the amounts at each payment dwindle in proportion.—*Dr. G. R. Patton, in The Northwestern Lancet.*

Reviews.

The Circulation in the Nervous System. By Herman Gasser, M. D. Journal Publishing Company, Wisconsin. 1901. \$1.00.

Dr. Gasser has devised what he believes is a new theory regarding the nervous system. Briefly stated this theory is that there is a continual circulation of energy from the central nervous system to the periphery and back again, and he believes that this is the only satisfactory method of explaining the various phenomena of sensation, motion and mind. The importance of the theory, according to him, is that it is incompatible with the neuron theory, that is to say, if the nervous system is composed of isolated units, such a circulation could not occur. As a matter of fact, Dr. Gasser merely re-states, in a very confused and unsatisfactory form, a fact that has been known to physiologists almost from the beginning of the study of physiology: that certain influences emanate continually from the ganglion cells in the brain and spinal cord, and keep in activity certain tissues in the human body. He misunderstands the neuron theory to this extent, that in that theory there is no suggestion whatever that impulses are not transferred from one neuron to another. As a matter of fact, if he would take the pains to study the phenomenon of motor innervation from the cell in the cortex to the cell in the muscle, he would find that at least two neurons were concerned in the chain, and that therefore, according to the neuron theory, one complete break must have occurred. And yet everyone is agreed that it is the impulse from the motor cell that determines the contraction of the muscle. The only point that the up-holders of the neuron theory insist must be admitted is that hitherto no satisfactory demonstration of a physical connection between neurons has been given. And we are therefore forced to suppose that physical connection exists which we cannot detect by our present methods of research, or that the dendrites are capable of moving and therefore of coming in contact with the neurons or fibres at the termination of the axis cylinder; or that the transference of energy takes place by a form of induction. We regret that we cannot share the author's opinion regarding the importance of his theory, but congratulate him upon the industry with which he has attempted to adapt it to the phenomenon of nervous activity. Of course, as he states at the end of his book, no theory will alone solve the

problem, and we fear that his effort at systematization of our "raw facts" will not add very greatly to our knowledge. [J. S.]

Merck's 1901 Manual of the Materia Medica. Compiled from the most recent authoritative sources and published by Merck & Co., New York and Chicago. 282 pages. \$1.00.

This little manual, so far as its general appearance and comprehensive collection of prescriptions are concerned, has maintained its previous excellence. There is a valuable compilation of the various medicaments, which are classified according to their physiological actions. In addition the manual contains a list of antidotes, modes, of administration, dosage and synonyms. We feel obliged to state that the synonyms are sadly deficient. Lobar pneumonia is classified as a synonym of pneumonitis, while modern medicine has definitely established lobar pneumonia or croupous pneumonia as a general infection with constant pulmonary lesions, but not an inflammation confined to the lungs. Under the term "meningitis," cerebrospinal fever is given as a synonym; it needs but little comment to point out the well authenticated fact that while cerebrospinal fever is anatomically characterized by an inflammation of the cerebrospinal meninges, meningitis is not necessarily cerebrospinal fever as stated in the manual. The term "dandruff" may be correctly applied as an associated condition in pityriasis capitis, but not to all forms of pityriasis, as would be inferred from the definition of the manual. The term "acute articular rheumatism" is to be approved instead of the general term "rheumatism" as hitherto employed, although the obvious infectious character of the disease has justly given the term "acute rheumatic fever" the preference.

In the treatment of ivy poisoning a highly recommended drug, "grindelia robusta" has been omitted. Calomel has not been classified under the "diuretics." We would suggest that as a definition of "cancrum oris" the term "gangrenous stomatitis" would be preferable to "foul ulcers inside the lip and cheek." Hematuria is not necessarily renal hemorrhage as is found in the manual, because blood in the urine may come from the ureters, bladder or urethra. With the exception of some of these ambiguous, and in some cases erroneous definitions, the little manual forms a valuable ready reference book for the physician.

[M. R. D.]

Hand-Book on Sanitation. A manual of Practical and Theoretical Sanitation. By George M. Price, M. D. Small 8vo., 306 pages and index. John Wiley & Sons. New York.

This is a condensed sketch of the methods and principles of modern sanitation, but is nevertheless ambitious in purpose, as the following sub-title shows, "For students and physicians, for health, sanitary, tenement-house, plumbing, factory, food and other inspectors, as well as for candidates for all sanitary positions."

It is obvious, that in a little over three hundred small pages, only brief consideration can be given to each topic. There is, however, much information in the book. By adopting a concise style and avoiding argument and discussion of irrelevant matter, a large amount of knowledge is packed in a small space. The author's experience has been principally in New York city, which leads him to discuss at some length the tenement-house problem, so striking a feature of life in that city. The last phase of legislative regulation of the construction and supervision of tenement houses is declared to be a satisfactory one. It will go into operation in January 1902. The law as given in the book, presumably in full, occupies thirty-two closely printed pages. It provides for over two hundred officials, most of which are inspectors. This seems an enormous number, but we are told that New York contains over 45,000 tenement-houses.

Many data of practical value are given. It is to be regretted that the tables for making various engineering calculations are rendered misleading by the use, without notice, of the English gallon, instead of the U. S. gallon.

This error is due mainly to relying upon an English publication.

The work is well printed; it is only sparingly illustrated. [H. L.]

Report of the Outbreak of the Plague at Sidney, 1900.
By the Chief Medical Officer of the Government and President of Board of Health.

The most important part of this very creditable publication is the report of the General Medical Officer of the Government, and President of the Board of Health to the Premier of the Colony. In this are given the statistics of the plague, an inquiry as to its causation, and a full account of the measures taken to combat it. As this report has already been treated editorially in this journal, we shall refrain from any careful analysis of its contents, contenting ourselves with the statement that it is one of the most thorough and scientific reports of a plague epidemic, that it has ever been our pleasure to read; and that the measures employed in combating this epidemic were eminently characterized by their sanity and effectiveness. Following this report there are a number of appendices in which the more scientific aspects of the subject are considered. Thus, Tidswell describes the bacteriology, starting with a complete account of the plague bacillus, the frequency of its occurrence in rats, which was 23 out of 115 cases examined, and a careful discussion of the significance of skin lesions as points of inoculation. Salter discusses the clinical aspects, and tabulates the symptoms in convenient form for reference. McLeod writes upon the eye lesions, and Taylor, Jamieson and Sanders give the notes of the autopsies upon 24 cases. The appendices following these belong to the department of hygiene and therapy. Thus Salter gives the result of all cases treated with the Yersin-Roux serum. There are other appendices upon the regulations employed for the Haffkine inoculations and the effect of disinfection of different areas of the town, and various notices and reports which were issued during the epidemic. The report is excellently illustrated by charts, maps, and a few pictures of plague bacilli and infected rats. [J. S.]

A Text-Book of Embryology. By John C. Helder, M. D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. Second Edition, thoroughly revised. Octavo, 405 pages; illustrated. Philadelphia and London. W. B. Saunders & Co., 1901. Cloth, \$2.50.

Embryology is at present the recognized starting point in the study of human anatomy. The student who has a good general knowledge of the development of the organism is prepared to appreciate the significance of many adult structures that would otherwise be entirely beyond comprehension. In order to give the student of medicine the necessary embryological data, the teacher is obliged to modify the literature on the subject to a great degree in order to bring it within the grasp of a class of men whose aim it is to become practical physicians rather than pure scientists.

Dr. Helder's book, which has now reached a second edition, is designed to set forth the principal features of human embryology. The essential features of the embryology of the lower forms are utilized in order to fill in the gaps left in the knowledge of the human type by absence of direct observation. Advantage has been taken of the recent work of Peter's on "The Embedding of the Ovum" to rewrite the chapter on the decidua and the placenta. Changes have also been made in the chapter treating of the chorion.

The book is admirably adapted to the needs of the medical student, who will find in its pages just the amount of information that he needs for an understanding of the essential features of the subject. [J. M. S.]

Personal Experience with Uterine Fibromyomata.*
HENRY D. INGRAHAM, M. D., of Buffalo, N. Y. In the full paper mention is made of a large number of cases of uterine fibroids which I have treated by various methods during the past sixteen years. Also my earlier

experience with the use of drugs, especially ergot and hydrastis. Later, my experience with electricity, the thyroid extract, the dessicated mammary gland, and stypticin. Although I have used ergot freely in many cases, it is only in a very few that it has had any effect upon the hemorrhage, and possibly hydrastis has in some cases. Stypticin has in my experience appeared to check the excessive flow better than any other drug. I have never derived any special benefit from the use of the thyroid extract or dessicated mammary gland, and consider their use dangerous, by their effect upon the general health. I have used electricity quite faithfully, visited Apostoli, and saw him use it, and continued its use some time after my return. In a very few cases it stopped the growth of the tumor, checked the hemorrhage in some others, but I do not use it now as the results are not satisfactory. I think it dangerous in cystic or rapidly growing tumors, although I never had any bad results in its use, because I have always been very careful, and used it only in selected cases. Doubtful if it does any good, excepting in checking hemorrhage in some cases.

I have had seven cases of quite large fibroids complicated with pregnancy. In five miscarriages occurred spontaneously. In one it was induced, and in the other the growth almost completely filled the pelvic cavity, and the four and one-half months fetus being above it, a hysterectomy was necessary. Patient made a good recovery.

One case mentioned is that of an unmarried woman who was past 64 years before the fibroid began to show signs of its existence. For some time it was dense and hard and grew slowly, but for the past few months it had become cystic and increased in size rapidly. This patient has had severe cerebral symptoms upon three different occasions, which I believe due to some particles of the disintegrating tumor becoming detached and carried to the brain, producing these symptoms. Upon one occasion she lost sense of motion and sensibility of the right side for over two weeks, and did not know the members of her own family for the same length of time. During the height of this attack the temperature was 101 F., and pulse 96.

About a year later she had a similar attack, and a few weeks ago another one, but milder, and no rise of pulse or temperature.

I believe that fibromyxomata, although considered benign in contrast to malignant growths, such as carcinoma, are by no means harmless, but expose the patient to great and increasing risk, frequently risk of life, partly due to their own inherent conditions and partly to the complications which may arise. All cases of fibroids should be carefully watched. If they are not giving any trouble or increase in size, let them alone, but continue to keep the patient under observation. If they do occasion trouble to any extent, which is gradually getting worse, or if the growth is gradually increasing in size, then the proper thing to do is to remove it before dangerous complications occur. If there be adhesions or necrosis of the tumor or pyosalpinx, then the danger of the operation is greatly increased.

If cardiac disease or hydronephrosis result as a complication, the removal of the tumor does not relieve these conditions. Waiting for the menopause to relieve the diseased condition is often like holding out false hopes to the patient, as the trouble may become worse than then before, or it may all develop after that period, as shown by the last case mentioned.

If any treatment is necessary, and the patient is in suitable condition, then a radical operation should be done. There is no excuse whatever for palliative or temporizing treatment at the present day.

Sychois.—In *L'Independance Medicale*, (June 26, 1901) Balzer discusses sychois, a skin disease consisting of nodules and pustules, with crusts and ulceration. The skin may be deeply infiltrated. It is not as a rule painful. It lasts from two to four years or longer. It occurs only in the bearded part of the face, and causes alopecia. It may be parasitic, and is generally associated with long standing coryza. In the treatment, this coryza must first be cured by the use of tannin and sulphur locally. For the sychois a saive of oil of tar, or ichthyol is useful. Sulphur, zinc, calomel, and mercury may prove beneficial. In very rebellious cases corrosive sublimate solution will do good, 1 to 1000 to 1 to 5000, applied at night. Iron, arsenic, and calcium phosphate are given internally. [M. O.]

* Original abstract of paper read before the American Association of Obstetricians and Gynecologists, Cleveland, September, 1901.

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

University of Pennsylvania.—Dr. Charles K. Mills has been elected clinical professor of nervous diseases in the University of Pennsylvania, having resigned his position as professor of mental diseases and of medical jurisprudence; Dr. William G. Spiller has been elected assistant clinical professor of nervous diseases, and Dr. Charles W. Burr professor of mental diseases.

Society Meetings Next Week.—The following sections of the College of Physicians will hold meetings next week: Tuesday evening, November 19, Section on Ophthalmology; Wednesday evening, November 20, Section on Otology; and Thursday evening, November 21, Section on Gynecology.

Philadelphia Hospital.—Bids have been received for the new buildings soon to be erected in the Philadelphia Hospital, the children's pavilion, maternity pavilion, and pavilion for contagious skin diseases. These are to cost altogether \$80,000. The Councils Committee on Charities were asked to appropriate, in 1902, \$80,000 for a pavilion for consumptives, \$10,000 for a new clinical amphitheatre, \$85,000 for a new obstetrical and gynecological pavilion, and \$50,000 each for a new pavilion for nervous diseases and general medicine. Dr. John V. Shoemaker, president of the Board of Charities, recommends these improvements. It is also rumored that the almshouse and hospital for the insane are to be moved to Petty's Island.

Tetanus After Vaccination.—In Philadelphia and Camden several cases of tetanus occurring in children after vaccination have been reported. One case is doing well upon the antitoxin treatment, while six have died. A few cases have been brought into the city for treatment from the country.

Mütter Lecture.—The Committee on the Mütter Museum of the College of Physicians of Philadelphia announce that the Mütter lecture for the year 1901 will be delivered Tuesday, December 3 at 8 P. M., in the Hall of the College of Physicians. Dr. Harvey Cushing, of Baltimore, will deliver the lecture upon "Some Experimental Observations Relative to the Surgery of the Nervous System."

Meschianza for the McKinley Memorial Hospital.—On Monday, November 11, at the Academy of Music, Philadelphia, the following speeches were made by physicians: "The Reasons of the Entertainment," Judge William N. Ashman; "The William McKinley Hospital Association," Dr. John Madison Taylor; "The Needs of a Pay Hospital for Contagious Diseases," Dr. James Tyson; "The Care of Contagious Diseases in Special Hospital," Dr. James C. Wilson; "Contagious Diseases and the State," Dr. John V. Shoemaker. Mayor Ashbridge then declared the Meschianza open, and Professor Ives and Dr. Jay F. Schamberg gave a magic lantern display.

Smallpox in Philadelphia.—More new cases of smallpox were reported for the week ending November 9th than for any similar period during the year. Seventy-two persons were prostrated and there were eight deaths. Since January 1 there have been, to date, 559 cases, of which seventy-eight resulted fatally. Of the 481 persons who survived, 262 have been cured, while 219 are confined to their homes or in the Municipal Hospital. Over 200 cases are now in the Municipal Hospital, the largest number at any one time in the present epidemic. The completed portion of the new frame building now being erected on the hospital grounds for smallpox cases is being utilized. The wings will be finished this week. Success is crowning the labors of Dr. George MacLeod in the smallpox district of Bryn Mawr. The spread of the disease has been checked. Smallpox made its first appearance in Bryn Mawr College was attacked. It was discovered that the negro settlement known as Whitehall was full of the disease. A Board of Health was formed at once, and under the direction of Dr. Chrystie those who showed marked symptoms were sent to the Municipal Hospital. At last the hospital refused admittance to any more patients from Montgomery County. The Bryn Mawr Hospital had no contagious ward, and a serious problem confronted the community. At this crisis, Dr. MacLeod volunteered to take charge in

the settlement. His offer was accepted and the settlement was strictly quarantined. This measure proved effective. No more cases have been reported and no deaths among those under Dr. MacLeod's charge have occurred. Of the new cases reported two were in Germantown and one in Olney. One case is reported from Camden, Del., in a lady who had just come from Philadelphia. The schools there have been closed on this account.

St. Timothy's Hospital Annex.—The \$85,000 men's ward annex to St. Timothy's Hospital will be dedicated Saturday, November 16th. The annex was erected as a memorial to Percival Roberts by his widow, Eleanor Williamson Roberts. It is one of the most complete hospital buildings in the United States, having all the latest improvements. The new building is of brick, four stories high, and will accommodate fifty patients.

Opponents of a Hospital Defeated.—An injunction asked by a number of West End citizens to restrain the Norristown Town Council from establishing an emergency hospital at old Oak View Park was refused. Among others who opposed the place was Dr. D. D. Richardson, of the State Hospital for the Insane, because the emergency hospital is within a quarter of a mile of that institution.

Diphtheria is reported in Hazleton Pa. It is feared that it will wipe out a family at Quakake, a few miles south of Hazleton. Within a month five children have died and the mother succumbed. Three other children are suffering, while the father and one son have been the only ones thus far to escape. The public schools have reopened at Athens, Pa. after having been closed two weeks on account of the epidemic of diphtheria.

Bucks County Medical Society.—At the annual meeting of the Bucks County Medical Society held at Doylestown, November 6, these officers were elected for the ensuing year: president, Dr. H. A. Hilyer of Penn's Park; vice-presidents, Drs. Henry Lovett of Langhorne and A. E. Fretz of Sellersville; secretary and treasurer Dr. F. A. Myers, of Blooming Glen; Board of Censors Drs. G. M. Grim of Ottsville; W. R. Stavely, of Lahaska, and William R. Cooper, of Point Pleasant.

Death of Dr. Orr.—News of the death of Dr. John C. Orr, at Mindanao, on September 12, has been confirmed by a telegram to the parents, Mr. and Mrs. John R. Orr, of Chambersburg. Dr. Orr was 31 years old, and a graduate of the University of Pennsylvania. He was attached to the Twenty-third Infantry, at Turcuran, Mindanao.

NEW YORK AND NEW JERSEY.

Tuberculosis Theory Tested.—Dr. George D. Barney, a physician of Brooklyn, with the assistance of a young woman who volunteered to become the subject of an experiment has, he says, started out to demonstrate the truth or falsity of Professor Koch's theory that tuberculosis germs cannot be communicated from a cow to a human being. His statements have been called to the attention of the Brooklyn office of the Health Department, which will investigate his assertion that he has injected tuberculosis germs into the young woman's neck. The matter will be laid before the counsel of the Health Board and, if he shall so advise, steps will be taken to bring the matter before the Kings county District Attorney, if it is found that Dr. Barney has done as asserted. According to the statement of the physician, the young woman, who was under treatment for some minor ailment, volunteered to permit him to inject the bacteria from the cow into her neck. The doctor describes her as an educated woman, whose parents are wealthy, and who had no other motive in offering herself as a possible sacrifice on the altar of science than the good of humanity. The operation, he says, was performed Saturday evening, November 9th, the culture from the cow being placed under the skin on each side of the neck, just above the clavicle. He said no effects had yet appeared. The cow, which was imported from Canada, had shown typical signs of tuberculosis after having been inoculated with human tubercle bacilli.

Damages for the Death of a Physician.—The second appellate division of the Supreme Court of New York holds, in the case of Ericius vs. the Brooklyn Heights Railroad Co., that it cannot be said that an award of \$15,000 damages is excessive for causing the death, through negligence, of a physician about fifty years old, who was earn-

ing, in the practice of his profession, \$175 a month.—*Journal of the A. M. I.*

No Skene Hospital.—Supreme Court Justice Maddox in Brooklyn has granted an order dissolving the Skene Hospital for Self-Supporting Women. The petition says that \$300,000 was necessary to carry out the project and that only \$23,000 was subscribed, of which only \$3,261 was paid. The hospital was to have been erected as a memorial to the late Dr. A. J. C. Skene. The order directs the distribution of the \$3,261 among the contributors.

Grown to a Colossus Within Thirty Days.—A farmer living near Cokesbury, N. J., within thirty days has changed from a man weighing about one hundred and forty pounds to one weighing almost four hundred pounds. His weight increases four to six pounds daily. He is sixty-five years of age, and up to last summer was strong and vigorous. While making hay he was sunstruck, but in two weeks appeared to have recovered, and was about as usual. A month ago, dropsy set in, and he began to gain weight at first slowly, and then very rapidly. He is not expected to live much longer.

NEW ENGLAND.

Boston Smallpox Situation.—There were 22 cases of smallpox reported by the Boston Board of Health for the week ending November 9th, three of which were fatal. This makes 115 cases reported since last July. The chairman of the board said that the hospital in use has a capacity of 50 or 60 patients. This hospital is well fitted up, and possesses the best means for the comfort and well-being of patients. All patients able to be taken to the hospital are taken in. It is a matter of only a few hours from the time a case is known until it is comfortably situated in the hospital, that the house from which the case is taken and all infected things therein are disinfected, and all persons known, or supposed to be exposed, vaccinated and watched until the stage of incubation for this disease has passed. Cases are constantly occurring as a result of exposure to unrecognized and unreported cases of smallpox. There can be no question as to the importance of immediate vaccination for all who have not yet had this duty performed, and that revaccination is equally necessary for most people over 10 years of age who have not recently been vaccinated. Offices for free vaccination are open daily.

An X-Ray Lawsuit.—A physician of Willimantic, Conn., has brought suit against a Boston company, to recover damages for burns received while testing an X-ray machine sold to him by the defendants. Expert testimony has brought forth remarkably contradictory opinions. The majority of the witnesses believe that static electricity, reasonably used, is perfectly harmless. The suit has not yet been settled. The physician was severely burned, and his practice has suffered since.

The Floating Hospital.—The Boston Floating Hospital, incorporated September 23, held its first annual meeting November 5th at Young's Hotel. Two contributions toward the endowment fund have already been received, \$5000 from a Somerville lady, and \$500 representing the "Caroline P. Adams memorial." About \$2500 has also been received for the new boat fund. The need of a new hospital boat is imperative.

A Scientific Man Honored.—Alpheus H. Packard, M. D., Ph. D., LL. D., was tendered a reception at the University Club, Providence, R. I., in recognition of the honors recently conferred upon him by scientific societies of England and America. Speeches were made and a poem pertaining to the occasion read.

For a New Hospital.—Dr. Cogswell, formerly port physician of Boston, founder and superintendent of the great hospital system at Long Island, has purchased the valuable estate in the Middlesex Fells Reservation, known as the Langwood Hotel, for the purpose of establishing a general hospital. This magnificent country place embraces 10 acres of cleared and wood lands, located directly in the heart of the reservation of 3500 acres of hills, groves, and uplands, all of a wonderfully wild and picturesque character, including that superb sheet of water known as Spot Pond. The hospital will be known as Middlesex Hall, and any reputable physician may send his patients there. It is located about five miles from the center of Boston.

Smallpox in New England.—Beside the cases of smallpox in Boston 44 cases are reported at St. John, N. B. Great care is being exercised in the examination of all passengers arriving at Portland, Me., by boat, or at Vanceboro, Me., by rail. It is possible that some of the cases discovered in Boston brought the infection from St. John.

WESTERN STATES.

Cars to Isolate Consumptives.—The isolation of consumptives on railroad trains is planned in Chicago. Railroad men admit the present danger of the spread of disease and refer the matter to the Pullman Company, which controls the sleeping cars. The plan for reform was promulgated as the result of numerous protests against the peril in journeying with men afflicted with phthisis. Separate coaches should be used. A communication was read from the Travelers' Protective Association objecting to the practice of allowing sufferers from phthisis to occupy space in sleeping cars and coaches with persons not afflicted. Consumptives, they suggested, should be isolated so far as possible by the railroads, and not allowed in cars where they mix with other passengers. The evil is largely confined to trains going to Colorado, New Mexico and Arizona, where the mild climate is sought, and all persons traveling thither from Eastern points are exposed. Recently a proposition was made to officers of one of the roads operating out of Chicago to establish a consumptive cure in the pine woods of Northern Wisconsin. The officers of the road declined to encourage the project on the ground that the transportation of diseased persons to and from the camp would be objectionable to other passengers, and would tend to hurt the business.

The Ohio Valley Medical Association held its sixth meeting on November 11 and 12, 1901, at Henderson, Ky.

St. Francis' Hospital, Peoria, Ill.—The new St. Francis' Hospital, occupying a commanding position on the East Bluff, was opened to the public October 10th, and thousands passed through the five-story stone fireproof structure, erected at a cost of \$115,000. It is under the direction of the Sisters of the Order of St. Francis. The interior is finished in quarter-sawn red oak, with the finest operating-room, entirely of marble, in the West. The hospital received a large number of valuable gifts on its opening day, and its formal dedication by Bishop Spaulding will take place at a later date.

Michigan Board of Health.—The next general conference of health officials in Michigan will be held in Ann Arbor, Michigan, November 21 and 22, 1901. The attendance of a number of officials is expected.

Fire in a Smallpox Hospital.—Eighteen smallpox patients, confined in the City Detention Hospital, Des Moines, Iowa, were forced to flee for their lives from the burning structure, November 7th. Policemen, fearful of acquiring contagion, were at first slow to seize the escaping patients. Firemen, having an equal dread of the disease, were also chary about approaching the flames, but all conquered their fear when it was seen that the lives of the unfortunates were in danger. Eventually the police corralled the inmates of the pesthouse and kept them under guard on a vacant lot a half block away. Three of the patients were suffering so severely from the disease that they were unable to walk, and it was due to the heroism of fellow-sufferers who carried them out of the flames, that these three were rescued. The wind was blowing and the thermometer stood below freezing. It is feared that the exposure will result in several deaths. Efforts to induce neighbors to throw open their homes to the diseased persons were unavailing. As a last resort a squad of policemen, armed with hatchets and saws, set to work preparing huts for temporary shelter. Neighboring property owners threaten injunction proceedings.

SOUTHERN STATES.

Medical Society of Virginia.—At the thirty-second annual meeting of the Medical Society of Virginia, held November 5-7, the following officers were elected for the ensuing year: President, Dr. R. S. Martin, Chatham; vice-presidents, Drs. L. Lankford, Norfolk, R. I. Griffin, Bosle City, and S. W. Dickinson, Marion; secretary, Dr. L. B. Edwards, Richmond; treasurer, Dr. R. T. Styll, Newport

News. Dr. J. It. Gildersleeve, the retiring president, and Dr. T. D. Crothers of Hartford, Conn., were elected honorary fellows. The executive committee elected were Drs. Upshur, Hoge and Irving of Richmond, Claiborne of Petersburg, and Culpepper, of Portsmouth. The delegates to the American Medical Association to serve for two years were Drs. Gildersleeve and Edwards.

Appointment.—The news has come from New Orleans that Dr. Gordon King has recently been appointed professor of otology, rhinology, and laryngology in the Polyclinic School of Medicine.

The Southern Surgical and Gynecological Association held its fourteenth annual session, November 12, 13 and 14, 1901, at Richmond, Va.

The Army Medical School has begun its sixth annual session in the Army Medical Museum, Washington, D. C. Nineteen student officers are to take a five months' course of study in military surgery, hygiene and medicine, microscopy, hospital corps drill and first aid.

The Brazos Valley Medical Association met in Calvert, Texas, November 12 and 13, 1901.

Memorial Hospital, Richmond, Va.—The corner-stone of the Memorial Hospital of Richmond was laid on November 5th in the presence of a number of physicians who will be connected with the institution. The walls of the hospital are going up rapidly and the contract calls for its completion next July.

The Maryland State Medical Society will hold its annual meeting in Baltimore, November 19th.

More About Mosquitoes.—Dr. G. M. Corput, assistant surgeon, U. S. M. H. S., has found that the china ball tree prevents the breeding of mosquitoes to a great extent. While he publishes only the results of his preliminary experiments, this result seems plain. He hung cans of fresh water in thickets of oak, pine, palmetto and china ball trees in Georgia. In all except the china ball trees the mosquitoes bred readily. He expects to carry his investigations further.

MISCELLANY.

Tonkin Medical School.—The governor-general of Indo-China has decided to establish a medical school for the natives at Hanoi. He will erect a hospital for natives, and will appoint two professors, an army surgeon and a physician.

International Sanitary Congress.—At the last Pan-American Medical Congress it was decided to hold a sanitary congress in Havana this year. Announcement has just been made that the congress will be held February 15, 1902. It is proposed to meet once every three years to discuss international sanitation. The prime movers in the organization of this congress were Drs. Wilde, of Argentine Republic, and Wyman, of the United States.

Molokai Leper Colony.—There are now 909 lepers and 164 clean persons at the Molokai leper settlement in Hawaii, according to a report received from Chief Quarantine Officer Cofer, in charge of the Marine Hospital work in Hawaii. All these are housed, fed, clothed and governed for \$80,000 a year. He praises the hopeful and cheerful way in which these people resign themselves to their fate and points out that such contentment can thrive only on a comfortable mode of life and good treatment. He made careful inquiries as to the chances of infection of the clean people working among the lepers. The general opinion was that in time they would become lepers. In the last ten years, however, only ten clean residents have become lepers. The Board of Health has initiated a new system for preventing the lepers and their relatives and friends from embracing and kissing each other, by marching the visitors immediately from the steamer landing to a corral with a double fence. The friends are compelled to remain inside this inclosure and lepers gather around and talk through the bars. Visitors are permitted at any time under this system, instead of only once a year, as formerly. The results of known exposure to leprosy show an uncertainty as to the chances of individual infection, which makes the disease one of the most difficult to operate against. Women are said to be less liable to it than men. The oldest three patients at the settlement arrived in 1874, 1875 and 1879, respectively. The recruits to the settlement each year during the last decade range from 132 in 1890 to 85 in 1900, showing a

gradual decrease, despite the fact that the hunt for lepers through the islands never before has been so vigorous.

Cremation.—The time required to heat a furnace for the purpose of cremation is generally three hours. The degree of heat of a furnace for cremation purposes is about 2500° Fahrenheit. The body is reduced to ashes in from an hour and a half to two hours. The coffin, with the exception of the glass and trimmings, is incinerated with the body, except in the case of metallic caskets, then the body is removed from the casket. There is no odor while the body is being consumed. When the casket containing the body is placed on the carriage just before being sent into the furnace it is covered with an alum-soaked cloth, so that it may not catch fire while being transferred to the furnace. Within three minutes after the casket and body has been placed in the furnace the whole becomes a mass of flames and then a mass of cinders at the end of the time stated.

Smallpox a Foe to the Insurgents.—The following report has been received under date of October 21 from Captain Thomas Perry, of the battleship Iowa, which has been lying at Panama watching the progress of affairs in that quarter. "I have the honor to report that at this moment activities are taking place on the part of the insurgents who have until recently been in the neighborhood of Chorrera. It is said this movement on the part of the insurgents had been forced upon them before they were ready by the prevalence of smallpox in their camp at Chorrera, the disease so decimating their numbers that they were obliged to go to save their entire force from becoming decimated."

Death of Dr. Kerr.—On August 10th, in Canton, China, Dr. John G. Kerr, who had been a medical missionary for nearly half a century, died of dysentery. For forty years he was connected with the Canton hospital, but left a few years ago to take charge of an insane asylum which he established in Canton. His surgical work was renowned, but one surgeon in the world having surpassed him in the number of operations performed for stone in the bladder.

Obituary.—Dr. J. N. Adkins, at Lampasas, Tex., October 6, aged 68 years—Dr. James J. Flynn, at Milwaukee, Wis., November 2—Dr. Hiram Tuttle, at Tacoma, Wash., October 9—Dr. C. J. B. Hirsch, at Audubon, Minn., October 16—Dr. Ralph E. W. Lerch, at Mt. Gilead, Ohio, October 8, aged 27 years—Dr. Lorenzo Firmin, at Findlay, Ohio, October 13, aged 94 years—Dr. H. K. Hershisser, at Tiffin, Ohio, October 8, aged 70 years—Dr. Frederick Loeber, at New Orleans, La., October 18, aged 62 years—Dr. John P. Bishop, at Charlestown, W. Va., November 5, aged 42 years—Dr. E. L. Diefenderfer, at Milwaukee, Wis., October 27, aged 62 years—Dr. John D. Dunning, at Webster, N. Y., October 27, aged 75 years—Dr. Dennis W. Porter, at Decatur, Ill., October 23—Dr. Peter Hewetson, at Amanda, Ohio, October 26, aged 79 years—Dr. R. D. Blackmore, Iowa City, Iowa, October 26, aged 27 years—Dr. Robert T. Bush, at Gallatin, Tenn., October 27, aged 65 years—Dr. C. M. Spalter, at Long Island Sound, N. Y., November 7 aged 27 years—Dr. Samuel S. Gnile, Fond du Lac, Wis., November 8, aged 74 years—Dr. George W. Burke, at Newcastle, Ind., recently, aged 70 years—Dr. Robert S. Hamilton, at Staunton, Va., November 9—Dr. C. H. Orton, at Chicago, Ill., November 8, aged 84 years.

GREAT BRITAIN, ETC.

The Mortality of Children in South Africa.—The English newspapers show that during September, while only 447 adults died in the Boer refugee camps in South Africa, the deaths of 1964 children are reported. Great Britain seems to be killing so many children in these detention camps that the country can only be repopulated by immigration. This high mortality among children occurs in spite of all that is done by the English officers to alleviate the condition of the Boer women and children.

Country Hospital for Children.—Funds are now being raised in Liverpool for the erection of a Country Hospital for the Chronic Diseases of Children. Mr. T. S. Timmis has contributed \$5,000.

The Sixth Intercolonial Medical Congress of Australasia will be held at Hobart, Tasmania, February 17 to 22, 1902. There will be general discussion on cancer. "Intercolon-

ial" is no longer applicable, and the name will probably be changed.

The Plague in England.—From Glasgow and Liverpool comes the news that bubonic plague has been stamped out. The last cases of the disease reported reached the hospital November 1st. There has, however, been a suspicious death upon a steamship at Hull. Indications seem to point to the plague as the cause of death.

Another Bequest to the Glasgow Hospitals.—By the will of the late Mrs. Janet Rodger, \$40,000 has been bequeathed to the various Glasgow hospitals.

The Vegetarian Society.—At the 54th annual conference of the Vegetarian Society, held in Manchester, October 21, it was shown that the society had made but little headway during the 53 years of its existence. There were but 59 members received last year. The statement was made that a large number of members had died during the year, surely an unusual result when one considers the claims made for vegetarianism.

The Plague in Bombay.—In spite of the hot weather there has been a continued increase in the number of deaths from plague throughout Bombay early in September. This increase was probably due to the onset of the rainy season. The only other increase noted in India was in Mysore.

Smallpox in London.—The present epidemic, instead of decreasing, has suddenly shown a marked increase, 79 cases having been reported in three days. The centres of infection have become widespread throughout London, and vaccination and revaccination are being widely practiced. This is, however, more among the wealthy than among the poor. The present invasion will probably educate the public upon the value and necessity of vaccination.

The John W. Garrett International Fellowship.—A fellowship has been founded by William Johnston in connection with University College, Liverpool, in memory of the late John W. Garrett, of Baltimore, with the title of the "John W. Garrett International Fellowship in Pathology and Physiology."

Obituary.—On October 21, John Halliday, a graduate of Guy's Hospital, one of the oldest physicians in Leeds, died of apoplexy. He had practiced in Leeds for over half a century.—On the same day Dr. Alfred Alpin, superintendent of the Notts County Asylum, died from heart disease, aged 47 years. He was a graduate of University College and at one time lectured on physiology at Nottingham University.—At Helston, Cornwall, B. C. Kendall died October 24th, aged 36 years. He was a graduate of the Bristol Medical School and Guy's Hospital.—Dr. W. H. Caldwell, of Coleraine, Ulster, a graduate of the Royal University of Ireland, died from hemiplegia, October 25th.

CONTINENTAL EUROPE.

University Notes.—Frankfort: The sum of 500,000 marks has been given to the city of Frankfort-on-the-Main for research work upon the etiology of cancer. Prof. Ehrlich has undertaken the work, with the assistance of Dr. Weldenreich of Strassburg.—Goettingen: The new Polyclinic for Mental and Nervous Diseases has just been opened, under the directorship of Prof. Cramer.—Leipsic: The widow of Dr. Puschmann, formerly professor of the history of medicine in the University of Vienna, left, upon her death, over \$20,000 to the University of Leipsic.—Freiburg: Dr. Bäumler, professor of medicine at Freiburg University celebrated the completion of 25 years in practice on October 31, 1901: Munich: Dr. von Voit, the renowned physiologist, celebrated his 70th birthday on October 31, 1901.—Liege: Dr. Schiffrers has just been appointed professor of laryngology, otology and rhinology.—Heidelberg: A medallion in memory of Dr. W. Kühne, formerly director of the Physiological Institute, was unveiled October 20th in the presence of the friends, colleagues and former students of the late professor.—Tomsk: Dr. A. Mysch has been appointed professor of surgery.—Vienna: Dr. Alois Monti, director of the Polyclinic Hospital, has been put in charge temporarily of the clinic for the diseases of children. Dr. Anton Drasche and Dr. Josef Weinlechner, professors in the Medical School of the University of Vienna have been retired on account of old age. They were tendered a farewell reception in their departments of the general hospital.

Plague in Russia.—A cablegram was received November 11 at the office of the surgeon general of the Marine Hospital service, saying that plague had appeared at Odessa, Russia.

Congress of Russian Naturalists and Physicians.—The eleventh Congress of Russian Naturalists and Physicians will be held in St. Petersburg, December 20-30. But three sections are concerned in medical subjects, one for anatomy and physiology, one for scientific medicine, and one for hygiene. The committee in charge consists of Professors Menschutkin, president; Inostranzew, vice-president; Borgmann and Schewjakow, executive committee.

The Paris Morgue.—This low building is situated behind the Cathedral of Notre Dame, directly upon the Seine where its two branches unite. The main room contains glass show cases in which the bodies lie while awaiting identification. They rest upon stone tables, while decomposition is prevented by artificial ice, made from calcium chloride and ammonia. To the right of this show room are the offices of the director. There are many photographs of the unidentified dead in the show room, and back of it is a small room, its walls covered with drawers in which repose more unidentified bodies, also kept cold by artificial ice. Next is a room containing a pile of coffins of all sizes; then comes the amphitheatre where the demonstrations in medical jurisprudence are given by Dr. Brouardel and his assistants. There are some small rooms, one for funerals, another where criminals are confronted with the bodies of their victims in the presence of the authorities. Formerly a reward was offered for bodies drawn out of the water; but this was almost an inducement against life saving. Now 25 francs are given for each person rescued from drowning, while only 15 francs are paid for a dead body brought to the morgue. Morgue is derived from an old French word meaning "countenance hautaine," since it was the custom in former times to keep all prisoners outside the prison for some time, that their countenances might be studied for later recognition. Throughout this one story building is heard the swish of the waters of the Seine below.

Inventor's Peace Prize.—Under the terms of the will of Alfred Nobel, the Swedish engineer and chemist who first applied nitro-glycerine, dynamite and blasting gelatine as explosive agents, who died in 1896, \$2,000,000 of his fortune of \$10,000,000 was left as a fund to provide prizes for the advancement of science. The interest on the \$2,000,000 was divided into five annual prizes. Prizes Nos. 1, 2 and 3 are to be awarded to the persons making the most important discoveries in physics, chemistry, physiology or medicine. Prize No. 4 is to be given to the person making the best literary contribution upon the subject of physiology or medicine. Prize No. 5 will be awarded to any person who has achieved the most or done the best thing looking to the promotion of the cause of peace throughout the world. These prizes are open to any person in any part of the world. Although not officially announced at Christiania it is regarded as assured that Dr. Henri Dumant, the Swiss physician who was recommended by the Swedish Riksdag to the committee intrusted with Nobel's annual prize for the encouragement of peace and arbitration, will be awarded that prize this year.

Alcoholism.—A French physician, Dr. Bourneville, reports that among 2072 boys and 482 girls suffering from idiocy, imbecility and various paralyses, there were 40 per cent. in whose cases alcoholism in one of the parents or both was found.

Scarlet Fever in Bremen.—Almost four hundred cases of scarlet fever have been reported in Bremen during August and September, with over 50 deaths. Half of the patients that died were between the ages of one and five years, and only four were over 20 years old. The epidemic is now well under control.

Obituary.—Dr. George Näher died of paralysis of the heart suddenly on October 24th in Munich.—Dr. T. Ynnez y Font, professor of medical jurisprudence in Madrid.—Dr. J. H. Chievitz, professor of anatomy in Copenhagen.—Dr. J. Grosser, founder and editor of the *Deutsche Medizinische Zeitung*, died in Prenzlau, October 26, aged 66 years.—Dr. Julius Cesar Häntzsche, whose death in his 75th year is reported, was formerly physician to the Russian embassy in Persia.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

October 26, 1901. (No. 2130).

1. The Harveian Oration. NORMAN MOORE.
2. The Communicability of Human Tuberculosis to Cattle. SHERIDAN DELEPINE.
3. Note on the Results Obtained by Antityphoid Inoculation in the Case of an Epidemic of Typhoid Fever. A. E. WRIGHT.
4. Primary Chancre of the Tonsil. W. H. KELSON.
5. On Asylum Administration and Nursing. J. B. SPENCE.
6. A Discussion on the Role of Toxic Action in the Pathogenesis of Insanity. W. F. ROBERTSON, J. B. SPENCE, R. JONES, E. GOODALL and E. S. PASMORE.
7. Some Conditions of Success in the Treatment of Neurasthenia. A. T. SCHOFIELD.
8. Remarks upon the Anthropological Examination of Asylum Patients, with a scheme for the Same. E. GOODALL.
9. The Evolution of a Perceptive Centre. F. W. ELDRIDGE-GREEN.
10. The Physical Basis of Melancholia. J. TURNER.
11. The Modern Treatment of the Insane. T. S. TUKE.
12. A Discussion on Feeble-minded Children: Diagnosis and Treatment. F. WARNER, G. E. SHUTTLEWORTH, F. M. POPE, F. BEACH, H. ASHBY, W. L. ANDRIEZEN and E. B. ANGELL.
13. Colitis or Asylum Dysentery. T. C. SHAW.
14. On Modern Asylum Plans. R. H. STEEN.
15. Periscopic Lenses. A. S. PERCIVAL.
16. A Plea for the Occasional Performance of the Operation of Depression in Cases of Cataract. H. POWER.
17. The Essentials of a Test for Color Blindness. F. W. ELDRIDGE-GREEN.
18. Notes on Ophthalmic Conditions Resulting from Modern Gunshot Wounds. L. V. CARGILL.
19. Remarks on the Treatment of Ulcer of the Cornea with Hypopyon. R. WILLIAMS.
20. Treatment of Hypopyon Ulcers of the Cornea. R. J. HAMILTON.

1.—See abstract from *Lancet*, October 26, 1901.

2.—Delépine obtained from the Manchester Consumption Hospital 6 specimens of human tuberculous sputum containing bacilli belonging to the following types: (1) long, slender, showing typical metachromatism; (2) thick, staining almost uniformly; (3) short, in clumps; (4) short, staining badly. With this mixed sputum the author experimented on four calves. One was inoculated directly into the lung, the second was inoculated subcutaneously, the third was inoculated into the peritoneum, and to the fourth milk was given containing 10 times as much sputum as the others had received by inoculation in two meals. The calf that was inoculated into the lung died on the sixth day; it was found to have generalized tuberculosis, not due to the inoculation. The calf that was inoculated under the skin of the leg, died on the sixth day. There was marked enlargement of a gland at a distance of 5 inches from the seat of inoculation, but no other traces of tuberculosis. Living and virulent tubercle bacilli were found in the affected gland. The calf that was given 50 cc. of mixed sputum with its food in one day, died 26 days after the ingestion of the tuberculous material. There was no trace of tuberculosis in any organ except the glands connected with the alimentary canal. Virulent tubercle bacilli were found in the esophageal glands. The calf that was inoculated in the peritoneal cavity gave a definite tuberculin reaction 68 days after the inoculation. The post-mortem examination was made 70 days after the inoculation and showed marked tuberculosis of the peritoneum, extending gradually to the pleura and the pericardium. No other organ was affected with tuberculosis except a few of the lymph-nodes connected with the peritoneum. Therefore, of the 4 calves experimented upon only 2 survived long enough to allow definite results to be obtained, and these 2 calves had contracted tuberculosis

as the result of ingestion of or peritoneal infection with human tuberculous sputum. [J. M. S.]

3.—See abstract from *Lancet*, October 26, 1901.

4.—Kelson reports a case of primary chancre of the tonsil. [J. M. S.]

6.—Toxic action is by far the most important factor in the pathogenesis of insanity. Robertson further says that the large majority of cases of insanity are not primarily diseases of the brain at all, but are dependent upon the action of toxins derived from elsewhere, that affect the functional activity of the cortical nerve cells by disordering their metabolism, and often permanently damaging or even destroying many of them. The common view that the mental disease is the primary condition, and that any accompanying bodily disease is secondary is, in general, founded upon an erroneous conception of what is taking place. [J. M. S.]

7.—Sympathy is one of the first conditions of success in the treatment of neurasthenia, and one of the chief causes of failure is the want of it. Patience, perseverance, firmness and tact are also essential factors. Hysteria or neuromimesis is distinctly a disease of the subconscious mind, of unconscious suggestion; and it is in this very fact of its unconscious nature that it differs from all forms of malingering, which always imply conscious fraud. Power of attention to details is also an element of importance. Cases of nerve irritation or exhaustion dependent upon external causes or upon physical lesions are purely physical. On the other hand, cases of neuromimesis contain a distinct mental element. The point to determine in cases of neurasthenia is the stage and the character of the disease; as to whether the nerve centers are in a state of irritation or of exhaustion or of both. If the cause of some of the symptoms remains obscure, carefully consider the question of sexual agencies, both physical and mental, natural and unnatural, for the extent to which this latter is a factor is little known to many physicians. With neurasthenics, east-iron systems of treatment stand condemned in theory and in practice. Neurasthenics cannot, as a rule, be cured in their own homes. Hypnotism, however, is of doubtful benefit in the majority of neurotic cases. [J. M. S.]

10.—In a number of cases of insanity, Turner found alterations in the pyramidal and giant nerve cells of the cortex that were identical with those produced in the hypoglossal and anterior cornual cells of animals by severing their axis cylinders. Except in traumatic cases, in which the axis cylinder has been separated from the cell, he only met with this alteration in certain cases of melancholia, of dementia following melancholia, in a few cases of dementia of alcoholic origin that rapidly terminated fatally, or in some cases of imbecility. Observations on the distribution of this change appear to indicate that the cause that brings it about is not a general one, operating on all parts of the nervous system. The change early affects the afferent cells, notably those of Clarke's column; and although, at first, the efferent tracts of the cord are unaffected, ultimately they begin to degenerate, and apparently this degeneration starts in those outlying parts of the cell farthest removed from its body. The author is of the opinion that the conditions of the pyramidal and giant cells found in these cases of melancholia are brought about by depriving them of the afferent impulses that normally pass to them. [J. M. S.]

12.—Feeble-minded children are estimated at about 1% of the school children in Great Britain. In making a diagnosis of a case said to be feeble-minded, Warner looks for the presence of signs of brain defect as apart from the fact of mere mental dulness and ignorance. As points in making a physical diagnosis we may look to (1) developmental and physiognomical signs, (2) nerve signs and indications of the general characters of brain action and (3) conditions of the body, the organs of special sense and general health. In commencing the treatment of a feeble-minded child we aim at removing the abnormal nerve signs in detail, and, at the same time, at improving the normal character of spontaneity and controllability. Andriezen referred to 4 points in the discussion: (1) The difficulty of diagnosis of feeble-mindedness in an infant of 12 months or less, the chief manifestations being the lack of variety and spontaneity in its movements and inability

to imitate; (2) the importance of development of the kinesthetic life by manual and industrial training, which seemed to reform young criminals with defective intellect very effectually, and had also proved useful in idiot asylums; (3) the fact that imitation might be the cause of faulty habits and "tic" in children, and that cure could in some cases be effected by removing the child from the source of imitation; and (4) the necessity of further developing the plan of classification of the lunatic and the degenerate, and especially the need of institutions for moral imbeciles and allied forms of degenerative and impulsive insanity which were not fit to be at large. Angell said that there are 2 types of stigmata, the anatomical and physiological. A single anatomical defect, such as a malformed ear or a highly arched palate, is of little importance, but the association of such stigmata is highly significant of defective cerebral development. [J. M. S.]

13. Ulceration of some parts of the intestines is acknowledged to be by no means an uncommon thing in asylums, but it is quite independent of overcrowding, and Shaw does not think that it depends either on the food, or the sewage farms, on the habits of the patients, or always on the presence of a bacillus of a particular type. He believes that there is a degeneration of the mucous coats of the intestine due to nerve degeneration, and that as ulcer of the stomach occurs without apparent cause, so we may have ulceration of the intestines without its being septic in origin. Ulceration in the intestine may occur without diarrhea or dysentery, and these latter may be present when there is no ulceration in any part of the intestinal canal. Diarrhea is, as a rule, more common in the outside world than in asylums. It appears that there is such a thing as *asylum dysentery* or *diarrhea*; but the author is of the opinion that all cases of colitis, with or without ulceration, are not primarily bacterial in origin. He does not deny that bacteria are secondarily present, and that then the cases may become infectious if the discharges are not properly treated and the nursing is insufficient; but he contends that there will be in asylums and among the insane a condition of degeneration, attended or not by diarrhea or dysentery, that is liable to occur at any time, especially in the more degraded and chronic types of insanity, which no amount of care, either in nursing, diet or general hygiene, can prevent. [J. M. S.]

LANCET.

October 26, 1901.

1. Note on the Result Obtained by Anti-Typhoid Inoculation in the Case of an Epidemic of Typhoid Fever which occurred in the Richmond Asylum, Dublin.
A. E. WRIGHT.
2. The Effects of Lead upon the Lead-Workers in the Staffordshire Potteries.
FRANK SHUFFLEBOTHAM.
3. Acute Dilatation of the Stomach, with Illustrative Case.
H. CAMPBELL THOMSON.
4. Acute Retro-Pharyngeal Abscess of Infants.
S. VERE PEARSON.
5. A Case of Compound Fracture of Both Jaws.
H. WRIGHTON.

1.—Wright gives an account of the results obtained by anti-typhoid inoculation in the case of an epidemic of typhoid fever which occurred in the Richmond Asylum, in Dublin. The first case of typhoid fever in this epidemic was observed on August 7, 1900. Cases developed amongst the inmates and nursing staff; toward the end of December 54 cases of typhoid fever had occurred. Soon after the beginning of the epidemic anti-typhoid vaccination was begun and a total of 511 persons were inoculated. Only individuals under the age of 55 were subjected to the inoculation and none of the nursing staff underwent the operation; .75 cubic centimeters constituted the dose. On September 26, 29 cases of typhoid fever had occurred in the uninoculated and seven cases of fever had developed in the inoculated individuals. An account of the histories of the cases which had developed in the inoculated individ-

uals is given. In the brief summary he states that "analysis has shown that of the inoculated persons attacked by the disease the first had certainly developed the fever before inoculation; the second had almost certainly contracted the infection before inoculation; and the third and sixth had also probably contracted it before inoculation. In the case of the fourth and seventh patients, if the infection was, as would seem probable, contracted subsequently to inoculation, it must have been contracted immediately afterwards, while the patients were still suffering from the effects of the operation. Thus the fifth patient would appear to have been the only one among the seven inoculated patients attacked who contracted the infection after the clinical symptoms due to the operation had passed off." Out of a body of 655 susceptible individuals consisting in part of inoculated and uninoculated subjects, six cases of typhoid fever occurred in the inoculated and 29 in the uninoculated. On Nov. 30th, the date of the completion of the inoculations, 504 individuals had been inoculated and in this group no case developed between this date (Nov. 30) and December 24, when the last case of enteric fever occurred. In the same period between November 30th and December 24, 114 persons were not subjected to inoculation, and five from this group contracted the disease. The writer states that these facts bring out in a striking manner the comparative immunity of the inoculated. [F. J. K.]

2.—Shufflebotham gives an account of the effects of lead upon the lead-workers in the Staffordshire Potteries. He has made a systematic examination of the workers employed in 13 factories in Staffordshire potteries in order to determine the state of health of the lead-workers. The total number of people employed in these factories is between 6000 and 7000, out of this number 528 are engaged in lead processes. In his article he has inserted a number of tables (1) showing diseases affecting some of the individuals; (2nd) an extensive table which deals with the lead lines upon the gums; (3rd) one showing the number of pregnancies in lead-workers' wives who have never aborted; (4th) another showing the number of pregnancies and miscarriages in lead-workers' wives who have aborted; (5th) another showing the number of pregnancies in women working in lead; (6th) lastly a table showing the number of pregnancies and miscarriages in women working in lead who have aborted. The author reached the following conclusions which are quoted in substance: "1. That of the 527 lead-workers I only met with one case of lead-poisoning. 2. That individual symptoms, which at first sight might have been attributed to lead poisoning, were found upon closer examination to be due to other causes. 3. That the health record of the lead-workers was excellent (the complaints I have mentioned are for the most part only minor ailments). Of 348 men, 198 have not lost a single day's work through ill-health from any cause whatever since they commenced to work in lead, and the same may be said of 90 out of 124 single women; 26 out of 55 married women have only been absent through confinements. 4. That the general condition of the work people was good and would compare favorably with that of a like number of workers in any average healthy trade. 5. That the 91 operatives who had worked in lead for over 20 years were not suffering from any ill-effects from their employment, although they had worked for years under practically no regulations. 6. That it must always be remembered that lead-workers are subject to the common ailments of life just in the same way as other people." [F. J. K.]

3.—Campbell Thomson discusses "dilatation of the stomach with illustrative cases. During the past three years this author has observed four cases of dilatation of the stomach, death being due to this condition. The diagnosis was confirmed by post-mortem examination in each case, and he believes that while this condition is an uncommon one, it is more frequent than generally supposed. He has

also collected six cases from literature. He states that there are various degrees of severity of this condition, slighter forms being met with not infrequently in the acute specific fever. Emphasis is laid upon the statement that the treatment of the recorded cases seems to have been of no avail. The introduction of the stomach tube was followed by no permanent improvement. Hypodermic injections of strychnia lessened the tendency to collapse, and feeding per rectum was always practiced. He remarks that perhaps dilatation of the stomach is a local manifestation of a total collapse and that the condition may be more common than is generally supposed. [P. J. K.]

4.—In reporting a number of cases of **acute retropharyngeal abscess** of infants S. Vere Pearson discusses the diagnosis and treatment of this condition. It is one which is not as infrequent as is generally supposed. Reference is made to several cases in which incorrect diagnosis has been made, the condition being mistaken for laryngeal diphtheria. The youngest patient which the author has seen suffering from this condition was seven weeks old. If the condition is thought of, and careful examination made, a diagnosis is not difficult. The condition is usually found in patients under two years of age. The voice becomes muffled, there is difficulty in nursing, with apparent pain on swallowing; the child is restless, has loss of appetite, and not infrequently there is a purulent nasal discharge either preceding or accompanying the condition. Considerable obstruction to respiration is common. The presence of tender and enlarged glands in the cervical region tends to make one think of laryngeal diphtheria. A careful examination of the neck will show one side fuller than the other, and an inspection of the pharynx will show the tonsil more prominent on one side than on the other, and the postpharyngeal wall will appear to be pushed slightly forwards. A visual examination of the throat is difficult and the best way of locating the abscess is by palpation with the forefinger. Sometimes it is difficult to obtain fluctuation. The cause of the abscess is an acute post-pharyngeal suppurative adenitis. The association of a purulent nasal discharge is interesting in this connection. The form of abscess described by the author is of course quite distinct from the chronic retropharyngeal abscesses due to spinal caries. The abscess should always be opened through the neck behind the sternomastoid muscle. The incision should be made as near as possible on the same level as the centre of the swelling or a little below this point. The guiding landmarks in the operation are the transverse processes and the anterior surface of the vertebral bodies. Palpation can be made with one hand in the mouth and the other in the wound. Having located the abscess it should be opened after the manner of Hilton. [J. H. G.]

MEDICAL NEWS.

November 9, 1901. (Vol. LXXIX, No. 19).

1. Some Further Remarks on Hospital and Dispensary Abuses and Mismanagement, with an Account of the Means to be Employed to Mitigate or Arrest Them. THOMAS J. HILLIS.
2. The Relation of Sunshine to the Prevalence of Influenza. HOWARD S. ANDERS.
3. A Case of Suppurative Otitis Media Following Influenza; Operation without Opening of the Antrum; Complete Lack of All Constitutional Symptoms of Inflammatory Disease. O. WATERMAN.
4. A Case of Raynaud's Disease. W. A. HALEY.
5. Three Obstinate Cases of Empyema of the Maxillary Antrum, Cured with Injections of Solutions of Nargol. A. G. WIPPERN.
6. Treatment of Typhoid Fever. BASIL M. TAYLOR.

2.—H. S. Anders, in his article on the **Relation of Sunshine to the Prevalence of Influenza**, states the following conditions tend to increase the prevalence of influenza: (1) abnormal increase in the barometric pressure, and in

the absolute range between the highest and lowest pressures for the epidemic months; (2) sudden frequent and extreme alterations of abnormally high and low temperature ranges; (3) comparatively lower relative humidity during the prevalence of sharply epidemic influenza; (4) diminished precipitation, but short periods of unusual fog-giness alternating with periods of dryness; (5) marked prevalence of strong northerly winds frequently alternating with very calm weather; (6) predominance of relatively clear and sunny days during exacerbations of influenzal attack; these attacking periods having invariably been preceded by sudden thaws and relatively warm, damp, murky weather. [T. M. T.]

3.—O. Waterman reports a case with the following interesting points: (1) While the entire mastoid process had been destroyed during the rapid course of the disease, and while the insertion of the sternocleidomastoid muscle had been undermined, the bone surrounding the antrum and the antrum itself were found free from granulations and healthy; (2) Notwithstanding the severe destruction of tissue the patient was free from all those symptoms which accompany severe inflammatory conditions. [T. M. T.]

4.—W. A. Haley, after reporting a case of **Raynaud's Disease**, calls attention to the following points: That this disease is not confined to the young, nor is it devoid of fever, even before necrosis begins. Neither is it necessarily a benign disease. Either from the intensity of the pain, or from some other cause, there resulted at times an elevation of temperature which is thought not to be in Raynaud's disease. There seemed to be an effort on the part of nature to circumscribe the disease, as is noticed in erysipelas of the skin, not by a line of demarcation and a raised margin, but by a close blending of the normal with the pathological skin; but the process continued to involve new tissue. The macroscopical examination of the affected limb within an hour after amputation presented the following points of interest: the cut ends of the arteries and veins had lost but little blood; the skin maintained almost its original cyanotic appearance; the large vessels retaining their identity, while the smaller ones were lost in the tissues, which had every appearance of bruised tissue. Several clots of blood were removed from the long saphenous vein; one of the clots was some three or four inches in length and was removed by laying open the vein and lifting it out, it being well organized. [T. M. T.]

5.—A. G. Wipperfurth prefers **nargol**, a compound of silver, to silver nitrate for the reason that the nitrate coagulates the albumins of the tissues forming a protective covering over underlying structures. Its action is superficial in the treatment of purulent inflammations of mucous membranes. This is a peculiarly unfortunate circumstance, inasmuch as the germicidal and alterative effects of the drug are thereby limited to the surface of the membrane, while without penetration of the remedy into its structure the disease cannot be cured, although it may be held in abeyance for a period. [T. M. T.]

6.—B. M. Taylor, in the **Treatment of Typhoid Fever**, divides the disease into two classes: (1) Those who are healthy prior to the acute disease, and (2) those who have had some chronic disease for years. In the first class we have an opportunity to show our skill, or put the patient into the second class for the next case of fever. He lays great stress upon the proper food and the digestive tract, and says first remember the stomach and then the colon. [T. M. T.]

MEDICAL RECORD.

November 9, 1901.

1. Some Observations on the Symptomatology and Differential Diagnosis of Apoplexy; with Reports of Several Illustrative Cases.

THEODORE DILDER.

2. Some Remarks on the Etiology of Apoplexies.

W. K. WALKER.

3. Concerning the Clinical Significance of the Klebs-Loeffler Bacillus. ADOLPH RUPP.
4. A Case of Death from Ether Anesthesia, with Autopsy and Microscopic Study. HARLOW BROOKS.
5. Practical Results with One Thousand Cases of Nitrous Oxide and Ether Narcosis. H. W. CARTER.

1.—Diller believes that the occurrence of apoplexy, with the production of either paralysis or loss of consciousness, is far more common than a reading of the standard text books would lead one to believe. He referred to the case of a priest, aged 47 years, who suddenly became slightly clouded in his consciousness; but, recovering himself quickly, noticed that he was blind to the right. Ophthalmologic examination showed that the left halves of both retinæ were blind. He also referred to two cases of apoplexy of the central vessels of the retina and points out that such a condition is sometimes the forerunner of an apoplexy of a cerebral vessel. Apoplexy may manifest itself by a hemiplegia alone, without a loss of consciousness. He referred to a case of apoplexy producing loss of consciousness and prolonged mental disturbance, but not paralysis. He referred to a case of thrombosis with secondary softening, in which the diagnosis of brain tumor was made; to a case of cerebral softening in which the diagnosis of hysteria was made; and to a case of hemorrhage into the frontal lobe attended with violent and prolonged convulsive movements in which the diagnosis of hysteria was made. Apoplexy may be a symptom of paralytic dementia. He referred to a case of apoplexy in the pons and to one of apoplexy in the cerebellum. [J. M. S.]

2.—Walker discusses the etiology of apoplexy. Appreciation of the far-reaching and destructive influences of the various poisons upon blood-vessel walls, should lead to prompt, energetic and prolonged treatment of one known to have been subjected to their influence; and when family history reveals inherited instability or vulnerability of nervous tissue, early appreciation of the significance of the vague symptoms of disturbed circulation within the brain will enable us to do much to prevent the more serious developments and complications which we are so powerless to cure. [J. M. S.]

3.—Rupp concludes: (1) That clinically there are two kinds of diphtherias; those having the Klebs-Loeffler bacilli present and those having none. (2) That the character or quality of the Klebs-Loeffler bacilli that may be present in any case of diphtheria does not prognosticate its course or termination. (3) That Klebs-Loeffler bacillary diphtheria may be so mild as to simulate a simple tonsillitis, and yet the most virulent Klebs-Loeffler bacilli be present. (4) That virulent Klebs-Loeffler bacilli may be present in the throats of healthy people never doing any harm to the persons harboring them, nor harming in any noticeable way or manner those who have come into close and intimate contact with the bacilli-infected people. (5) That the Klebs-Loeffler bacilli are found associated with other bacteria in other diseases than diphtheria, but that they fail to exert any appreciable influence on the progress and decline of those diseases. (6) That the Klebs-Loeffler bacilli vary much in size and shape and the quality and quantity of their toxicity is not peculiar to any particular form. (7) That the virulence or disease-promoting qualities of Klebs-Loeffler bacilli can be determined only by experimental inoculation tests. (8) That the ubiquity of Klebs-Loeffler bacilli, and their irregular and varying forms, besides the inconsistency of their toxic qualities make it impossible to grant them any primary specific etiological importance in the pathogenesis of clinical diphtheria. (9) That the necessary influences and the favoring conditions, besides other factors of which we are still ignorant, enfold within themselves the secret of the real causes of clinical diphtherias. [J. M. S.]

4.—Brooks reports a case of death from ether anesthesia. The patient had a compound fracture of the forearm, which exposed the wrist and elbow joints, accompanied by rather extensive laceration of the muscles of that member. The autopsy showed interstitial myocarditis of moderate degree, complicating functional cardiac hypertrophy; chronic arteriosclerosis of marked degree in the aorta, but not extending to the smaller vessels,

excepting those of the heart; submeningeal edema of slight extent, limited to the cerebral vertex; pigmentation of the ganglion cells of the cerebral cortex and a similar condition of the cells along the floor of the fourth ventricle. [J. M. S.]

5.—The main advantages of nitrous oxide as a preliminary to ether are its almost perfect safety and its rapid and pleasant action; while the principal disadvantages of ether are its disagreeable pungent odor, its irritability to the respiratory mucous membrane, and the slowness of the onset of anesthesia. In using the two in combination or succession, the pleasant and rapid action of the gas supplants the prolonged disagreeable sensations of the first stage of ether inhalation. The number of patients who cannot take gas and ether Carter believes is exceedingly small. In neurotic patients, in children and in old people, the method is particularly valuable. In all pulmonary diseases, provided the heart is not affected, the use of chloroform is preferable to the administration of gas and ether. [J. M. S.]

THE NEW YORK MEDICAL JOURNAL.

November 9, 1901. (LXXIV, No. 19.)

1. The Treatment of Cutaneous Epitheliomata. CHARLES W. ALLEN.
2. The Future of Gynecology as a Special Branch of Surgery. ELY VAN DE WARKER.
3. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.
4. Muscular Atony an Important Factor in Uterine Displacements. HENRY C. COXE.
5. Devitalized Air Toxemia, a Prime Cause of Tuberculosis. CHARLES DENNISON.
6. Curies of the Spine; an Analysis of a Thousand Cases. J. HILTON WATERMAN and CHARLES H. JAEGER.

1.—C. W. Allen concludes his article as follows: (1) Cutaneous cancer can be traced in almost all instances to preceding local irritation; (2) While other causes may be operative, it is not unreasonable to assume that infection may be one source of irritation occasioning cancer; (3) Benign epitheliomatous proliferations of infectious nature transmitted by contagion lend weight to this view; (4) Cancer is curable, but the disease may be allowed to progress until the patient no longer is; (5) No treatment short of the most radical measures should be tolerated; (6) In the application of caustic pastes and subsequent cauterizing dressings we possess a method not alone radical, but one which is in many conditions preferable to the knife; (7) The earlier treatment can be applied, the less likelihood is there of recurrence or of subsequent outbreaks in other parts due to cancerous tissue which has been left behind; (8) The X-ray as a means of treatment bids fair to prove quite as effective as caustic applications. [T. M. T.]

5.—C. Denison, in his article quotes the views of Dr. E. O. Shakespeare as follows: (1) It never has been, and never can be, shown that the *bacillus* is the "sole" cause of all the conditions classed as tuberculous, for other causes which produce susceptibility are entitled to quite as much consideration. (2) It is wholly presumptive to say because "the lungs are so generally involved" that the disease is almost exclusively transmissible through the expectoration. The function of the bronchial glands, the part played by the delicate unventilated lung tissues, and the retention of other poisons than the supposedly inhaled bacilli, all these facts need to be considered. (3) The statistics of Biggs and Johnson cited a large portion of humanity as having been at some time, or in some degree, infected with tuberculosis, and that, too, increasingly with the advanced age of the individual, an increase which, taken with the evidence of H. Schreiber, that new-born infants do not react to the tuberculin test, shows that the human race probably starts out free from the disease. This ought to prove, or at least to suggest, that there must have been a condition precedent to this disease acquired during life from peculiar environment. Such a fault of our civilization, if we can only find and acknowledge it, will explain the frequent occurrence of this disease. Then, to the reflective mind, this most fatal scourge of the human

race is as clearly due to non-conformity to healthful environment.

6.—J. H. Waterman and C. H. Jaeger, in their studies on *Carles of the Spine* have observed that the family history plays an important role in this condition. They found that over ten per cent. of the cases had tubercular parents. Another interesting observation was that the children of "Lungers" in Colorado were very rarely affected with tubercular diseases of bones and joints, and in the rare cases in which the children had hip or spine disease it ran a very mild course, hardly ever coming to the formation of abscesses and progressing favorably without any apparatus. They also found that children admitted to the wards of hospitals in a non-tubercular condition after leaving the hospital would develop hip or spine disease after some months. It was found that the disease varied in situation with the age of the patient. In the first five years of life it was found that every vertebra down to the sacral was affected with the exception of the first cervical. During the ages of ten to fifteen the highest vertebra found to be affected was the fourth cervical. After the fifteenth year the highest vertebra affected was the first dorsal and that only once. After the twentieth year the highest was the fourth dorsal and over thirty years the fifth dorsal. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 7, 1901.

1. Medical and Sanitary Conditions in the Philippines. W. P. CHAMBERLAIN.
2. The U. S. Army System of Personal Identification. C. H. ALDEN.
3. On the Establishment of Medico-Legal Diplomas, etc. WYATT JOHNSTON.
4. The Erickson Murder. F. H. BAKER.

1.—Many new and important problems confront the American medical profession in the Philippines. With the cessation of hostilities and the establishment of permanent garrisons, barracks and hospitals adapted to the tropics must be constructed to guard the whites from the dangers of living in their present make-shift quarters. Ice machines, water distilling plants and laundries must everywhere be installed. Measures for municipal sanitation must be enforced among the native population, to protect the white man from the effects of epidemics among his neighbors. General vaccination must be vigorously carried out, and lepers must be segregated and cared for. For the benefit of the natives, dispensaries and civil hospitals must be founded, where the indigent can receive scientific treatment and proper care free of charge. For the ultimate good of both the white and the brown inhabitants, as well as for the advancement of science, laboratories should be established for the investigation of the many unsolved problems of tropical medicine. The initiative and the execution in all these matters must depend upon the American army surgeon, unless a special medical service is established to look after the civil side of medical and sanitary administration. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 9, 1901.

1. A Further Report of Permanent Catheterization. J. RILUS EASTMAN.
2. Fallacies in the Treatment of Urethral Diseases. ROBERT HOLMES GREENE.
3. New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery. G. KOLISCHER and L. E. SCHMIDT.
4. The Treatment of Pneumonia. DeLANCEY ROCHES, M.D.
5. Abortive Treatment of Pneumonia. W. L. DICKERSON.
6. Strabismus; Its Treatment. A. EDWARD DAVIS.
7. Typhoid Fever—Dietetic Treatment. LOUIS FISCHER.

1.—Eastman has employed Permanent Catheterization in 15 instances, the catheter remaining in place for more than 10 days in all, and for more than two months in two of the cases. The slight urethritis which was set up subsided

in a few days, the urethra developing a tolerance for the instrument. Catheters varying from 26 to 29 (Charrière scale) are chosen because they cause less irritation from friction than the smaller instruments and are not so apt to be dislodged. Cystitis was not produced by the catheter in any of the cases and in two in which inflammation of the bladder was the lesion for which the instrumentation was carried out, the pain and strangury were distinctly relieved. Among the reasons for draining the bladder by the permanent catheter are: the urine is removed by the natural exit; if there be a perineal defect it closes more quickly because unirritated by the flow of urine; the calibre of the urethra is maintained; the difficult and often dangerous efforts to introduce a catheter after operations on the urethra is avoided; the urine may be drained into a receptacle; the danger of urinary absorption and the danger of bacterial infection are reduced, since the area of unprotected tissue with which the urine comes in contact is diminished; pain and fever are slight; narrowings of the urethra may be removed by pressure absorption, and the procedure may be utilized for cystitis without subjecting the patient to the danger of a surgical operation. [F. T. S.]

2.—Green comments on the slight amount of real progress that has been made in the treatment of diseases of the urethra. Excluding the traumatic cases it is said that strictures requiring incision are almost never met with, certainly not in men under 40 years of age. The irrigation method for the treatment of acute urethritis makes the patient more comfortable and quickly changes the discharge into a muco-purulent exudate, but it drives the germs to the deeper layers of the urethra, increases the danger of latent urethritis, and augments the prostatic infiltration. The best treatment is to refrain from local measures for the first 6 or 8 weeks. The writer believes that gentle prostatic hypertrophy is an inflammatory enlargement and most frequently due to urethritis. He is supported in this belief by Harlow Brookes who studied 30 enlarged prostates microscopically. [F. T. S.]

3.—The authors introduce into the ureters a wire which is made of lead blended with antimony, and then skiagraph the kidneys and ureters. The course of the ureters may be determined; the location of the renal pelvis; the situation of calculi, etc. [F. T. S.]

4.—Rochester gives an account of "the treatment of pneumonia." In his article he gives a brief view of the clinical course of this disease; the chief cause of death, and includes a table which deals with a number of cases of pneumonia treated by himself and Dr. Charles G. Stockton, of Buffalo. In this series 168 cases were treated with 17 deaths—a mortality of 10.12%. In this group of cases are included individuals from all walks of life and of all ages, covering a period of a little over ten years. The following are his conclusions which we quote in substance: "1. The sustaining of the metabolic process of the individual by the administration of easily digested or predigested foods in small quantities at stated intervals, the administration of large amounts of pure water for eliminative purposes and the administration of oxygen gas by inhalation whenever the absorbing surface of the pulmonary mucosa is involved to such extent as to interfere with proper metabolic oxygenation. 2. Elimination, (a) by the liver and bowel through the vigorous use of calomel and salts; (b) by the skin through sweats by external heat; (c) through withdrawal of blood when indicated by right heart distension. 3. Stimulation of heart by strychnin, alcohol or ammonium carbonate, and in suitable cases by subcutaneous injection of normal salt solution. 4. The local treatment of the lung by leeching, wet cupping or dry cupping as indicated." [F. J. K.]

5.—Dickerson makes a plea for the use of cardiac depressants in the treatment of the congestive stage of pneumonia. The author admits that as a rule cardiac depressants are used too late, but when given during the con-

gestive stage these drugs are of value. He recommends veratrum viride, believing that it is safer than other cardiac depressants and that it is as efficient as it is safe. He advises the administration of the tincture (U. S. P.) in oft-repeated doses until the physiological effect is noticed, namely, some nausea, relaxation of the skin, and a reduction of the pulse rate and temperature. He advises not stopping its administration as soon as the exudate is formed, but to continue its use so long as the pulse is angry and the blood pressure too high. He emphasizes that the administration of this drug lessens the amount of exudate and seems to cut short the attack. [F. J. K.]

6.—See Phila. Medical Journal, June 15, 1901, page 1139.

7.—Fisher discusses a dietetic treatment of typhoid fever. This author writes that the successful management of a typhoid fever case does not depend on the administration of drugs excepting eliminatives, but depends solely on supporting the vitality by giving liquid foods of a nutritious character which are enumerated in his article. These may be given either by the mouth, rectum, or subcutaneously. (In the form of the white of an egg added to normal salt solution). He believes that acidulated drinks are not only grateful to the feverish patient but appear to inhibit bacterial action. [F. J. K.]

AMERICAN MEDICINE.

November 9, 1901.

1. Trional Fatalities. ARCHIBALD CHURCH.
2. Diagnosis and Treatment of Round Ulcer of the Stomach. N. S. DAVIS.
3. The Nature of Internal Lesions in Death from Superficial Burns. JOHN McCRAE.
4. The Bacteriology of Otitis Media, etc. JOHN FUNK.
5. A Case of Elephantiasis. JOHN M. BERTOLET.
6. Appendix Vermiformis Passed in Stool.

W. L. WALLACE.

1.—Church reports the case of a man, aged 40 years, who sprang from a family of decided neurotic tendency. In childhood the patient was of pronounced nervous temperament. In 1899, he suffered from nervous dyspepsia, insomnia, loss of weight and neurasthenia. In 1900, he had an attack of diphtheria. In September, 1900, he suffered from insomnia for which he took trional in 5-grain doses every hour for 8 hours for 3 days. Two months later he began to use trional as before. Later he began to take the drug upon his own motion and used from 10 to 20 or 30 grains a night. This drug he used almost continuously up to a short time before his death in March, 1901. It was found that the patient's urine was dark red in color for weeks. There was trace of albumin, a distinct trace of hematoporphyrin by the spectroscope and a few hyaline casts. At the autopsy the right kidney showed several small areas of interstitial degeneration. The withdrawal of the drug was followed by the disappearance of the hematoporphyrin within 48 hours. The author points out that abdominal distress and urinary derangements, including hematoporphyrinuria, indicate trional poisoning of a very grave character, and that in so-called safe doses, trional may give rise to serious even fatal toxic conditions. [J. M. S.]

2.—Davis says that in round ulcer of the stomach a reduced acidity of the urine and a well-marked alkaline wave after meal is found. The production of a large amount of acid by the glands of the stomach increases the alkalinity of the blood, and therefore reduces the acidity of the urine and often makes it alkaline. The amount of chlorids in the urine will be reduced especially during periods of digestion. [J. M. S.]

3.—From a study of fatal cases of superficial burns, McCrae concludes: (1) That the entire pathologic picture presents great similarity to the conditions found in the diseases characterized by the presence of toxins of bacterial origin in the blood. (2) That damage to the lymphatic tissue is a constant feature, but is not necessarily

focal, some cases presenting only diffuse degeneration. The patients who live but a few hours after infliction seem more likely to present a focal condition than those who live a longer time, as the condition which the author interprets as proliferation and phagocytosis is one that may rapidly disappear. (3) That the focal lesions are not a true necrosis, but rather a proliferation of the endothelial cells of the reticulum and the capillaries, and a phagocytosis by the leukocytes and endothelial cells, to which latter is due the fragmented, disintegrated appearance that suggests a true necrosis. [J. M. S.]

4.—Will be abstracted when finished.

5.—Bertolet reports the case of a woman, aged 50 years, who had a family history of tuberculosis. In the year 1878 she fell and injured her left knee-cap. Two months after the injury had, to all appearances, completely healed, her leg began to swell and rheumatic pains appeared. A diagnosis of elephantiasis was made after finding live filaria sanguinis in the blood at midnight. The necropsy showed that the lymphatics were clogged and dilated enormously and that gangrene had attacked the right foot. The author believes that the filaria were in the system from the large amount of fruit that the patient had eaten. [J. M. S.]

6.—Wallace reports a case of appendix vermiformis passed in stool. [J. M. S.]

UNIVERSITY MEDICAL BULLETIN.

September, 1901.

1. The Comparative Virulence of the Tubercle Bacillus from Human and Bovine Sources.
MAZYCK P. RAVENEL.
2. Aneurysm of the Thoracic Aorta of Traumatic Origin; Treatment by Introduction of Wire and Electricity.
De FOREST WILLARD.
3. Wax Models—Their Preparation and Uses.
JAY F. SCHAMBERG and J. FRANK WALLIS.
4. The Case Method of Teaching.
CHARLES H. FRAZIER.
5. I. On the Diagnosis of Diphtheria. II. A Double Stain for the Bacillus Diphtherie.
ROBERT L. PITFIELD.

1.—This noteworthy article was read before the British Congress on Tuberculosis, and was abstracted in this journal upon its appearance in the *British Medical Journal*. [T. L. C.]

2.—De Forest Willard reports a case of aneurysm of traumatic origin of the thoracic aorta, which was treated by the introduction of wire and electricity. The position of the tumor and the absence of pulsation in the neck, and the character of the chest sounds, indicated a traumatic lesion of the descending thoracic aorta rather than of the arch or of ascending portion, unless the dilatation was at the very origin of the vessel. As the conditions were growing worse, and rupture certainly approaching, the patient consented to accept the risks of the only operation that offered any chance of success, the introduction into the sac of a certain quantity of wire as a framework or skeleton, each coil of which might form a nucleus for coagulation, producing eddies in the sac and final consolidation. To facilitate coagulation upon and around this wire framework, the coagulating power of galvanism was brought to bear. In this operation of wiring it is essential that strict asepsis be secured, and that no elements of suppurative be introduced, since sepsis and faulty technique are the most frequent causes of death. After six or eight feet of wire had been inserted, the wire was connected with the copper conducting cord of the positive pole of a galvanic battery. The negative pole was attached to a large, flat electrode sponge-covered pad, placed between the scapulae. Five milliamperes were turned on at first, and the force of the current was increased by fives, the patient perceiving plainly each addition, and complaining of pain chiefly in the back, especially when new pieces of wire were connected. More wire was threaded in through the cannula until about twenty feet of coils were inserted. Nine weeks after the operation the man was so well, that he could not be restrained, and he left the hospital in spite of protest. Good consolidation of the anterior portion of the sac at the seat

of operation was positive. Willard makes some remarks upon the applicability of this method of treatment and its technique in aneurysm of aorta, and also gives a résumé of the literature on the subject. He thinks that ten cases have been positively benefited; one is uncertain, and while the remainder died at various periods within one year yet nearly all of those, that survived the immediate effects of the operation, were rendered decidedly uncomfortable. [T. L. C.]

3.—J. F. Schamberg and J. Frank Wallis describe **wax models and their preparation and uses**. These models have manifold advantages over pictorial representations in the flat. They serve admirably in the portrayal of cases to illustrate didactic lectures. The method of preparing these models is furnished. [T. L. C.]

4.—Charles H. Frazier discusses the method of instruction supplementary to the clinic, the ward-class and the didactic method, and gives the method of teaching as is followed in his department in the University of Pennsylvania, the case method of teaching. He believes the method encourages the student to think for himself, and develops his powers of reasoning and his ability to discriminate between the important and unimportant facts as presented in the history of a given case. It encourages the student to read more widely, to consult many authorities, and thereby broadens his scope of knowledge. The clinical histories are presented to the student as they will be when he engages in actual practice. The method possesses certain features which appeal to the earnest student, and arouses in him no little enthusiasm in the pursuance of this branch of work. In conclusion he publishes three papers prepared by a member of the third-year class, as illustrating the way in which the cases are treated. [T. L. C.]

5.—Robert L. Pitfield discusses the **diagnosis of diphtheria**, and believes that Klebs-Löffler's serum culture method is by all means the best method of positively diagnosing diphtheria. A description of the diphtheritic membrane is given. He describes the practical method in which Löffler's alkaline blue is used to stain the slide after heating, and mentions the importance of the presence of little black or bluish-black points situated at one or both poles of the bacillus, with occasionally a little point in the middle. If these point-bearing bacilli are found in the fibrin, one can be very certain that the case is diphtheria. There are many other organisms found in the diphtheritic membrane by this method, but if they contain **chromatin granules** and are curved and irregular in outline, they are diphtheria bacilli. If the case is tonsillitis, by the same method, single round coccil or strepto- or diplo-cocci are to be found, but no chromatin point-bearing little rods will be seen. Pitfield also recommends a double stain for the bacillus diphtheria. He uses three simple solutions. A.—Silver nitrate, gram 5; Aqua destill., c.c. 5; sat. sol. (alcoholic) fuchsin, c.c. 3. B.—Pyrogallie acid, gram 1; 10 per cent. sodium hydrate in water, c.c. 5; aqua destill., c.c. 10. C.—Carbol fuchsin solution, drops 10; aqua destill., c.c. 10. After making a smear on a slide or cover, carefully fix with heat, pour on solution "A," boil a minute, wait a minute, and then wash. Then pour on solution "B" and do the same; then wash and pour on "C" for a minute or two, wash, dry and examine. The organisms will appear delicately pink, of slightly uneven shades, corresponding to the heaping of the protoplasm. At one or both ends, and after in the middle, brilliantly shining black points appear, which stand out exceedingly sharp and clear. This makes a novel field of pink and black. The cell membrane appears a gray-brown of very light shade in this preparation. [T. L. C.]

VRATCH.

July 21, 1901.

1. The New Method of Medico-legal Detection of Human Blood and That of Animals, and a Few Remarks Concerning It. M. A. SCHIROKICH.
 2. On the Question of Abdominal Adhesions.
E. Ia. KATUNSKI.
 3. A Few Cases of Serious Injuries to the Head in Children. L. M. KONTOVT.
 4. Transplantation of the Ovaries. A Few Experiments on Animals. V. I. LUKASHEVITCH.
- 1.—Schirokich furnished experimental proof of the **absolute value of the method of detecting human blood**, proposed

recently by Ehrenhut and subsequently studied by Wassermann and Schütze. He immunized a rabbit by injecting various quantities of blood obtained at the Maternity Hospital from the human placenta and cord. The injections were not made at regular intervals, as prescribed by Wassermann, owing to the irregularity of the supply. At the end of 2 months the rabbit was bled from the left jugular vein and 25 c.c. of blood, or 15 c.c. of serum, obtained. Two to three drops of this serum were added to salt solutions (1.6%) of the following blood stains: (1) Blood from a new-born, on filter paper, 2 weeks old; (2) blood from an adult, on ordinary paper, 1½ weeks old; (3) the same on gauze, 2 years old; (4) blood from a horse; (5) blood from a ram; (6) blood from a bull, the last three stains were on paper, 5 days old; (7) blood from a cadaver of an adult who died of CO poisoning, on a rag, 1 year old; (8) blood from a goat, on wood, 2½ years old; (9) blood from a camel, on a rag, 2 years old; (10) blood from a guinea pig, on filter paper, 2 years old; (11) blood from a cat, on filter paper, 1 year old; (12) blood from a rabbit, on a rag, 1 year old; (13) blood from a hog, on a rag, 2½ years old. The clear solutions of Nos. 1, 2, 3 and 7 became **opalescent in about 2 minutes**; within ¼ of a hour **distinct flocculi formed** and within 1 hour a marked sediment. All other solutions remained clear during that time, but in 4 to 5 hours developed an opalescence which resulted in a sediment within 24 hours. This behavior of blood other than human is not mentioned by other observers, and while it has no practical significance from a medico-legal standpoint, it is nevertheless well to bear it in mind. **Only the changes taking place during the first hour should be taken into account.** In view of the difficulty of immunizing an animal, the author suggests that the blood once obtained should be preserved in sterile capillary tubes, or what is more practical, on filter paper. Satisfactory results were obtained with the blood dried on filter paper and kept for 1 month. [A. R.]

2.—Katunski claims that clinicians and authors of textbooks pay but little attention to **abdominal and peritoneal adhesions**, following injuries or operations. Even slight adhesions, involving important structures, may bring about a train of severe symptoms, constituting a disease which is often difficult to diagnose. His personal observations as well as the data obtained from the literature on the subject lead him to the following conclusions: (1) Peritoneal adhesions in general, and typical peritoneal adhesions, first described by Gersuny, have an important bearing on the study of diseases of the peritoneum and the abdominal viscera, including the internal generative organs of the female. (2) The subject of typical peritoneal adhesions is greatly in need of a thorough clinical investigation to clear up the cause, study the clinical picture, determine the objective signs and, finally, solve the question of treatment. (3) The great importance of typical adhesions makes it indispensable for the surgeon to establish their presence or absence in every laparotomy. (4) In view of the topographo-anatomical peculiarities of typical peritoneal adhesions and their correlation to other diseases of abdominal and female generative organs, only such operative procedures should be undertaken which would make it possible to remove the adhesions if present; otherwise the surgical intervention for the removal of symptoms will prove a failure. (5) Among the contraindications to the vaginal route for entering the abdominal cavity should be included also the presence, evident or suspected, of peritoneal adhesions. [A. R.]

3.—Kontovt reports 9 cases of **serious injuries to the head in children** from 1½ to 13 years of age. In 7 the injury was caused by a kick from a horse. The skull was fractured in all; in some the brain was seriously involved. All made a good recovery. Of the 4 children whose subsequent history could be traced, 2 showed the after-effects of the injuries. In one the development was retarded, while in the other the memory was affected. These cases demonstrate the fact that the skull of the young, owing to the osseous construction, suffers less from traumatism than that of the adult. [A. R.]

4.—Lukashevitch has done some experimental work on **transplantation of the ovaries**. The animals used were rabbits, guinea pigs, dogs and cats. The ovaries of a given animal having been removed, fresh ovaries from another were substituted, being attached by the mesovarium and left free in the abdominal cavity. The results of these experiments lead the author to the following conclusions:

(1) Ovaries on one animal may be transplanted into another, irrespective as to whether the animal is herbivorous or carnivorous. (2) The transplanted ovaries take root, are nourished and partially perform their function. (3) For a successful transplantation it is necessary: (a) an aseptic operation; (b) careful stitching of the mesovarium of the transplanted ovary, the lower half of the latter being enveloped in a fold of peritoneum so as to increase the nutrition and imitate nature; (c) two ovaries should be transplanted so as to have more ovarian tissue; (d) the ovaries should be attached at the site of the original ovaries, in the broad ligament; (e) pressure from neighboring organs on the ovaries should be avoided, also the passage of sutures through the ovarian tissues. (4) The transplanted ovaries, as a rule, do not live very long and soon begin to show retrogressive changes, such as senile atrophy characterized by vacuolization, loss of follicles and ova, thickening of the parenchyma, narrowing of the lumen of the blood vessels and thickening of their walls and at times also calcareous degeneration. (5) Such short duration of the life of the ovaries is explained mainly by the lack of nutrition, owing to the small size of the new-formed blood vessels. (6) Nevertheless, some of the transplanted ovaries, the larger and more successfully grafted ones, may live for a considerable time (3 years in the author's experiments), partially functioning and preventing atrophy of the generative organs and obesity and also improving the general condition of the patient. (7) In no case did pregnancy follow the transplantation of the ovaries, although the animals were kept together with the males. [A. R.]

ARCHIVE FUER EXPERIMENTELLE PATHOLOGIE
UND PHARMAKOLOGIE.

(Band 46, Hefte 1 and 2.)

1. Investigations Concerning the Distension of Intravenously Injected Na Cl and Na² SO⁴ Solutions. SOLLMANN.
2. The Chemical Nature of Ricin. JACOBY.
3. A Clinical and Experimental Contribution to the Diagnosis of Renal Diseases. WALDVOGEL.
4. Acetonglycosuria. MUELLELT.
5. Some Morphine Derivatives Which Produce Convulsions and Their Point of Action. BARNES.
6. The Determination of the Blood Pressure in Human Subjects. v. RECKLINGHAUSEN.
7. Compounds of Glycosuric Acid with Substances of a Fatty Series. NEUHAEUER.
8. The Fate of Atropin and Cocain in the Animal Organism. WIECHOUWSKI.

1.—Aquimolecular solutions of Na Cl and Na² SO⁴ when brought directly into the blood stream in large quantities disappear very rapidly from the blood stream; even during the injection (lasting 3 minutes) the greater portion of these salts had disappeared, and in a half hour the constitution of the blood is about as it was originally. The total quantity of blood is diminished in spite of the injection of a large quantity of fluid. The fluid and salts leave the blood stream first to enter the "tissues" and then pass out in the urine; the tissues may pass off what has entered them even before the blood has become normal again. At times large quantities of the substances injected are excreted through the intestine. The wandering of the fluid and salts up to their ultimate excretion is completed in about half an hour; the salts are excreted more rapidly than the fluid and Na Cl more rapidly than Na² SO⁴. The excretions is first very rapid, soon reaches its maximum and then falls, but remains increased throughout the experiment. The increase in the amount of blood at the immediate time of injection varies, but may be very marked. The molecular concentration of the serum, strange to say, shows no marked changes; there is slight increase in molecular concentration directly after the injection, but even this soon disappears, and the concentration may decrease if the injected salts leave the vessels very rapidly. The urine shows a molecular concentration

(in inorganic salts) shallar to that of the blood, these salts being chiefly those injected, though Na Cl carries other salts with it in greater concentration than they are found in the serum. After injecting Na² SO⁴ the urine on the contrary becomes nearly chloride-free. The concentration of the urine in inorganic molecules was inconstant but was in the beginning universally proportionate to the diuresis. It appeared probable that the plethora produced by the injection caused increased pressure in the capillaries and consequently the increased filtration processes, first toward the tissues. The urine excreted through the glomeruli is free from organic substances and hypotonic. Through osmosis the urine increases the salts which it contains until the concentration equals that of the serum, but chlorides for some reason are never coined out of the organism in quantities possessing a certain definite amount. Sollmann's work convinces him that the organic constituents of the urine are passed into the urine through a definite secretory power of the epithelium of the tubules. The total concentration of the urine is greater than that of the blood serum and the explanations offered for this are, (1) that everything passe by filtration and the concentration is afterwards raised by absorption of water; (2) that the water and inorganic salts passed by filtration and osmosis and the organic constituents reached the urine by means of a "vital" secretory act of the tubules. Sollmann adheres to the latter view chiefly because the concentration and the diuresis bear an inverse ratio to each other directly after the injection and afterwards ran parallel with the concentration maintaining a constantly and somewhat higher relative level. This can be readily explained only by considering the diuresis at the beginning as due to increased pressure, while later the excretion depends more upon secretory action and consequently the concentration becomes relatively high. The methods used in the investigation were in brief, injection of solutions of Na Cl or Na² SO⁴ in quantities equal from 63% to 521½ of the reckoned amount of blood, and making preliminary and subsequent determinations of the freezing-point of the blood serum and urine, reckoning the organic substances, the non-chlorides and the chloride substances of the urine. The latter method was thought more reliable for this study than comparing the electric conductivity of two fluids so different as are the blood and urine. [D. L. E.]

2.—Ricin was purified by repeated precipitation with ammonium sulphate and dialysis. It retained its poisonous properties and its agglutinating action upon red blood cells, though it no longer gave reactions for albumins. Hence these actions are due to some substances in the ricin which is not an albumin. The pure ricin can be preserved for several weeks at any rate. It was readily destroyed by trypsin and hydrogen peroxid while when in solution with albumins it is resistant to trypsin and but little affected by hydrogen peroxid. [D. L. E.]

3.—Waldvogel presents a series of studies of the freezing point of the urine and its relation to the total amount of urine to the Na Cl and to the total nitrogen. He bases his conclusions upon cases of nephritis, cases in which one kidney was practically destroyed by disease such as pyonephrosis, and in several of which the damaged kidney was removed and the urine studied after the operation as well, and also upon observations of persons in health and with various diseases other than nephritis, and upon experiments (nephrectomy, double and single) in animals. He decides that values obtained for the freezing-point, the freezing-point multiplied by the daily amount of urine, the freezing-point divided by the total amount of Na Cl or by the total nitrogen, are all variable and are not typical either even in inanition or after extirpation of a kidney. So far as the condition produced by double nephrectomy in animals is analogous with uremia in man, one may say that blood letting and saline or water injections do not decrease the concentration of the blood in uremia as indicated by the freezing-point. If one kidney is known to be

destroyed (as by pyonephrosis) and the product of freezing-point by total urine is still above one degree the prognosis as to the functioning power of the other kidney is good. If within a few days after a kidney extirpation the same value is found below one degree one may say that the remaining kidney is unequal to its task. His investigations did not support the view that there is an osmotic exchange of chloride containing and chloride-free molecules in the urinary tubules. [D. L. E.]

4.—As a result of animal experiments Müller believes that the glycosuria that follows acetone-poisoning is a result of the narcosis produced, and is immediately due to the reduction of bodily temperature or to the severe dyspnea. The fact that the bodily temperature is not always depressed or that there is not always dyspnea explains the relatively infrequent observation of glycosuria with acetone poisoning. It also explains the fact that other substances of the alcohol or chloroform groups in rare cases produce glycosuria, and it particularly explains the glycosuria sometimes seen after ether narcosis—i. e., it is not a direct result of the ether, but of secondary disturbances in the organism set up by the ether. Because of the abnormal reaction to Trommer's test in a number of instances Müller believes that paired glycosuric acids were present in considerable amounts in these cases of poisoning. [D. L. E.]

5.—Barnes finds that while morphoxyacetate and its homologues are relatively not poisonous, their methyl and ethyl ethers are active convulsive poisons which, in frogs and mammals, act similarly to picrotoxin. While in the frog the spinal cord is involved in the poisoning, in rabbits the only seat of poisoning is in the pons and the spinal cord. Medulla, cerebellum and cerebrum are unaffected. [D. L. E.]

6.—v. Recklinghausen describes a new instrument which he has devised for measuring the arterial pressure in clinical and experimental work when a vessel can not be opened. It consists of a broad cuff-like band of rubber which can be inflated by means of a pump which is attached by tubing. There is a metal plate over the outer side of the cuff and hence the inflation must take place inwardly. If then the cuff be placed on a limb (best the arm) and inflated, it gradually compresses the tissues until a pulse can no longer be felt below. In this way or by means of a series of tracings, one can learn the manometer reading at the time when the pressure from without overcomes the arterial pressure. Recklinghausen gives a long study of the factors influencing blood pressure and thereby influencing the accuracy of instruments used to determine the degree of blood pressure. Gärtner's instrument, he thinks, suffers from the fact that the finger ring is too narrow and often does not fit well. He has constructed a special ring, much broader and made to fit the basal phalanx, with which he states that he got much more constant and more reliable results than with the usual ring. The results from his own instrument seem to have been very satisfactory. The chief point of excellence of the instrument is that the cuff is broad and therefore a large portion of the artery is compressed at one time, thus avoiding the error attendant upon compression at one point, and secondly, the tissues of the whole circumference of the arm are compressed at one time—i. e., the compression does not act from one side alone and against varying thicknesses of tissue and different degrees of rigidity in different persons. [D. L. E.]

7.—A chance observation that the administration of fermentation amyl alcohol led to the appearance of paired glycuronic acid in the urine induced Neubauer to investigate the effect of aliphatic alcohols. Ketones and aldehydes and various other substances, practically all alcohols and ketones, various unsaturated carbohydrates and numerous aldehydes were excreted in part at least paired with glycuronic acids. This was the case with substances of the fatty series as well as with cyclic compounds, though methyl alcohol, the higher primary alcohols, and the polyatomic alcohols of the fatty series were exceptions, as were

some of the primary aromatic alcohols. Since the normal urine contains but very small amounts of paired glycuronic acid one is justified in believing that the substances investigated do not occur in any considerable amount as intermediary products of normal metabolism. [D. L. E.]

8.—Both cocaine and atropine are largely decomposed in the animal organism, cocaine much more markedly than atropine. About 5% of cocaine and about 33% of atropine pass the kidneys unchanged. Rabbits decompose cocaine completely. Egonine and tropin were looked for as decomposition products of atropine and cocaine, but could not be found in recognizable amounts. [D. L. E.]

BERLINER KLINISCHE WOCHENSCHRIFT.

July 22, 1901. (No. 29.)

1. Concerning the Development and Perforation of the After-Coming Head. W. NAGEL.
2. Contribution to the Study of Tabes in Women. P. FEHRE.
3. Concerning Some Observations of Pest in Bombay During the Present Year. M. HAHN.
4. The Changes of the Polynuclear Leukocytes in Some Infectious Diseases. H. HIRSCHFELD.

1.—Nagel's case was that of a primipara who had menstruated last on July 7th, 1901, and in whom the membranes had ruptured on April 13th, at 8 o'clock in the morning, one hour after the onset of labor pains. The patient presented various signs of rachitis and gave a history of having learned to walk only at her third year. Pelvimetry showed the following: Distance between the spines of the ilia was 26.5 cm.; between the crests of the ilia 27 cm.; external conjugate 15 cm. Upon measurement the author found the internal conjugate 8 cm., leaving a true conjugate of 6 cm. The position of the child was that of the first position, vertex presentation and from the os uteri there projected the left arm of the child and a loop of prolapsed cord which upon the arrival of the author no longer pulsated; the head had not yet entered the pelvis. The perforation of the head therefore seemed particularly difficult. As the child was not alive, Cæsarian section was not advised. The author succeeded in lifting up the child toward the anterior portion of the mother's body and perforated the posterior portion of the head. He advises this procedure in all similar cases and discusses in detail allied manipulations. [M. R. D.]

2.—Will be abstracted when completed.

4.—The author observed the changes in the polynuclear leukocyte granules in certain infectious diseases as well as the change of the tinctorial properties of the granules. He observed that they stained deeply with methylene blue in contradistinction to the normal condition. These changes were observed to be almost constant in pneumonia, measles with bronchitis, scarlet fever and in phthisis associated with high fever. The changes generally occurred at the height of the fever. Furthermore it was observed by the author that in staining with methylene blue and with methylene blue with eosin, that there were seen in the protoplasm of the polynuclear leukocytes, situated principally at the border of the cell, but also present in its centre, one or more spherical or elliptical bodies whose nature and significance have not yet become established. By triacid staining these bodies cannot be demonstrated. The question arises whether these products represent degeneration of the protoplasm or a nuclear degeneration, or, whether they are centrosomes. [M. R. D.]

July 29, 1901. (No. 30.)

1. The Question of the Heredity in Pathology. F. MARTIUS.
2. Poisoning with Carbon Bisulphide. E. MENDEL.
3. Concerning Chronic Pentosuria. F. MEYER.
4. The Frequency of Herpes Zoster. E. HOENNICKE.
5. Contributions to the Study of Tabes in Women. P. FEHRE.

1.—Will be abstracted when completed.

2.—Mendel's observations of carbon bisulphide poisoning

embrace the cases of two workmen who had been employed as vulcanizers. The following changes were noticed in consequence of the poisoning. Degenerative atrophy of the interosseous muscles in both hands and feet, and particularly in the thumbs and little fingers; weakness in the arms and legs. Anatomically the author considers the clinical picture as a poliomyelitis, which is also substantiated by other authors. Out of nine workmen in the factory the majority were affected. Experimental investigation has shown that carbon bisulphide affects various portions of the nervous system, both centrally as well as peripherally, and therefore the author believes that the lesion is not confined to one nerve area, but that it is considerably distributed. [M. R. D.]

3.—The author reports the fifth case of pure **pentosuria**, affecting a man 39 years of age, neurasthenic, markedly emaciated, with a pronounced tolerance for carbohydrates, and in whom the pentosuria was unaffected in spite of the liberal ingestion of carbohydrates. The diagnosis was made according to the so-called orcin test. In the author's case the diagnosis of **diabetes mellitus** had been made and the patient treated for it. The patient was subsequently pronounced cured in consequence of a polarization test which proved negative. The pentosuria in this case was reduced to one-half, not by either a rigid or an unrestricted diet, but by a mixed one, consisting of the ingestion of milk and definite quantities of carbohydrates. [M. R. D.]

4.—The author's observation, which embraces 164 cases of **herpes zoster** treated in ten years at Max Josef's Polyclinic in Berlin, comes to the conclusion that herpes zoster represents about 1% of all diseases of the skin. It affects both sexes equally, but shows itself particularly during youth, and that between the ages of 15 and 30; it rarely occurs in very young or old individuals. With one exception the eruption affects those regions which have the most nerve distributions, and that is the area of the trigeminus. Both sides of the body are equally affected, although bilateral zoster is rare. Epidemics occur in the spring and fall, although sporadic cases occur throughout the year. Physicians and nurses seem to suffer particularly during epidemics, but no other vocation seems to be predisposed. [M. R. D.]

5.—The author has analysed the etiological relations of **tabes**, in 47 cases affecting women. He arrives at the following conclusions: As a rule the same etiological factors found in men also apply to women. Syphilis by all means plays an eminent role in the etiology of tabes in women. The puerperal state may intensify the disease in tabetic women. The author calls attention to the facts that the increased association of women with various vocations previously held by men and the increased dissemination of syphilis appear to materially, both relatively and absolutely, increase tabes in women. [M. R. D.]

August 5, 1901. (No. 31.)

1. Puerperal Psychoses. E. MEYER.
2. Enuresis in Childhood. M. THEMICH.
3. The Priority of Cesarean Section per Vaginum.

A. DUEHRSEN.

1. The Problem of Heredity in Pathology. F. MARTIUS.
5. Human and Bovine Tuberculosis. R. VIRCHOW.

1.—Meyer observed at the psychiatric clinic at Tübingen that among 1101 insane women there occurred during six and a quarter years 51 puerperal psychoses, or 4½%. Those occurring during pregnancy were not included, but only those occurring during the puerperium and lactation. There were 11 cases of melancholia, four periodic melancholia, three circular psychoses, five paranoia, nine acute dementia, 11 katatonia, two hebephrenia, two epilepsy and one hysteria. An isolated, pure mania was not observed. The author states that there is no specific puerperal psychosis and that none of the phases represented in these conditions differ from those dependent upon the generally recognized etiology. In five cases puerperal infection and mastitis were present, and in 29 cases family history of psychoses. [M. R. D.]

2.—The author is opposed to the views that enuresis is due to muscular weakness or to local cause at all. He considers it purely as an hysterical phenomenon. Most of the children suffering from enuresis manifest a neuro-pathic family history, and not rarely other hysterical stigmata are also present. Another proof of the hysterical na-

ture of the infection is the frequent occurrence of epidemics. The best treatment is change of surroundings, isolation of the patient, faradization and the observance of hygienic principles. Other successful measures are to be attributed to suggestion. [M. R. D.]

5.—Treated editorially in *Philadelphia Medical Journal* of August 24, 1901.

August 12, 1901. (No. 32.)

1. The Employment of Subcutaneous Injections of Gelatine for Hemostasis. GRUNOW.
2. The Associated Movements of the Musculature of the Lids and Nose. BERNHARDT.
3. Cataract Operations in the Aged. MENDEL.
4. Pathogenesis of Delirium Tremens. BONHOEFFER.
5. Changes in the Central Nervous System following Ligation of the Thyroid Vessels. O. MAAS.

1.—The author reports the results obtained in 27 cases. The solution employed consisted of 2g. of gelatin to two parts of normal salt solution, the dose employed being 200g. daily, injected beneath the skin of the thigh. Grunow suggests that in addition to this method, the other hemostatics be also employed. He furthermore urges the continuance of the procedure for some time. Fever was observed in all the cases, but never any serious complications or results. If any advantage is derived, it is to be ascribed to the increase of the coagulability of the blood, caused by gelatin. The author's observations are as follows: 1. He has observed the efficacy of the procedure in hemorrhages affecting internal organs. The mild disturbances accompanying the subcutaneous injections of gelatine do not contraindicate them. 3. He urges the protracted employment of the method in all internal hemorrhages. 4. Often the procedure must be reinforced with other hemostatics. [M. R. D.]

2.—The following phenomenon was observed by the author in otherwise normal individuals: on closing the lids, and especially lightly, there is a synchronous dilatation of the nasal alae. He found it present in 15% of the examined cases. According to the author the phenomenon is to be attributed to anomalous anatomical development of the involved structures. [M. R. D.]

3.—In spite of the facts, that reclamation of the lens in the very aged at one time was largely employed, and is still to some extent, the author concludes from his observations at Hirschberg's clinic, that extraction is after all the most feasible procedure, even very late in life. His observations embrace 1645 cases of nuclear cataract, among which there were 36 patients over 80 years of age. Only in two cases were the results not entirely satisfactory. Advanced age does therefore not offer an unfavorable prognosis for cataract extraction. In very restless patients, general anesthesia may be employed. Delirium will occasionally occur, but the most serious complications are those related to the heart, lungs and bladder. In one case heart disease gave rise to pulmonary edema, which, however, was controlled by morphine. [M. R. D.]

5.—The experiments were performed on dogs. In all the examined cases degeneration was present in the spinal cord. In the brain degeneration was present, extending to the postero-lateral and pyramidal tracts. The longer the animals were kept alive after the operation, the more marked were the changes. [M. R. D.]

ZEITSCHRIFT FÜR KLINISCHE MEDICIN.

(Band 43. Hefte 1 und 2.)

1. On the Etiology of Carcinoma. E. v. LEYDEN.
2. Experimental studies Concerning Heredity in Tuberculosis. Infection of the Fetus Through the Semen Without Disease of the Mother. F. FRIEDMANN.
3. Henzin-Poisoning as an Occupation Disease. DORENDORF.
4. Contribution to the Histology and Pathogenesis of Amyotrophic Lateral Sclerosis. ERNST v. CZYHLARZ and OTTO MARBURG.

5. Metabolism with Pure Vegetable Diet. ALBU.
6. Metabolism Experiments with Convalescents.
N. SVENSON.
7. On the Diagnostic Value of the Widal Serum Reaction in Typhoid Fever. FR. TORRESEN.
8. A Case of Paralysis of the Recurrent Laryngeal Nerve Which has not Previously been Observed. A Contribution to the Diagnosis of Patulous Ductus Arteriosus. HERMANN v. SCHROETTER.
9. The Medical Teaching of Alcmaeon of Kroton.
ARTHUR KAYSERLING.

1. Leyden observed some years ago peculiar bodies in the fluid removed from the peritoneal cavity of a patient who was at that time thought to have carcinoma. The autopsy ultimately confirmed the diagnosis. The same bodies were afterward found in the fluid from cases of carcinoma of the pleura, from fluid obtained by direct aspiration of a malignant growth, and they were also found in smear preparations from the cut surfaces of numerous freshly removed carcinomata. Cultures were also obtained on fuscus crispus after 6 or 8 days, but nothing was learned from them. The bodies closely resembled those described by the botanists, Woronin and Nawaschin, as the cause of parasitic tumor growths in plants. They were large epithelium-like cells, usually showing two large nuclei and clear vacuole-like areas in the center of which was a point which took a bright red stain. They were often found in the interior of lymphoid cells in lymph-glands in the neighborhood of a carcinomatous growth. When found free in exudates they showed distinct amoeboid movement, and their structure was that of amoebae. Leyden believes that carcinoma is probably due to a protozoan infection—and these bodies are probably protozoa. Further statements concerning their relation to the etiology of carcinoma he is apparently unwilling to make.

[D. L. E.]

2.—Previously abstracted from *Deutsch. Med. Woch.*

3.—Two well-developed and apparently healthy men were admitted to the hospital with signs of poisoning. Both worked in an India-rubber factory. It was learned that in the manufacture of india-rubber goods benzine was used, and the patients had been exposed to the vapor of this substance in their work. Acute benzine poisoning is known to occur, but chronic poisoning is not described. In order to determine that the symptoms observed were actually due to benzine poisoning, Dorendorf placed animals in a bell-jar into which air and benzine vapor were passed. These animals showed symptoms closely resembling those seen in the men. Other persons who had been working in the rubber factory for various lengths of time were also found to have more or less marked symptoms. The symptoms were first more or less marked disturbance of the digestive tract, and afterward striking nervous symptoms of a somewhat hysterical type—irregular pains in various parts, paresthesias, reduction in muscular power in one or more extremities, chiefly the anus, increase of knee-jerks, pain on pressure over certain nerves, particularly the radials, nystagmus, tremor of the hands and tongue. There was also a striking blood change in the men and animals. The hemoglobin showed no change in amount or in spectroscopic reactions, and the red cells were not reduced, but granules of pigments of ochre to black color were found in large numbers in the plasma, in the red blood cells and in occasional leukocytes. The animals experimented upon showed toxic changes in the ganglion cells.

[D. L. E.]

4.—The case reported occurred in a woman who had long been a subject of tuberculosis, and died from tuberculosis while her amyotrophic lateral sclerosis was well developed, but not so far advanced as to have had anything to do with her death directly. The brain, cerebral ganglia, and spinal cord were examined microscopically by the Nissl, Marchi, Weigert-Pal and van Gieson methods. They found primary atrophy of the posterior columns and primary degeneration of the lateral columns together, the differential points in these two conditions being: In the first, simple thinning of the fibers, demonstrable only by weight, with thickening of the glia and sclerosis of the vessels, but complete absence of fatty degeneration. While in the second instance there was degeneration of the nerve sheaths easily demonstrable by Marchi, as well as by weight, slight increase of glia, very few round cells in or about the vessel

walls, and many fatty degenerated cells. The change in the vessels is of uncertain importance, as it has not previously been described. The author reviews the literature at length. They consider amyotrophic lateral sclerosis a true system-disease, and agree with Edinger's views that it is in a sense an occupation disease, i. e., that it occurs in those who, by their occupation often in connection with weakened undernourishment or actual weakening diseases, have overtaxed the regions of the central nervous system especially involved. They especially refer to v. Bortol's case in a coachman in which the first signs of the disease appeared in the thenar eminences of the two hands, that is, in the parts which he constantly overtaxed functionally.

[D. L. E.]

5.—Albu's investigations were carried out with an intelligent unmarried woman of 12 as the subject. She stated that she had been using the same diet that she was taking at the time of the experiment for over 6 years; the diet was purely vegetables and fruits without meat, fish or eggs. The average daily ingestion of nitrogen throughout the 5-days' experiment was only 5.46 gm! and the total daily caloric ration was only about 1400, and was only 37.33 to the kilo of body weight. Yet the woman showed a daily nitrogen balance of +0.37 gm., and in 5 days had retained 1.85 gm. nitrogen. It seems evident to Albu from the study of this case that a purely vegetarian diet is capable of maintaining a proper nitrogen balance, and apparently of keeping a person in generally good health. But, as he justly says, to argue from this that a vegetable diet is a thing to be recommended is ridiculous. Meat and eggs would furnish the same amount of nitrogen and of calories in much smaller bulk and in much more digestible form. There is absolutely no scientific objection to be offered to meats and eggs and other animal diets, and therefore to use vegetables exclusively is merely to overtax the digestive organs and to weary the palate, even though metabolism is properly maintained. The most interesting result of the experiment was the observation of a positive nitrogen balance with a ration of only 5.46 gm. nitrogen in the day, and only 37.33 calories to the kilo. These are the lowest figures yet obtained. Siven's subject was getting only 4.52 gms. of nitrogen and only 0.08 gm. to the kilo, and a subject of Paschal's and two of Klemperer got the same nitrogen ration per kilo, but these subjects were all getting much higher total rations, i. e., from 41.4 to 78.4 calories per kilo. Evidently the minimum possible nitrogen ration and caloric ration is not yet determined.

6.—The main purpose of Svenson's investigations was to determine whether the rapid gain in tissues and weight in convalescence which is so commonly observed is due purely to increased intake of food or to a reduction of the metabolic processes similar to that seen with chronically imperfect nourishment. It is known that even with normal or with rather small quantities of nitrogenous food convalescents tend to retain nitrogen and build up nitrogenous tissues. This is of itself not a distinction, however, as the ether foods may be so increased that the nitrogenous foods are spared and the amount of caloric units in food consumed during the day may remain very high. Svenson attacked the question at the end point, making determinations of the respiratory gas-interchange. In convalescence from typhoid fever he found a reduction of the respiratory quotient in the early stages, but the quotient soon increased with a marked increase in the values for oxygen and CO₂, and often a quotient of over 1.0 was found. Similar conditions, though less marked, were found in convalescence from pneumonia. The quotient very gradually decreases to the normal. Nitrogen, he finds, is retained in amounts even under no other circumstances, a fact often observed by other investigators. There may be absorption of large edematous or other exudates in convalescence, however, which may give rise to so large a nitrogen output as to make an apparent nitrogen balance or even an apparent loss. The increase in consumption of oxygen after muscular exercise was abnormally great in convalescence from typhoid fever, but about normal in convalescence from pneumonia. Any intercurrent affection during convalescence is likely to make conditions return to those of an earlier period of the disease itself or of convalescence. In the main the result of the investigation was to disclose the startling fact that convalescents demand and use much more food-energy than in normal persons, and the tissue increase is not the result of economy in metabolic processes,

but of increased intake of food, and if the normal person consumed as much food he would be increased still more in weight than the convalescent does. In a case of carcinoma, the ordinary processes were found at a high normal point or above it. In a case of tetanus, contrary to expectations, the oxidative processes were not increased notably, and at several examinations not at all. [D. L. E.]

7.—Tobiesen carries out the Widal reaction in watch-glasses, observing both by the naked eye and with the microscope. In 350 cases of typhoid fever he got 329 positive reactions with a dilution of 1 to 50. 17 with a dilution of 1 to 10 or 1 to 25. Two cases reacted with 1 to 5 dilution and 2 not at all. 151 cases not typhoid gave 4 positive reactions at 1 to 25 and 25 reactions at 1 to 10. 122 were always negative. The reaction was positive in typhoid during the first week in 138 of 290 cases. Tobiesen examined 20 patients who had typhoid fever from 1 to 23 years previously. All gave the reaction from 1 to 10, but only one gave it as high as 1 to 25, when as much as one year had passed since the attack. Several gave it at 1 to 25 after a year, and one at 1 to 50. Nine of these patients had been examined during the attack and had reacted then at from 1 to 200 to 1 to 700. Evidently the agglutinating power rapidly decreased after the attack. Tobiesen considers the reaction a very important aid in diagnosis, though not always distinctive. Any result is always valueless with a dilution of less than 1 to 50.

[D. L. E.]

8.—Paralysis of the recurrent laryngeal nerve is not so commonly a symptom of aneurysm as to suggest that disease at once. It of course occurs with mediastinal growths also, and Ortner has reported its pressure in mitral stenosis and regurgitation, the paralysis resulting from pressure of the distended left auricle. Schrötter doubts the correctness of this explanation, however. Kraus records a case in which the paralysis was due to compression between the left branch of the pulmonary artery and the ligamentum arteriosum. Schrötter's case was one in which a clinical diagnosis could not be established satisfactorily. Mitral stenosis and regurgitation were thought to be present, and patulous ductus arteriosus and communication between the ventricles were thought of. The interesting signs were absence of the usual dullness due to patulous ductus arteriosus, though a shadow was seen with the fluoroscope at the base on the left of the sternum; there was a presystolic systolic murmur at the apex, increasing toward the base, and loudest at the juncture of the third and fourth rib with the sternum, a diastolic murmur of rolling character at this point and a soft diastolic murmur at the apex. The murmurs were weaker at aortic and pulmonary regions, the pulmonary second sound much accentuated. The patient died of cardiac failure, and the postmortem showed a patulous ductus arteriosus and endocarditis involving the mitral tricuspid and pulmonary valves. The left recurrent laryngeal was compressed for about 1 cm. between the dilated ductus arteriosus and the aorta, and upon microscopic examination showed marked degeneration. Schrötter thinks that under similar conditions the observation of paralysis of the recurrent nerve might be an aid in the diagnosis of patulous ductus arteriosus of mitral stenosis and regurgitation could be excluded. [D. L. E.]

28. Embolism in Heart Disease. GINSBURG.

29. Brief Communications. Contributions to the Knowledge of Congenital Anomalies of the Tear Ducts.

HAMBERGER.

30. Book Reviews.

21.—Heineke puts to himself the question why perforative peritonitis runs a more severe and fatal course than other forms of inflammation of the same membrane. In order to answer this question satisfactorily he has performed a number of experiments upon rabbits in whom he produced perforative peritonitis by puncturing one of the coils of the small intestine through a minimal wound in the abdominal wall. Hemorrhage was always avoided as much as possible during this operation. The first symptoms usually appear after from 6 to 8 hours. The animals become apathetic, the abdomen distended; sometimes there is diarrhea, and occasionally a purulent discharge from the eyes. Death usually occurred in from 6 to 12 hours after the operation. The temperature behaved variably. In some cases there was a rapid fall—as low as 30°. In others it rose to 40°. At the autopsy a considerable quantity of turbid bloody fluid was usually found in the abdominal cavity. An attempt was then made to find out which system of the body was primarily concerned in the causation of death: whether the heart or the vascular system. In the first hours after the perforation, blood pressure reacted normally to various forms of stimulation. Even in the early stages of collapse the heart was able to do an excessive amount of work for a short time. In the late stages the heart was still in fair condition, but the vasomotors were paralysed. It was impossible, therefore, to raise the blood pressure. The paralysis of the vasomotors was apparently central, not peripheral. Nevertheless, there is some reason to believe that the nutrition of the heart muscle is impaired as the result of a deficient supply of blood, for when more blood is supplied its activity is restored. The effect upon respiration was very similar to that upon blood pressure. It gradually became more and more impaired, until finally it was arrested before the heart ceased to contract, as a result of centric action. Heineke therefore concludes as follows: First, the cause of death in perforative peritonitis in rabbits is a paralysis of the centres of the medulla oblongata. Second, this involves first the vasomotor centres, next the respiratory centres. Third, although the circulation is disturbed before the respiration, the latter ceases before the former. Fourth, the paralysis of the vasomotor centres is the cause of the disturbance of circulation. Fifth, the heart is not directly involved. Sixth, the circulatory disturbances are entirely analogous to those of infectious diseases. Seventh, the paralysis of the nervous centres is the result of the absorption of the products of bacteria from the peritoneum into the blood. Eighth, the mere perforation of the abdominal organs produces in rabbits some disturbance of the circulation. [J. S.]

22.—Worobjew, as a result of a careful study of the statistics obtained from various authors who have discussed the relation of rheumatism to valvular heart disease, reaches the conclusion that their figures are not based upon material studied strictly scientifically. Their results are very different, but there does not appear to be sufficient proof that rheumatism is the chief cause of valvular disease. He has therefore made a thorough study of all cases of valvular heart disease which were admitted to the hospital at Moscow, in which it was possible to determine the etiological condition. The total number of cases was 180. In 54 of these acute rheumatism was given in the history. In only 20 of these however, could a distinct relation be determined between the valvular disease of the heart and the rheumatism. In the remaining 34 cases the symptoms of valvular heart disease commenced some time after the acute attack. In 126 cases no relation to acute rheumatism could be determined. In regard to the development of valvular heart disease, in 90% of the patients it commenced in chronic form, and the remaining acutely. Comparing cases according to age it appears that the acute infectious diseases are very common etiological factors in the early stage, and various local processes such as arterial sclerosis, in the latter periods of life. Worobjew concludes therefore, that although acute articular rheumatism plays a more important part than any other single form of infectious disease, it is, never-

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21. Experimental Investigations Upon the Causes of Death in Perforation of the Peritoneum. HEINEKE.

22. The Question of the Etiology of Cardiac Defects.

WOROBJEW.

23. Notes Upon the History of the Stethoscope.

ERSTEIN.

24. Studies Upon the Doctrine of the Viscosity and Internal Friction of Living Human Blood.

HIRSCH and BECK.

25. A New Method of Investigating the Urine and Blood.

STRUBELL.

26. Investigations Upon the Bacterial Contents of the Normal Lung as an Experimental Contribution to the Etiology of Pulmonary Infections. BONI.

27. Experimental and Clinical Investigation of Functional Disease of the Intestine. Sixth Communication. The Intestinal Fermentative Dyspepsia of Adults. Insufficiency of Digestion.

SCHMIDT and STRASBURGER.

theless, less important than all the other forms together. However, the majority of non-rheumatic forms of endocarditis are probably chronic from the beginning. [J. S.]

23.—Ehstein, in a brief discussion of the history of the stethoscope mentions the fact that Laennec preferred a solid instrument for listening to the heart's sounds, and his opinion has been shared as recently as 1884, by Haupt. In the concluding part of his paper he describes a form of stethoscope that he regards as perhaps the most available for ordinary usage. This consists of a hearing piece that fits the external ear accurately, particularly the tragus, which can be placed in either end of the instrument. The external diameter of the tube, however, differs at the two ends, making it possible to apply it to large or small surfaces as preferred. It is divided in the centre. He believes that the hollow is preferable to the solid stethoscope. [J. S.]

24.—Hirsch and Beck have performed a series of experiments in order to determine the effect upon the circulation of the viscosity of the blood. It is well known that the resistance of the forward movement of the liquid in a tube depends upon the length and calibre of the tube, and the internal friction of the liquid itself. Poiseuille has devised a variety of formulas to express this resistance, for a description of which we must refer the reader to the original article. The method employed was essentially that of Oswald. The instrument consists chiefly of a tube in the form of a U with a long and a short end. In the upper part of the former there are two dilatations. The U part is also wide, and ends in a small bulb with a round opening at the top, in which a long straight tube can be placed. To the upper end of the long tube a rubber tube with a mouth-piece is attached. The blood drawn from a vein is placed in the U, and is then drawn up until the constriction in the dilatation at the upper end of the long tube is passed. The apparatus is placed in a thermostat and the pressure upon the rubber tube released. The time required for the blood to pass the constriction is then noted and the result is expressed in the ratio required for fresh analin to pass the same point. The details of the experiment cannot be given here, but the author reaches the following conclusion. There is no relation between the specific gravity and the viscosity of living human blood, although in a general way a diminished specific weight corresponds to a diminished internal friction. The viscosity of the blood is influenced not only by the corpuscular elements but also by the viscosity of the serum. The relation of the normal viscosity of the human blood, of specific weight from 1.045 to 1.055, is about 5:1 to that of water at 38°. [J. S.]

25.—Strübel has sought for some method of rendering the investigations of the physical properties of liquids more readily determined for clinical purposes, than are any of the methods now employed by physicists and chemists. In order to determine the refractive index of liquids he uses an instrument he has devised, which consists of a small hand telescope whose magnifying power is about 10 diameters. In the lower end of this telescope a prism of certain definite formula is placed. This may be immersed in liquids, and inclined until the refractive index of the liquid can be readily determined. However, as Strübel was anxious to take the refractive index of blood, a second prism was constructed with a concave undersurface, by which it is readily possible to determine the refractive index of a single drop of liquid. A great number of experiments were made upon urine, apparently normal but of different specific gravity, and from cases of various forms of renal disease, upon solutions of urea, glucose, and the various salts found in the urine. He finds that the refractive index is a specific quality that does not necessarily vary as do the specific gravity and the freezing point. Experiments made upon the serum of horses showed that it is possible to detect very slight alterations in the strength of the dilution by this method. Strübel concludes that the determination of the refractive index is easy, exact, and constitutes a new physico-chemical constant. It is to be hoped that for physiological and chemical, as well as for clinical and pathological questions, a new criterion can be obtained as soon as the method has been thoroughly worked out. It is particularly available for investigations upon the blood. [J. S.]

26.—Not satisfied with the condition of our knowledge of the bacteriology of the lungs, Boni has undertaken a series of experiments in order to determine whether actual sterilization exists in the lungs of human beings and

various animals. The technique was as follows: After opening the thoracic cavity the lungs were drawn forward with sterile pincers, the visceral pleura thoroughly scarred with a red-hot knife, and then portions of the subjacent pulmonary tissue cut out and placed in various solutions, an effort being made to avoid the larger bronchial tubes as far as possible. The portions of the lungs in bouillon cultures were then thoroughly crushed with sterile instruments, and the bouillon divided into 3 portions, one of white mice, one for the inoculation of agar plates, and one for the intra-peritoneal inoculation of guinea-pigs. Other portions of the lung were examined histologically in order to determine whether an inflammatory process existed or not. Practically 5 forms of bacteria were found. The *Diplococcus pneumoniae*, the *Streptococcus pyogenes*, the *Staphylococcus aureus* and *albus*, the *Bacillus pneumoniae* of Friedländer, and the *Bacterium coli commune*. He examined the lungs of a child who had died about 24 hours after a severe scalding. Thirty-four hours later the autopsy was performed and the *Staphylococcus albus* and the *Diplococcus pneumoniae* were found in the cultures and in the inoculated animals. As however, experiments upon human beings always contain a certain element of doubt, he performed a larger series of experiments upon the lungs of hogs obtained from the slaughter house, and found in 20 cases, only 6 completely sterile. In the others one or more varieties of micro-organisms could be found, some of which were virulent, and some harmless. Similar experiments were also made upon 10 apparently healthy guinea pigs, and their lungs were found almost invariably sterile. Boni is convinced that his positive results cannot be ascribed to contamination during the operation. He thinks it would be remarkable if the surface of the pulmonary alveoli which are perpetually in communication with the outer air, should be sterile. He summarized his results as follows. First, the lungs of guinea-pigs are usually free from germs, but in many cases may contain microorganisms, including such as are pathogenic; second, the lungs of recently killed animals (hogs) contain, in the majority of cases, germs, many of which are pathogenic. The most common of these is the pneumococcus. It is therefore certain that the lungs of healthy men in most cases contain a variable number of bacteria, among which the pneumococcus is most common. Fourth, the virulence of most of these forms is diminished. Fifth, in the healthy lungs of animals the *Bacillus tuberculosis* is not present. [J. S.]

27.—Schmidt and Strasburger continue their contribution to the fermentative phenomena of the contents of the intestinal tract. The studies in this instance concern the so-called fermentative dyspepsia of the intestines of adults. For this purpose various diets are given, essentially the same as those used by the authors in their previous experiments upon the subject of fermentation. Their results are based upon the study of 11 cases; 3 entirely healthy; 4 with fermentative dyspepsia, and 4 representing the transitional form. In general their results are as follows. In fermentative dyspepsia the total quantity of the dry feces is about twice the normal quantity. The quantity of nitrogen is increased; the amount of fat is about normal; the quantity of digested carbo-hydrates is greatly increased. The clinical picture of this condition they describe as follows. The patients are usually in middle life; their subjective disturbances are very indefinite, and they appear to exaggerate their suffering. Sometimes the tongue is coated; the breath is heavy; the abdomen slightly distended, and occasionally slightly tender. With the exception of the depression of the ensiform process there is no abnormal resistance. The stomach contents are usually normal in constitution. Defecation usually occurs from 2 to 4 times a day; the feces are semi-solid and exhibit the characteristics that have already been described. The condition showed some tendency to improve, and the treatment consisted of the administration of astringents and antiseptics. According to the previous investigations of Schmidt and Strasburger it appears that the seat of this condition is in the small intestine. The changes are probably functional rather than organic. The cause is still indefinite. The important feature in diagnosis is the occurrence of early fermentation which usually ceases after 24 or 36 hours. The absence of symptoms of gastric or cholic disease is also important. The prognosis is rather doubtful; many of the patients are improved by strict diet,

but the treatment always requires a long time, and the patients are apt to relapse. The histories of the cases are appended to the article. [J. S.]

23.—Ginsburg has studied the records of 250 cases that have come to autopsy in the clinic at Zurich. Eighty-five of these cases had been complicated by embolism. Emboli were found in 62 cases in the kidneys; in 53 cases, in the brain; in 11, in the lungs; in 3, in the mucous membrane of the intestine, and in the superior mesenteric and pleural arteries; in 2 cases in the skin, and in one case each in the iliac artery, the tibial, brachial, coronary arteries, the cerebral pia mater and in the uterus. Embolism had occurred 131 times. Of course in many of the cases there were multiple emboli. There appeared to be no particular relation to age. In the cases from 18 to 20 years embolism had occurred 4 times, that is, in 50% of all cases of this age. In the more advanced ages the proportion of the cases of embolism was sometimes more, but usually less. Regarding the clinical symptoms the most interesting were those in relation to embolism in the brain. All of them came on suddenly, with the ordinary characteristics of an apoplectic attack. In 9 cases unconsciousness remained until death. In one case recovery occurred, and in the remaining 5 the clinical details failed. Embolism of the superior mesenteric artery came on with intense pain in the abdomen, collapse, and in one case, considerable bright red blood in the stools. In both cases there was vomiting of blood. The author also describes some other interesting cases of embolism of the brachial or pleural arteries, in the extremities. [J. S.]

29.—Bamberger describes the case of a man, 27 years of age, who apparently had never wept from the left eye. A small opening was observed lying about 3 cm. to the outer side of the external of the eye, into which the sound could be passed for a distance of a half a cm. About every 10 minutes a tear-drop appeared at this opening and rolled down the cheek. Methods employed to stimulate the secretion of saliva had no effect on this, and it appears to be an abnormal opening connecting with the left lacrimal gland. [J. S.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

July 18, 1901.

1. A Cured Case of Tetanus. E. v. LEYDEN.
2. Four Cases of Tetanus. HERBALD.
3. On the Epidemic of Smallpox in Berlin. KLEINE.
4. An Apparatus for Pasteurizing Milk at Home. A. HIPPIUS.
5. The Topography of the Brain. (Conclusion). WALDEYER.
6. A New Syphilis Bacillus.

JUSTIN de LILLE and LOUIS JULIEN.

1.—The case which Leyden reports is interesting because it was apparently carried by the use of tetanus antitoxin. The patient was a man of 22 who was received in the hospital on the third day after he had shown the first signs of tetanus. He was given 5 c.cm. of antitoxin the same day by sub-dural infusion, after 10 c.cm. of cerebro-spinal fluid had been removed. The latter, when injected into mice, produced tetanus and demonstrated that the man actually had this disease. The symptoms of tetanus were not severe when the man was injected, excepting that he had a temperature of 105.8° F. Soon after the injection the temperature fell, and on the next day and subsequently there was but very slight fever; the pharynx-cramp also was much improved soon after the injection. Leyden has never seen a case of tetanus previously in which the temperature reached so high a point and in which recovery occurred. For this reason and because of the apparently rapid and favorable response of the fever and other symptoms to the injection, he decided that the serum saved the man's life. He states that the man gave a history of tetanus two years before, and refers to this as indicative that the patient had not acquired any immunity (permanent immunity at any rate) to the disease from a previous attack. It is stated, however, that tetanus was not caused in animals after injecting the man's blood, and that the cerebro-spinal fluid caused the first symptoms only after six days. It seems within the range of possibility, therefore, that these facts may indicate that the man had acquired some immunity and that his recovery was due to this

quite as much as to the serum, especially as his symptoms were all mild except the fever. The case was interesting from an etiological standpoint. No point of entrance could be found and it was thought to be possibly an instance of respiratory infection. No tetanus bacilli could be found in the sputum. [D. L. E.]

2.—The cases reported by Herbold are of no special interest excepting that they indicate the existence of many opportunities in China for infection with tetanus through the excessive uncleanness of the Chinese. Herbold expresses some hope that tetanus antitoxin may in time become sufficiently cheap to allow of its use as a prophylactic in cases in which tetanus might occur. He has used it in one or two instances in which he feared the possible development of tetanus, and the disease did not appear. Naturally, since tetanus does not occur after every wound, this does not show that the antitoxin had a prophylactic action. Two of the patients with actual tetanus received antitoxin "with good effects," but both died. Of the other two, one, a mild case, ended in recovery, and the other, which was severe, proved fatal. [D. L. E.]

3.—Since the end of April there have been twelve cases of smallpox in Berlin, a city usually entirely free of the disease. When isolated cases do turn up, they almost always occur in Russian or Italian immigrants, or in persons who have been in personal contact with Russians or Italians. Berlin, and Germany in general, are so well protected by vaccination that the disease almost never appears in natives unless imported from countries where vaccination is not properly insisted upon, and the chief sources of danger are the people of the two nations mentioned. This small epidemic was no exception. The first known case occurred in a railroad employé, who in his occupation frequently came in contact with foreigners and probably acquired the disease in this way. All the cases afterwards reported could be traced with much probability to this first case. In several instances infection evidently took place through the medium of persons who were still in the incubation state of the disease. In some instances the contagion was almost certainly carried through a chain of two or more insusceptible persons, finally reaching one who was susceptible. The wide distinction of the cases throughout portions of the city separated by great distances was remarkable. In persons who had been vaccinated or revaccinated the case was not so severe; of the unvaccinated, several, including a six months old child, died. One child was vaccinated after infection and the eruptions of smallpox and vaccinia were afterwards present coincidentally, but the variola was mild. It was noticed that several cases came from two houses which were separated by a third house. The immediate source of infection for these cases was thought to be a case in this third house, which had been severe chickenpox, but which was almost certainly smallpox. The chief ordeal of the epidemic was that every one in an infected house or who has in any way come in contact with a case should be vaccinated at once, no matter when he was last vaccinated; and, furthermore, all cases diagnosed chickenpox should be reported at once and investigated by a medical health officer. [D. L. E.]

4.—The apparatus consists of a tin vessel large enough to hold five milk bottles and surrounded by an air jacket. The bottles are placed in the vessel, water is passed in around them and warmed by a petroleum lamp to a temperature of 70° C., as indicated by a thermometer which goes with the apparatus. The vessel is then covered. The temperature of the milk does not go above 60° C. at first, but after the covering the apparatus, both milk and water reach a temperature of 65° C. in fifteen minutes after the heating is stopped. If a lamp is now placed under the apparatus the air-jacket becomes heated and the contents of the apparatus can be maintained at about 65° C. for as long a time as desired. It is best, after the pasteurization has been completed, not to keep all the milk in the apparatus but to remove all but one bottle, the latter being given the child at its next feeding after cooling properly. This bottle is then replaced by another. This so-called "fractional pasteurization" is recommended as a very successful means of producing asepsis without causing chemical changes in the milk. The results of analysis of the fat, sugar, casein and phosphates are given,

and seem to show practically the same chemical conditions before pasteurization as after, even when the process was carried on as long as twelve hours. (To be continued.) [D. L. E.]

6.—The authors claim to have found the specific cause of syphilis. Their studies were carried out with blood from syphilitics, the blood being removed from a vein with a syringe. They found the same round bodies that had been found by others (Levi, Loeb, etc.) but attempts at making cultures of these bodies or their injections into animals were without results. It is known from previous work that coagulated blood of syphilitics does not seem to have infection proven when injected into susceptible persons. The authors therefore used blood plasma of syphilitics and serum obtained from artificially produced blisters, and state that they isolated a bacillus. The organism was cultivated on various media. It is a polymorphous bacillus, 5 to 8 micron long and 0.15 to 0.3 micron in width, sometimes thread-like. It takes ordinary stains but should not be fixed at a temperature over 60° C. Osmic acid and saturated bichloride solution containing some acetic acid are the best fixatives. It does not decolorize by gram. It clouds a gelatine medium, liquefies gelatine. On agar and glycerin and peptone agar it forms moist, creamy colonies of greenish color. On solid media the colonies are invisible. It does not coagulate milk, but precipitates the casein. It produces no pyocyanin or indol. Old cultures appear under the microscope to be entirely granular; inoculations into animals were usually positive even then, however, and the authors believe that these granular bodies (those described by Levi, Loeb, etc.) constitute the resistant element of the organism. Their reasons for considering the organism to be the cause of syphilis are as follows: It is found in syphilitics who are in the florid stage; it gives an agglutination reaction with the blood serum of syphilitics and does not with non-syphilitics; it produces symptoms and lesions in animals which are closely similar to those seen in man; it fixes the alexine of animals inoculated with syphilitic blood plasma; its injection into persons who have syphilis produces no result; both in man and in animals the bacillus disappears at the time of death. [D. L. E.]

WIENER KLINISCHE WOCHENSCHRIFT.

July 18, 1901. (XIV Jahrgang, No. 29).

1. The Influence of Food Upon Uremia. ALEXANDER STRUBELL.
2. The Diagnostic Value of Specific Precipitates. RUDOLF KRAUS.
3. Lightning Stroke and Electric High Tension. S. JELLINEK.

1.—After a full review of the literature upon food in acute and chronic nephritis, Strubell details his experiments upon 5 rabbits and 18 dogs, all of which had their kidneys removed, to produce experimental uremia. The statistics follow in full. He concludes that convulsions often accompany uremia in animals, contrary to von Limbeck's opinions; that animals, in which uremia is induced experimentally, live longer upon carbohydrates than upon albumen, fat, etc. From his experiments, Strubell shows that uremia in animals resembles uremia in man. Therefore he believes that when uremia is threatened in acute or chronic nephritis, a diet of carbohydrates, or at least of vegetables, should be given from time to time, once or twice a year. [M. O.]

2.—Kraus details his series of experiments in the formation of specific precipitates when filtered cultures of colon bacilli are added to coliserum (the serum of horses immune to colon bacilli), making agglutination tests at the same time. He concludes that homologous agglutinating coliserum forms a specific precipitate with the filtrate of related colon bacilli; that filtered colon bacilli, which will not agglutinate heterologous coliserum, will not cause specific precipitates; that filtered colon bacilli, which agglutinate heterologous coliserum in small quantities, give very little precipitate when much serum is used; with serum which gives typical precipitates with homologous colon bacilli, the formation of precipitates is wanting in this heterologous nitrate; that agglutinating cholera serum which shows typical precipitates with filtered cholera bacilli, gives no precipitate

with nitrates of vibrios which are not agglutinated by cholera serum, that filtered vibrios, which are agglutinated by a small quantity of cholera serum, show but a few flocculi with cholera serum, which forms a typical precipitate with filtered cholera bacilli; and that the specific precipitates, from these conclusions, possess as great a diagnostic value as does the agglutination itself. [M. O.]

3.—Jellinek reports the histories of 10 people and two animals struck by lightning. The first case, a man of 20, was found dead, with his clothes untouched, only his collar showing burns. On the top of his head the hair was burned off down to the neck, where there was a deep burn. There were burns of the back, buttocks, hips, legs, etc., and one of the third degree in the lower abdomen, scrotum, and penis, strictly confined to the left half of the body. The thoracic organs were found hyperemic, the abdominal organs anemic. Jellinek believes that the burns were caused, not by direct flames, but by the great internal resistance offered by the human body. Where the current entered remains unknown. Perhaps the severe burns occurred where the skin was especially moist from rain or perspiration. After reviewing the different theories advanced to explain death from lightning stroke, Jellinek states that the thermic effect of the electric current, with the consecutive increase in volume of the cerebro-spinal fluid, may play an important role, or the commotion may cause compression of the medulla. Experimental work upon the subject is also detailed, and other cases are reported with diagrammatic illustrations. In one case lightning caused a peripheral sciatica only. One stroke of lightning affected each of three individuals in a different manner. From experiments Jellinek found that not only the tension, but also the strength of the current will cause the burn. The current always seeks the road which offers the least resistance. But the way by which the current comes is as important as the strength of the current. Many works and experiments are quoted. [M. O.]

CENTRALBLATT FUER INNERE MEDIZIN.

July 27, 1901.

A Substitute for the Kieldahl Method of Estimating the Nitrogen of the Urine, to be Used for Clinical Purposes. A. JOLLES.

The methods carried out by adding 5 c.cm. of distilled water to the same amount of urine, taking 5 c.cm. concentrated H₂SO₄ of 1.84 specific gravity, heating, adding permanganate solution (about 4 gm. to the litre in strength), cubic centimetre after cubic centimetre until the color does not disappear after 15 minutes heating. Then decolorize with oxalic acid, coal tar, and gradually add 32% soda solution until the reaction is alkaline, shaking and cooling after each portion of soda is added. The fluid is then washed into the shaking vessel of Jolles' ozometer and the nitrogen determined volumetrically after Jolles' method. (*Zeit. f. Phys. Chem.*, Bd. XXIX, p. 236). The method was devised because of the time necessary for a Kieldahl nitrogen estimation. The actual working time necessary for such an estimation is, however, scarcely more than 20 minutes, and at the time for oxidation (with urine) and distillation and titration need not be more than two hours at most. Jolles' figures correspond sufficiently closely for clinical purposes to those obtained by the Kieldahl method, but are of course less accurate, and his method would seem scarcely to recommend itself through the rapidity with which it is carried out. [D. L. E.]

JOURNAL DES PRATICIENS.

July 27, 1901. (15me. Année, No. 30.)

1. The Treatment of Keratitis. F. TERRIEN.
2. Over-feeding in the Pathoguy and Treatment of Lithemia. PASCAULT.

1.—Keratitis is always infectious, whether primary or secondary. The cornea may be infiltrated, which is generally seen with some endogenous cause, hereditary syphilis, tuberculosis, etc., or ulcerated, from some ectogenous cause, as traumatism. Pericorneal injection is noted at once. Clinically Terrien separates keratitis into 3 divi-

lons, parenchymatous, superficial, and ulcerative keratitis. Parenchymatous keratitis is simply corneal infiltration. Its treatment will be hot compresses, smoked glasses, and a few drops of a weak atropine solution. Care must be taken to stop the atropine, should the intra-ocular tension rise too high. Internally mercury, potassium iodide, cod liver oil, iron, iodoform, salt baths, etc., are given. Superficial keratitis generally follows conjunctivitis in alcoholic subjects. An occlusive dressing and dark glasses may be necessary, or even median tarsorrhaphy. Corneal ulcers are the most common form of keratitis. Occlusion, with atropine and antiseptics are useful. Iodoform and methylene blue are also used. Hygiene and internal treatment are advised. The ulcer, especially when due to streptococci or pneumococci, may become neuro-paralytic, serpiginous, or phlyctenular. Then it must be cauterized. To diminish the intra-ocular tension and so prevent perforation, eserine is useful. If perforation occurs, atropine is again to be employed. Leucomata result from corneal ulcers. Yellow oxide of mercury will aid in clearing them up, with corneal massage. Finally, when the leucomata are large and centrally located, they may be covered with India ink to counterfeit the pupil. [M. O.]

2.—Pascual states that he who eats meat only gains less than he expends. This is also true of alcohol, spices, etc., as they cause gastric hypersecretion, and so lead to over-eating. Then as more is eaten, more is stored in the cells of the organism, the period of **prelithemic excess of function**. The liver is then over-worked, standing it well at first, but badly later. The excess becomes peptones, glucose, lactic or oxalic acid. Uric acid, creatinine, xanthine, etc., are then formed, the period of **lithemic excess of function**. Finally the nutritive and functional cell activity weakness, and loss of function, slowly results. Constipation appears, with fermentation. Clinically the lithemic is dyspeptic (hepatic); chemically he is hyperacidic (uric); physiologically he is intoxicated from hepatic insufficiency. Fat results, or lithemic glycosuria. Lactic acid, oxalic acid, and gravel appear in the urine, carbonic acid in the expired air, fatty acids in the perspiration, or these products remain in the individual, causing catarrh, ptosis, passive congestion, lithiasis, gout, arterio-sclerosis, etc. All the troubles are due to the liver and kidney, and the lack of elimination finally causes death. Purgation is necessary, with tonics, hydrotherapy, massage, alkaline drinks, vegetable diet, etc. These patients should learn to masticate, to drink properly, and to eat regularly, not too much or too often. Meat, alcohol, etc., should be cut off completely. Vegetables, bread, and fruit should form the main articles of the diet. [M. O.]

ARCHIVES DE MEDECINE DES ENFANTS.

June, 1901. (Volume IV. No. 6).

1. Umbilical Infection. PORAK and DURANTE.
2. Intermittent Albuminuria. H. GILLET.
3. Hypertrophic Cirrhosis of the Liver. H. AUDEOUD.
4. Infectious Endocarditis.

A. ZUBER and P. ARMAND-DELLILE.

1.—Death in new-born infants follows infection. Though infection be plainly present, either localized or widespread, its source, the point of entrance of the micro-organism, is difficult to find. Porak and Durante report in full four cases of generalized septicemia, the point of entrance of the germ in all cases being the umbilicus. The local, umbilical symptoms are suppuration, gangrene, erysipelas, hemorrhage, etc., often hardly enough to attract attention. The infection may enter along the umbilical vessels, or along the embryonic tissue of the cord. In the former case, there are no local symptoms. General septicemia follows. The liver is most often affected, the lung coming next in frequency. In the liver, degeneration occurs with jaundice. Secondly, dyspepsia may also occur. Two other cases, with jaundice, are described. The worse the local symptoms, the less dangerous, as a rule, is the infection. But these cases show how careful the physician must be in his work upon the umbilical cord. [M. O.]

2.—Gillet defines intermittent albuminuria as the condi-

tion in which albumen is not continually found in the urine. Accidental albuminuria occurs when the albumen appears in the urine only once. For diagnosis, specimens of urine passed at different parts of the day must be examined. Most of the cases of intermittent albuminuria are cyclic albuminuria. The majority of cases are also orthostatic, due to standing up and walking about. As a rule the albumen is found only in the day time. In a few cases it can always be found at the same time of day, or it may last a few days and then disappear for a few days. There is generally oliguria, more constant even than the albuminuria; and urobilin is present even when the albumen is not. Clinically Gillet divides children into three groups; those who seem perfectly well; those with vague symptoms of anemia, neurasthenia, dyspepsia, lithemia, growth, etc.; and those with distinct nephritic symptoms. The great number of cases belong to the middle group. It may follow nephritis, the infectious diseases, the diatheses and dyscrasias, auto-intoxications, and intoxications. It may last for years. The prognosis is generally favorable. The treatment is hygienic, diet, baths, rest in bed, with regulation of the intestinal function, etc. The general condition should be improved. A table of 15 cases follows. [M. O.]

3.—Audeoud reports two cases of **hypertrophic cirrhosis of the liver** in infants of 14 and 15 months, both of whom died two months later. In one the disease began at 12, in the other, at 14 months, with digestive symptoms; then the abdomen enlarged, with ascites and hypertrophy of the liver and spleen. Jaundice followed with disturbance of the skin and urine. Contrary to statistics, both cases were girls. Audeoud could find no cause in either case. The cirrhosis occurred quickly, probably due to a microbe which entered from the intestine. Both spleen and liver are enlarged, and jaundice and ascites existed. The disease ran a very acute course. Hypertrophic biliary cirrhosis is called "Hanot's Disease" in France. [M. O.]

4.—Zuber and Armand-Delille report a case of **infectious endocarditis** in a boy of 13, who had had four attacks of rheumatism. The origin of the infection could not be found. The aortic valves were most affected. The microbe found was a *cocco-bacillus*, like that described by Litten in a non-septic case of malignant endocarditis. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

July 28, 1901. (31me. Année, No. 30.)

1. Lumbar Puncture in Diagnosis. JEAN ABADIE.
8. Torsion of the Pedicle in Cystic Salpingitis.

ANDRE BOURSIER.

1.—While discussion of the therapeutic use of lumbar puncture is still rife, there remains no doubt of the service rendered by this measure in diagnosis. The cerebro-spinal fluid, normally clear, is cloudy in meningitis, purulent in suppurative meningitis. Or it may be bloody, showing ventricular hemorrhage, fracture of the skull, etc. The pressure, increased in disease, was formerly measured for diagnostic purposes. The freezing-point of the fluid is less than normal in tuberculous meningitis. The amount of albumen is increased in hydrocephalus, and acute meningitis. Bile pigment has been found in the fluid when excessive jaundice occurred. After the ingestion or the subcutaneous injection of potassium iodide or methylene blue, the appearance of either of these substances in the cerebro-spinal fluid shows that the pia-arachnoid has become permeable. Bacteria are easily found in it, so that the diagnosis etiologically may be settled. Lately, lymphocytosis in the fluid has been shown to denote tuberculous meningitis; while polymuclear leukocytes denote cerebro-spinal meningitis. Lymphocytes are also seen in tabes and general paralysis. It will at once be recognized how important a diagnostic factor lumbar puncture has become. [M. O.]

2.—Boursier reports another case of torsion of the pedicle of a cystic salpingitis on the right side, in a woman of 34. In this case, as in the others reported, the condition was not diagnosed before operation. Boursier states that the condition is only found with hydrosalpinx, generally on the right side, with only one or two twists of the pedicle. The fluid as a rule shows that it was hemorrhagic previously. The exact causes of the condition are as yet unknown. [M. O.]

Society Reports.

MEETING OF THE NEW YORK MEDICAL ASSOCIATION.

(Continued from Page 776).

Modifications in the Methods of Operative Surgery Resulting from Laboratory Research, Dr. Joseph D. Bryant, New York. Tindall, Lister and Pasteur were mentioned as laying the foundations for modern antiseptics. The essayist referred to antiseptics as the older and aseptics as the younger. Erysipelas, pyemia and other infectious diseases were abundant in Bellevue Hospital several years ago. Now, through a perfect asepticity, they have diminished and pyemia is so seldom found as almost to escape the notice of the physicians. The doctor referred to Lister's plan of antiseptic procedure, and the progress of aseptics in the last few years through which 60 to 70% of the patients are saved. Modern gunshot wounds result in 40% recoveries, instead of 95% of deaths as before. Modern methods of practice rescue from 20 to 50% of cases of bowel obstruction.

The Use of the Pneumatic Cabinet in the Treatment of Diseases of the Heart, was the subject of a most scientific and interesting discourse by Dr. Charles E. Quimby, New York. The author first took up the points of blood tension, nutritive interchange, and cardiac lesions, and said that the function of the heart and vessels is a simple mechanical process. To decrease vascular tension and increase cardiac nutrition are ideal therapeutic measures in cardiac disease. We must not only lower vascular tension, but develop those alternations of tension required to maintain the circulation. The author then gave a description of the pneumatic cabinet and the technic of treatment, and a close perusal of his paper will repay any specialist or general practitioner for the trouble of reading it. The cabinet which he employs is the very one that the profession condemned not many years ago, and which he has proved to be one of the most successful means of treating heart disease, as verified by his cases and reproductions of his sphygmographic tracings. Pneumatic differentiation applies to the different atmospheric pressures upon the lung in the thoracic cavity and on the cutaneous surface. From the standpoint of applied physics, pneumatic differentiation represents the nearest treatment to cardiac disease of all measures available. The doctor then had lantern slides showing the conditions of the different cases he had treated by the representative sphygmographic tracings. Reference was made to aortic and mitral regurgitation. Patients suffering from cardiac and arterial tension are being successfully treated by the cabinet apparatus, and clinical results have proved the effect of this method.

Gun-shot Wounds of the Hip Joints by Reduced Calibre Projectiles," by Major Louis A. LaGarde, Washington, D. C., proved to be one of the most valuable contributions presented. The doctor has just been detailed by the Government as "Lecturer on Gun-Shot Injuries in the Army Medical College." The Major gave a most vivid description of tests made upon the cadaver with small-calibre bullets, the results of gunshot injuries received in battle, and the comparative force of impact or hole produced by the old-fashioned 45 and 56 calibre bullets of the civil war with the smaller sizes, 30 and 32, now in use. Of 389 cases of hip-joint injuries received in the Civil war, Otis informs us that by the treatment then employed the mortality was 84 per cent, and those results are a fair average of the gun-shot injuries in the Crimean and other great wars, during the pre-antiseptic era of treatment. Gunshot wounds then inflicted were prone to invite sepsis from the great amount of focal injury, especially on the bones and joints. The missiles of the military rifle varied from 50 to 55 calibre in diameter and were composed of soft lead, easily deformed by impact; wounds of the larger joints were marked by an area of destruction corresponding to the original calibre of the bullet. Bones hit by these bullets were characterized by loose spicula with fissures running into the marrow and the bullet often lodging around the joint structure. The change in the armament of all the countries was coincident with new wound treatment. All the Governments have now discarded the large calibre bullet for one of 26 or 30 calibre. Furthermore, the lead of this new bullet is encased in

hardest steel, so that the deformation is seldom observed. The doctor showed a Springfield rifle bullet, weighing an ounce, 45 calibre, made of lead, which deformed easily on impact. He also showed the bullet from a 30 calibre Krag. The rotation of the bullet at the muzzle in both guns differs widely, and the rotation itself is said to have something to do with the destructive effects. The bullet from the Springfield rifle is said to be turned 899 times per second at the muzzle as it issues from the gun. The gunmaker has given a shorter twist in the new rifle, making the new bullet (referring to the 26 and 30 calibres) revolve 2100 times per second as it issues from the gun. From 600 to 1500 yards the humane advantages of the smaller bullets are demonstrated upon the cancellous tissues of bone. A specimen was shown demonstrating the effect of the new bullet upon the spongy end of the bone, showing perforation. Now, as to the results. In the Spanish-American and Philippine wars there were 5.8% mortality as compared with 81% in the Civil war, in gun-shot wounds of the knee—a reduction of over 78% in mortality. The doctor had used the X-rays in diagnosing the course of bullets in two soldiers, who were hit, respectively, at 700 and 800 yards at San Juan Hill.

In the Anglo-Boer war, Mauser bullets had, at medium and long ranges, passed through the joint without causing solution of continuity in the neck of the bone, and also produced a clean-punched-out hole without comminution.

Dr. Alleman, here interposed the question as to whether the destruction of tissue at short distances was more than at long distances. He had seen an instance of a Krag bullet, at short range, where the bullet went through the foot, and the wound of entrance and exit were the same, the patient recovering without a great deal of destruction of tissue.

The essayist replied that at close range the effect upon the soft tissues was not different. In the muscle and skin the channel differs very little at 20 feet from that at 2000 yards in the compact substance of the bone, where the ball meets a great resistance. At all the ranges and especially with the maximum velocity near the muzzle, the destruction is very great. "We all know that the point ends of bones are much softer than in the middle of the shaft, and for that reason those wounds in war which were dreaded so, are to-day less in destructive effects than they are in the middle of the shaft. I would ten to one rather treat a man to-day with gun-shot injury of the hip or knee, by a small, reduced-caliber bullet, than I would wish to treat him for a gunshot injury of the tibia or foot. The destructive effects in proximal range are always great, because of the superior velocity of the projectile.

Asthma of Blood Origin, Not Nerve or Reflex, by Dr. G. N. Jack, Depew, N. Y. The doctor said that asthma is not a disease, but a symptom dependent upon toxemia, intestinal derangement and particularly the condition of the blood. Dr. George F. Cot, of Buffalo, referred to varieties of asthma, and said that it is shrouded in mystery. One investigator has shown that it is caused by vaso-motor paresis, and another by neurosis. No one knows what actually takes place in the bronchial tubes. Dr. Cot suggested that if the afflicted one would inhale easily or slowly, not quickly, he would get relief.

The Present Status of the Pathogenesis of Concomitant Strabismus, Dr. Alvin A. Hubbell, Buffalo. (Read by title.)

The next paper on the program was on Acne by Dr. Edmund L. Cocks, New York. This disease occurs in females more frequently than it does in males. It is a disease of lowered vitality and impaired digestion. Constipation, which is always present, should be removed. 75% of all cases occur before the age of 18, between 15 and 25 is the limit. In many women just before and after the menstrual period this affection comes on. Diet of a certain kind is an exciting cause, but there is a class of micro-organisms which are responsible for acne. Another cause given is intestinal intoxication. The doctor thought the treatment to be difficult and serious, but it is curable by constant and persistent treatment and attention. Dr. Reese, Cortland, N. Y., believed that acne was due to laziness, that patients are not regular in moving their bowels. It is easily cured by tincture of green soap, scrubbing the

face with a nail brush; and cascara, as a laxative, will cure every case.

Concluding the morning's program, Mr. Curtis gave an exhibition of his high-tension electrical machine and ozone generator.

MORNING SESSION, OCTOBER 24, 1901.

Dr. Wm. G. Le Bouillier read a paper entitled **Differential Leukocyte Count in Fractures**. His report consisted of 65 differential counts in single fractures and 39 counts in compound fractures, comprising fractures of the skull, nose, ulna, and aseptic compound fractures of the femur and radius.

Prostatic Obstruction to Urination—Its Remedy by Enucleation of the Diseased Parts, Dr. J. W. S. Gouley, New York. He reviewed the anatomy of the prostate and mode of radical treatment, and referred to the enucleation of the diseased glands through the perineal incision. The operation is performed ordinarily when auto-catheterization is difficult or impossible, but there is no doubt of its indication in the earlier stages of cellular enlargement. The process of enucleation, if carried out with deliberation and gentleness, is effected without difficulty. The doctor then showed one of his latest instruments, which he considered an improvement on the rubber one by Dr. Parker Syms.

In the discussion, Dr. Parker Syms gave credit to Dr. Gouley for radical treatment and relief in hypertrophy of the prostate. The mortality, he thought, was very high in prostatectomy when operating on enfeebled old men and when the work is left as the last resort. It should be done, if at all, as soon as serious obstruction to the act of urination is observed. If those cases in which cystitis and infection occur, without relief, the mortality is practically 100%. Death ensues in time in all these cases. He proposed that there should be made a small laparotomy wound above the bladder, then perineal section, and then the operator, with two fingers of the left hand within the abdomen, presses down the prostate so that he can reach it in the perineum and enucleate it with the index finger of the right hand. That suggestion has been modified with advantage by Dr. Johnson, of New York, who, instead of doing a laparotomy and going through the perineum, makes an incision down to the bladder, but below the peritoneal fold, and the cases that have been reported by him have been successful. "I have devised a retractor which I think will make it possible to enucleate the diseased portions of any hypertrophied prostate through a perineal wound." (The doctor here exhibited his instrument, a retractor with a rubber bulb on the end of a catheterlike tube).

Dr. Eugene Fuller said he always enucleates or removes the obstruction, that he is not one of those who are frightened at the idea of the supra-public operation. It is necessary to know how to perform the operation, how to treat the wound, and how to manage your bladder wall. If you do that, the mortality itself is not great. He takes the prostate out a great many times by the perineal route, but there are a great many cases where the supra-public route is more preferable. "I have a gentleman now, aged 81, whose arteries are so atheromatous that they are like pipe-stems. He is convalescent, up and around after a prostatectomy. I did a perineal prostatectomy on him." He had a stone weighing $\frac{3}{4}$ of an ounce; it was not dragged through the perineal wound, but a secondary suprapubic operation was done and the stone was removed without difficulty. "I do not think one should be wedded to any one surgical procedure."

Dr. Lee, recently of St. Louis, said that he did not look upon hypertrophy of the prostate as most men do, as a senile condition. He believed that old, uncured gonorrheas had a great deal to do with hypertrophy of the prostate; also the condition of the kidneys or anything that will produce a cystitis has a tendency to produce hypertrophy of the prostate. Method of treatment must depend upon the conditions that exist, a great many hypertrophies being due to conditions outside of the prostate. A thorough examination of the interior of the bladder should be made with the aid of the cystoscope. He had seen hypertrophy subside 50% by removing a villous papilloma which obstructed the outflow of urine. He was thoroughly convinced that vasectomy and castration reduced the size of the prostate. There seems to be a great objection to men

being castrated, but for years, for every conceivable ailment, women have been castrated.

Dr. Gouley, in closing, said he had made one thousand dissections of parts of the prostate and claimed that you cannot injure the bladder wall. The smaller the prostate the more difficult it is to remove. As to the accepted terminology, the doctor said: "The sooner we get rid of the word 'hypertrophy of the prostate,' the better. There is no such thing as hypertrophy of the prostate. It is rather under-nourished than over-nourished. The great enlargement of the prostate is due to atresia of the acini of the prostate. He also claimed there was no such thing as "a prostate gland," but that there are many prostate glands in that body which consists of $\frac{3}{4}$ of muscle tissue. "It is these prostate glands that we endeavor to enucleate." He proposed further to discuss the matter at the coming 1902 meeting of the American Medical Association. He, like some of the others, was not wedded to any one operation; he performs many, but whichever it is "It is the one that is indicated and when I do it, I do it fearlessly." (Applause).

(To be Continued).

THE NEW YORK OBSTETRICAL SOCIETY.

Meeting held October 8, 1901.

The President, Dr. H. J. BOLDT, in the Chair.

Dr. Grandin presented a specimen of **Tubal Gestation**, diagnosed hemato-salpinx by a colleague. Superficial examination of the uterine scrapings suggested chorionic villi. The patient had had amenorrhea for six weeks, and two attacks of abdominal pain. A small mass was felt near the right broad ligament. On opening the abdomen, six ounces of blood were found in the peritoneal cavity.

Dr. G. Ward, Jr., presented a specimen of **Multilocular Cyst of the Kidney**, from a patient, forty-nine years old, with a family history of carcinoma. In May, 1900, he removed ovaries, broke up adhesions, and performed ventro-fixation. A smooth globular growth was felt in the left hypochondrium, but with the hand in the abdomen, the cystic character of the tumor, its mobility, and its probable nephritic origin were noted. In December, 1900, symptoms referable to the cyst appeared, gradually increasing. The tumor increased in size, filling both hypochondriac regions. Dr. Einhorn agreed that nephrectomy was the only means of relieving the patient. The other kidney was apparently normal; the urine passed averaged thirty ounces daily, specific gravity was 1010, and there were no albumen, sugar, or casts. Celiotomy was performed June 11, 1901, and the growth found adherent to the colon and omentum. The whole mass was enucleated, the pedicle being ligatured with chromicized gut. The wound healed by primary union and the patient returned home on the 20th day. For ten days she was about, gradually regaining her strength, then she had pain at the site of operation and fever. An abscess was found and drained. For a few days there was apparent improvement, then fecal matter appeared through the opening, her condition became worse, and death took place fifty-six days after the operation. The autopsy showed an area of gangrene involving the colon adjacent to the tumor. The other kidney was normal. Multilocular cyst of the kidney is a rare disease, and is almost always bilateral. Dr. Jarman reported a similar case. The left kidney was affected, and he made a curved incision over the hip, through which the kidney was removed. About the sixth day the temperature was 106° and she complained of chills. The fever passed away and the patient got well. This was five years ago, and she is still well. Dr. Boldt believed that this incision was preferable to opening the abdomen.

Dr. L. Broadhead presented a specimen of **Placenta Duplex or Biloba**. The supplementary placenta measured 15x6.5 cm., while the main placenta measured 14.5x11 cm. There was a space of about 5 cm. between the two placental masses, which were connected by the chorion and three fetal vessels, one of which was of large size. The

supplementary portion (placenta succenturiata) may remain in the uterus. If at the edge of a placenta, which seems to be complete, the torn ends of vessels are noted, that is evidence that a portion of placenta has been left behind, and search for it should be made at once.

Dr. Edgar presented a reproduction of the mammary changes produced during menstruation. He drew attention to the prominent veins, darkening and edema of the areola, erect and congested nipple, and dry scales in the orifices of the ducts. He believed that the mammary changes of early gestation were valueless even for an uncertain diagnosis of pregnancy. Dr. Graudin thought that the mammary signs were of value only in connection with the other signs of pregnancy. Dr. Jewett had been accustomed to attach some diagnostic importance to the mammary changes in a first pregnancy in the absence of pelvic disease. Dr. Edgar said that in the absence of uterine disease the mammary changes at the menstrual period are practically the same as those which occur in the first three months of pregnancy. It is the rule among the upper classes to find changes similar to those shown 22 or 48 hours before the expected menstrual epoch.

Dr. LeRoy Brown read a paper entitled "A Comparative Study of Immediate Recovery Following Vaginal, Total Abdominal and Supra-Vaginal Hysterectomy Involving 130 Cases."—Dr. Brown three years ago had advocated the vaginal operation. Results apparently left nothing to be desired. During the past two years, this method has been gradually replaced by the abdominal, more conservative route. He compared the immediate recovery of patients following these operations. 34 vaginal hysterectomies, 35 abdominal hysterectomies and 54 supra-vaginal hysterectomies were performed. Of the 36 vaginal hysterectomies, there were two deaths, of 36 abdominal hysterectomies one death, and of 59 supra-vaginal hysterectomies five deaths. There was shown to be a slight difference in favor of the vaginal route, which he attributed to the presence of the sutures in the abdominal wall. The patient made a recovery after one method of operating as evenly as another. Both have gauze drainage, which must be removed; one has the abdominal wound, the most prominent feature of the operation. This wound with its pain and frequent dressings, impairs the morale of the patient. After the gauze drainage is removed, the patient, following vaginal hysterectomy, is thoroughly at ease, mentally and physically. The one, following abdominal hysterectomy, is worried and anxious. He regards the vaginal operation as the more difficult, while the abdominal route is much the safer method. It is not his custom to close the pelvic peritoneum in either operation. The recovery of patients from supra-vaginal hysterectomy is surgical in every respect; there is no suppurating cavity to close by contraction and granulation. The true advantage of the supra-vaginal method was in the absence of any drain with its attendant painful removal, the absence of the resulting suppurating, closing cavity, and the time gained in the discharge of the patient from surgical care. Leaving the cervix, while of distinct advantage, is accompanied by some risk, since, if secondary infection occurs, the effusion under the flaps can only be reached by a secondary operation. That drainage through the cervix was a bad practice he was personally convinced. The five deaths from supra-vaginal hysterectomy were caused by sepsis. In all the fatal cases the sub-peritoneal space was drained by the gauze wick through the cervix. He concluded that (1) while the result of a supra-vaginal hysterectomy was most satisfactory; the operation was marred by the possibility of secondary infection. When infection occurs, it can be reached by a secondary operation. (2) The chances of infection are greater when the sub-peritoneal space is drained through the canal of the cervical stump, or when the canal is left open. (3) In total abdominal hysterectomy there is less likelihood of secondary complications, and though objectionable on account of the

suppurating cavity, it offers a surer means of uninterrupted recovery.

Dr. Bache Enniet advocated the supra-pubic route for all classes of work. He advised thorough disinfecting of the uterine canal by curetting before opening the abdomen, then by carbolic acid and the thermo-cautery after excision. He always stitched the peritoneum over the cervical stump. Dr. Vineberg considered that the cases of abdominal hysterectomy packed with gauze were not cases without drainage, for the drainage in these cases was of the best kind. Dr. Waldo has given up the partial operation because he did not get good drainage. Dr. Brown emphasized the fact that, if going to drain, we must remove the cervix to have thorough drainage. In supra-vaginal hysterectomy it is better not to drain, but to close the cervix. Supra-vaginal hysterectomy had been employed for fibromatous uteri, or in pus cases in which the pus was sterile. Total hysterectomy was generally done in more desperate cases or those in which a large area of raw surface was exposed.

BOSTON GYNECOLOGICAL SOCIETY.

Meeting held October 9, 1901.

Dr. H. O. Marcy opened the discussion upon **Fibroid Tumors of the Uterus**, referring to early abdominal surgery. He spoke of the difficulties encountered and the prejudice manifested to this department of surgery. He mentioned the excellent work of Dr. Burnham and Dr. Gilman Kimball, of Lowell, who performed 225 ovariectomies with sixty-nine recoveries, and extirpated the uterus twelve times with five recoveries. Dr. Marcy said that Storer was the first to accomplish successful removal of the uterus. Massachusetts, by its early and continued success, has become the home of abdominal surgery. He spoke of the early management of the pedicle by Dr. Storer, who treated it extraperitoneally, leaving the ligatures outside the wound. Dr. Marcy, seeing the advantage of such disposition, carried the pedicle downward after sewing it off with tendon sutures. Hemorrhage preventing recovery was formerly a serious obstacle. Adhesions after abdominal operations are prevented by the careful introduction of fine sutures, applied superitoneally, that all incised portions of the peritoneum, as well as the pedicle, be completely turned backward, presenting a smooth, closed surface. Dr. Marcy spoke of the friendly criticism which he had always had from members of the society, and expressed his gratitude for the valuable suggestions offered from time to time. He referred to Lister's early use of animal ligatures. First catgut was used, and now kangaroo tendon, both thoroughly aseptic, and the sutures are buried. The uterus could sometimes be saved when uterine tumors existed, but he thought that generally unwise, because the uterus was not infrequently seriously affected. When the uterus is the centre of a tumor, pregnancy cannot occur. The removal of the whole mass affords immediate relief. He showed a specimen of a uterine fibroid removed from a patient aged 72, who thought that she had been cured. To show the bad effects resulting from the use of buried silk sutures, Dr. Marcy exhibited a specimen containing a silk knot. A man some three months before had had a testicle (left side) removed; soon after the other testicle became the seat of pain and though the patient had been in two different hospitals for treatment, he obtained no relief until Dr. Marcy removed the silk knot. Dr. Marcy also showed specimens from two cases of gall-stones, upon which he had recently operated. In one of the cases there were over a hundred gall-stones of varying sizes; in the other there were two stones, one large, and one small.

Dr. Frisbie, in discussing uterine fibroids, advised the removal of fibroids before serious symptoms occur. Dr. W. T. Brown said that Dr. Burnham was the first operator who successfully removed the entire uterus. He stated that the pioneers of abdominal surgery were not all model operators, since one of the earliest operators went to lunch in the midst of an abdominal hysterectomy. Fibroids are

usually of multiple origin, and occur mostly in women who are forty years of age or more, in whom the preservation of the uterus is of minor consequence. Dr. V. D. Miller said that she had seen tumors of this class as large as a fetal head of the fourth or fifth month of pregnancy. When there were no adverse symptoms, she questioned the propriety of operation for their removal. Dr. A. E. Miller felt in doubt whether growths of this character should be interfered with. Dr. G. Ryder remarked, that myomectomy often resulted in failure, owing to the occurrence of growths in other parts of the uterus. Dr. A. L. Norris reported a case in which a fibroid was located in the right cornu of the uterus, the patient doing well. He thought that if physicians looked for such tumors, they would find them oftener than they suppose. Dr. A. P. Clarke referred to the methods employed in France, where hysterectomy has been too common. Myomectomy is indicated for the removal of fibroids in young women. Tuffier reported 500 cases of myomectomy, and proposed that abdominal hysterectomy for fibroids should be the exception. Enucleation of fibroids with preservation of the uterus and the adnexa is the operation of choice. Two factors come into consideration, the greater perfection with which the operation is now performed, and the smaller number of uterine fibroids now seen, extending as high as the epigastrium. Tuffier has removed from one to seventeen fibroids of varying size from a single uterus. He speaks of having resorted to enucleation in 19 consecutive cases, with 18 recoveries. The contraindications to myomectomy are manifest when the uterus contains many tumors in varied states of telangiectasis, when the growths have become sphacelate, or the adnexa are irretrievably diseased. Advanced age of the patient may delay recovery. In such cases total hysterectomy is to be preferred. Dr. Clarke stated that his experience has led him to look upon enucleation as less practicable. Dr. G. W. Jones was not in favor of myomectomy on the ground that more time was required, and the danger from hemorrhage was greater. Dr. G. Ryder was opposed to myomectomy for the same reason. Besides, the uterus and its appendages, in cases of fibroids, are in a more or less diseased state.

Dr. Marcy, in closing the discussion, took the ground that aseptic wounds should not be drained. He reported a case in which delivery was delayed by the presence of the fibroid. He spoke of the advantages of resorting to myomectomy in cases of fibroids in young women. When the tumors are multiple, abdominal section is preferred, since there is a better chance of saving the uterus. Multiple fibroids have resulted fatally because the patient has refused to have them removed. The greater the age of the patient, the worse is the danger from such growths. The surgeon should first make a decision, and should never urge an operation for the sake of performing it. If the disease, when left to itself, is likely to tend toward a fatal issue and there is a fair chance of recovery with an operation, to decide against the measure would be a sin of omission. Consultation is often advisable. The operator should be well prepared to meet any emergency that may arise in a case, in order that a high standard of surgical skill may be maintained, and human life be not trifled with.

Extra-buccal Nutrition.—Von Leube is quoted in the *Journal des Praticiens*, (June 1, 1901, No. 22), as dividing the means of giving sustenance, when food cannot be given by the mouth, into nutritive enemata and subcutaneous injections. The best results will be obtained by combining these methods. The enemata, composed of albumen, (milk, 300 g., peptone, 60 g., raw eggs, 3 g., and salt, 3 g.) and of carbohydrates, (starch, 50 to 100 g., or sugar 15 to 20 g.) represent 550 calories each, and can be given twice daily, after a detersive injection. For the subcutaneous injections a fat is used, 50 to 100 g., injected slowly once a day, representing 920 calories. Thus 2000 calories can be given daily. From this it is plain that artificial alimentation is no longer impossible. [M. O.]

Special Article.

THE OUTBREAK OF TETANUS IN ST. LOUIS.

By A. C. ABBOTT, M. D.

of Philadelphia.

Professor of Hygiene and Bacteriology in the University of Pennsylvania.

To the Editor of The Philadelphia Medical Journal:

In reply to your request for an expression of opinion concerning the cause of the serious accident reported from St. Louis in connection with the administration of antidiphtheritic serum, permit me to say that the evidence at hand does not warrant a final opinion on the subject. If, however, we can take as trustworthy such data as have reached us through the daily papers, it might not be unprofitable at this time to use them as a basis for speculation that may or may not aid in the elucidation of the matter.

Of primary importance to an analysis of the circumstance is manifestly the discovery of the real cause of the fatalities. That they are attributable to the serum employed seems beyond reasonable doubt, but whether they resulted from infection by the specific microorganism of tetanus, or from intoxication by the poison of tetanus that was circulating in the blood of the horse at the time the serum was prepared, cannot now be decided, though we are inclined to regard the latter supposition as the more likely explanation, for the following reasons:

In the first place the conditions under which diphtheria antitoxic serum is usually prepared are not in any way favorable to the growth of the tetanus bacillus, should it by accident gain access to the serum during the course of its preparation. The tetanus bacillus is, in technical parlance, an obligate anaerobe, that is to say, it is one of that group of microorganisms that exhibits no evidence of life in the presence of free oxygen. As the blood when drawn from the animal contains oxygen, and as no effort is made in the preservation and preparation of the serum to exclude oxygen, it is evident that the conditions from this standpoint are directly opposed to the opinion that tetanus bacilli were growing in the serum: and inasmuch as it is the custom to employ antiseptics (phenol, trikresol or formaldehyde) for the preservation of serum, we have here an additional reason for skepticism as to the multiplication of tetanus bacilli in the serum. It must be admitted, however, that neither the oxygen in the serum nor the strength of antiseptic used can be certainly said to destroy the spores of bacillus tetani.

Admitting that tetanus spores did gain access to the serum, and admitting as we are, I think, forced to do, that they could not have developed under the conditions, the question arises, is it likely that they were originally introduced in sufficient numbers to fully account for the accident without any multiplication on their part, and that they simply lay dormant in the serum until its injection into susceptible human beings? We can scarcely conceive this to be the case, unless the source from which they came was much richer in them than one ever observes outside a culture flask, a grossly

infected wound or, perhaps, imperfectly cleansed and disinfected instruments and apparatus employed in the study of the disease and its exciting organism. Had the serum contained the bacilli or spores of tetanus in any such numbers as this, tetanus would almost certainly have developed in some one or another of the very susceptible animals employed for the standardization of the antidiphtheritic strength of the serum; but this we are told did not occur.

In so far as the evidence will permit of an opinion we think the facts point more to a toxic origin for the deplorable accident, though at the very outset we encounter an obstacle to the establishment of this belief. If it is possible for the horse that supplied the serum to have been suffering from tetanus in its incipient unrecognizable stages on August 24, when the serum in question was drawn, then the solution of the whole problem is simple, but we do not know whether this could have been the case or not. Little is known of the real period of incubation of tetanus. In human beings it is usually regarded as something less than fifteen days; we occasionally hear of latent, delayed or chronic tetanus; we know that experimentally the period varies in different animals, varies with different doses, and with different cultures employed; it does not seem therefore beyond the realm of possibility for the horse, which developed unmistakable signs of tetanus on October 2nd, to have had the disease in its early stages on August 24, (about five weeks before) when he was bled. If there is anything in this assumption, the serum contained at the time of bleeding not only diphtheria antitoxin but tetanus toxin in small quantities as well. But why then did not the animals on which the antidiphtheritic strength of the serum was tested give evidence of tetanus intoxication and thereby direct attention to the horse? I think this is best answered by some of the conditions under which these tests are made. In the standardization of serum for its antidiphtheritic strength the method commonly employed is, roughly stated, to mix with a fixed quantity of diphtheria toxin of known toxicity varying amounts of the antitoxin serum under consideration until a point is reached at which the amount of serum just exactly neutralizes the toxin employed, that is to say, prevents the toxin from killing the animal (guinea pig) into which the mixture is injected. In the case of strong sera, i. e., those rich in antitoxin, the quantity needed for neutralizing the toxin may be very small indeed, often as low as 0.005 to 0.01 c. c. While these antidiphtheritic sera contain usually only diphtheria antitoxin, for which the test is being made, they may under very exceptional circumstances, as I believe to have been the case in St. Louis, contain also other, undesirable, bodies such as toxins, referable to accidental, intercurrent or antecedent infections, but in amounts not sufficient to cause, at the time of bleeding, symptoms in the animal that would attract attention. When, therefore, the serum being standardized is employed in such very small amounts as those noted above, it is possible for the quantity of undesirable toxin that it may contain to be too small to evince its intoxicating properties,

even in the very susceptible guinea pig on which the test is made; but when this tiny dose of serum is multiplied up to a point at which it becomes a useful therapeutic agent for the treatment of diphtheria in human beings, i. e., from one thousand to two thousand times, this trace of dangerous toxin assumes thereby very much more significant proportions, and might indeed be sufficient to cause acute intoxication with, in some cases, lethal termination.

The vulnerable point in this argument is plainly the assumption that a horse may have tetanus toxin in his blood for a month or six weeks prior to the time that he evinces the characteristic signs and symptoms of tetanus, but until we know that this cannot be the case we must regard it as a remote possibility against which all precautions should be taken.

In so far as tetanus bacilli or their toxins are concerned, their detection in such animal products as antitoxic sera is fortunately a matter of comparative simplicity, and after the experience in St. Louis I do not regard one is justified in distributing these products until all doubt in the matter is cleared away. This I believe can always be done in several ways, namely, by the very careful observation of the horses under treatment; by the occasional prophylactic use of tetanus antitoxin upon such horses; by the keeping of serum for a reasonable length of time after it is prepared and before it is distributed throughout the community, the object of this interval being to keep the horse from whom the serum came under observation; and finally by a special test directed to this point, a test in which there is injected into a highly susceptible animal, the guinea pig, not the fraction of the dose of the serum that is to be used on human beings, but the full human dose. If after this the animals exhibit no signs of tetanus, one is justified in assuming that the serum is free from anything capable of causing the disease.

The question has arisen as to the probable influence that the St. Louis accident will have upon the employment of antitoxic sera in general. Doubtless some will be for a while intimidated, but that this will be wide-spread or lasting I think unlikely. When we consider the thousands and thousands of injections of these sera that are annually administered, with undesirable results so infrequent that they may practically be ignored, in so far as they are referable to the serum, it is evident that this deplorable incident must be regarded simply as an unavoidable accident of exceptional rarity, and if my interpretation of it is correct, as an accident that could not have been foreseen and that might have fallen to the lot of any of us.

To say that I experience the deepest sympathy for the man on whose shoulders the weight of this burden must fall will be to express my feelings but mildly; and I trust, as I believe, that the outcome of the investigations that are now being made of the incident by those competent to undertake it, will fully exonerate him from any personal responsibility for the accident.

Original Articles.

THE PRESENT STATUS OF THE BOTTINI OPERATION
AS A METHOD OF TREATMENT IN OBSTRUCTIVE
HYPERTROPHY OF THE PROSTATE GLAND, DERIVED FROM A SUMMARY OF EIGHT HUNDRED
AND EIGHTY-EIGHT OPERATIONS BY FORTY-
EIGHT OPERATORS.By ORVILLE HORWITZ, B. S., M. D.,
of Philadelphia.

Clinical Professor of Genito-Urinary Diseases, Jefferson Medical College; Surgeon to the Philadelphia Hospital, Jefferson Medical College Hospital and State Hospital for the Insane.

It is generally believed that with few exception, prostatic hypertrophy usually begins in individuals who are over fifty years of age. White and Martin state: "extensive tabulation demonstrates, that enlargement of the prostate begins exceptionally under the age of fifty or after seventy." This is the received view, but I am of the opinion that the morbid condition commences much earlier than is commonly supposed. At least one eminent authority concurs with me in this belief. Dr. L. Bolton Bangs, writing recently on this subject (*Journal of Dermatology and Genito-Urinary Diseases*, March, 1901), says: "In my opinion enlargement of the prostate gland is not a senile condition; its effects may not show themselves until midlife or later, but it really begins in early life."

Obstructive symptoms due to prostatic enlargement usually make their appearance between 50 and 65 years of age, when on examination it will be found that the growth has obtained considerable size. Hypertrophy of the prostate gland is not only a very slow but essentially a chronic process; it naturally follows that probably several years elapse after the gland first begins to enlarge before any considerable increase in the dimensions of the organ takes place, and indications make themselves fully manifest; which would account for the symptoms occurring late in life, the gland being usually markedly enlarged at the time they first make their appearance. This view appears to me to have been verified from numerous cystoscopic examinations, strengthened by the improved methods of examining the urethra, prostate and bladder, which have led me frequently to discover a beginning retundity of one or more lobes of the prostate; abnormal in men between 40 and 50 years of age, there being no symptoms referable to the change going on in the gland, the condition being unsuspected by the patient, and discovered by the surgeon accidentally. I am convinced that if the future of these patients could be watched, it would be found that, in many instances, by the time they had attained the age of 60, the prostate would be found to have enlarged sufficiently to give rise to unmistakable symptoms.

Individuals in whom prostatic hypertrophy takes place may be divided into three groups:

1. Those in whom the enlargement does not produce obstruction; or where the urinary symptoms are so slight as to attract little or no attention, the patient being unaware that the morbid growth has taken place, and goes through life with few or no symptoms referable to the prostatic enlargement.

These individuals, of course, require no treatment.

2. Those in whom there is residual urine associated with a disturbance in the function of urination and are dependent on catheterism for relief; who nevertheless live to old age in comparative comfort, requiring no other treatment than the use of the catheter. Under this head may be ranked a large number of prostatitis.

3. Those who sooner or later suffer from what is known as "the break-down in catheter life." The catheter being inserted with difficulty, with pain becoming more and more intense both day and night; these persons are certain in the course of time to suffer from very grave secondary complications, their resisting power becoming lowered and worn out by pain and loss of sleep. It is in this group of cases that either a radical or palliative operation becomes necessary as time goes on; and the sooner the profession realizes the truth of the statement that those individuals in whom the "break-down in catheter life" is imminent should early receive surgical aid, the better for the unfortunate sufferers. Delay in these cases is fraught with danger to the patient and often prevents the surgeon from doing anything more than palliate the disease. The importance of early recognizing these cases of prostatic hypertrophy cannot be too strongly urged upon the profession, when, if deferred, ultimately surgical interference becomes a necessity. Experience has demonstrated conclusively that the safety and comfort of these individuals demand that an operation be performed as soon as it becomes evident that the time is approaching when the catheter cannot be depended upon as a means of treatment. Early operation means small mortality, with quick convalescence and a radical cure; whilst an attempt to postpone the inevitable betokens operating upon a patient worn out with suffering and loss of sleep, whose resisting power is at its lowest ebb, often associated with some grave secondary complication, adding very materially to the risk of surgical procedure. When this condition exists, any mechanical interference is fraught with danger, and a radical operation being often out of the question, some palliative measure becomes necessary, which at least is but a makeshift; extremely unsatisfactory alike to patient and surgeon. Frequently in cases of advanced prostatic obstruction attempted radical operations, if successfully performed, are unsatisfactory in their results and prove to be only palliative. In several instances, in cases of hypertrophy of the prostate gland of long standing, when I have performed complete prostatectomy and entirely removed all obstruction, the bladder has remained permanently crippled by disease, and has never fully regained its vigor. Other operators report a similar experience. The general health of these patients often improved; the catheter, however, has to be frequently employed, although the instrument can be inserted without difficulty or pain. The cystitis is mitigated, but though these patients are benefited, they are far from cured, the operation being only a palliative measure. It is this class of patients that teaches the necessity for early action.

I believe that the day is past when the physician

is justified in standing by and seeing these unfortunate people drift along month after month into a situation of permanent invalidism with the discomfort, pain and misery attendant on their unfortunate condition, allowing valuable time to be lost by delaying until the urgency of the symptoms demand immediate surgical interference. The opportunity to perform a radical operation, with comparative safety and almost certain of success, goes by and in its stead one of the unsatisfactory palliative measures in vogue is resorted to, which, owing to the generally poor physical condition of the patient, is usually fraught with great danger.

The sooner the profession learns to recognize the cases in which the catheter cannot be relied upon to relieve symptoms caused by the obstructing hypertrophied prostate, and that they are suitable cases for surgical interference and should be referred to the surgeon, the better for suffering humanity. Not only will life be prolonged, but much unnecessary misery will be spared; we will cease to hear of prostatic surgery for the relief of hypertrophy being attended by such great mortality and of the results being so uncertain, and in many instances unsatisfactory. Early operation under these circumstances is absolutely essential, as in any other condition in which prompt surgical aid is indicated.

Operations for the relief of prostatic hypertrophy are divided into the palliative and radical, to which I take the liberty of adding, since the introduction of the Bottini operation, the *prophylactic*. Perineal prostatotomy, vasectomy, angioneurectomy and ligation of the internal iliac arteries have all had their advocates and have been given a fair trial by numerous surgeons throughout the world; the universal testimony as to their efficacy is unfavorable, and they have practically been abandoned as a means of treatment. Orchidectomy has proved to be of value in some instances, where the prostatic growth is of a purely glandular type; a rare form of hypertrophy which is almost impossible to distinguish from that of other varieties. This operation is not applicable in the early stages of the enlargement, whilst the sexual vigor is still preserved, as a consequence the sphere of its usefulness is so restricted as to be of but little practical value. The palliative operations consist of vasectomy, in conjunction with daily catheterism, or permanent suprapubic drainage. Whilst the radical measures are either a partial or complete prostatectomy or a prostatotomy, by means of the galvano-caustic incisor. The latter method of treatment being capable of being employed as either a prophylactic, palliative or a radical procedure, depending on the character of the growth, the length of time it has existed, the complications which attend it, together with the physical condition of the patient.

The operation of prostatectomy will always be applicable in certain forms of prostatic hypertrophy. The indication for its employment is much restricted since the introduction of the Bottini operation. Partial suprapubic prostatectomy is to be performed in cases of obstruction due to interurethral growths, in some instances where residual urine is caused by hypertrophy of the lateral lobe, or where it is due to a valve-like formation that acts

as a barrier to the free egress of the urine. Complete prostatectomy is indicated, provided the patient's physical condition is suitable, where all three lobes are enlarged, especially if associated with tumor formation, where the vesical outlet is well elevated above the base of the bladder, having a pouch formation either above or below the enlarged gland, with probably a stenosis of the urethra. Prostatectomy, to be safe and effective, must be resorted to early, before serious complicated conditions have supervened.

In 1875, Bottini, of Pavia, performed his first operation for the relief of prostatic hypertrophy by the method that he devised, employing an instrument especially designed for the purpose known as a "prostatic incisor." In spite of the good results that he claimed for his method of treatment, the profession paid but little attention to the subject until the instrument was remodelled, and perfected, by Freudenberg, of Berlin, who not only verified the statements made by Bottini in cases of enlargement of the prostate gland, but strongly advocated its employment. (*Berliner Klinische Wochenschrift*, Feb. 15, 1897.)

It was not, however, until the operation was performed for the first time in the United States by Willy Meyer, in the autumn of 1897, that the interest of the American surgeon in this mode of treating senile hypertrophy of the prostate was aroused; since then it has attracted general attention and has been almost universally accepted throughout the country. The views of the majority of surgeons, whose experience has been extensive, agree in the opinion that the galvano-caustic operation of Bottini, for hypertrophy of the prostate, is the safest and most satisfactory, and at the same time more generally applicable to the different forms of prostatic enlargement than any other method of treatment hitherto devised. It is difficult to understand how so brilliant an operation, attended by such excellent results, and such low mortality, should have been allowed to lie dormant for twenty years before it was appreciated, or before it was generally employed.

The accumulated testimony derived from numerous surgeons throughout the world, representing a large number of operations, showing that the method advocated by Bottini is the most successful, being attended by the greatest number of symptomatic cures, and the lowest mortality of any radical measure that is employed at the present time for the relief of prostatic hypertrophy, the mortality is estimated to be between 4 $\frac{1}{4}$ and 7 per cent. I venture to assert that as soon as the practitioner recognizes the fact that early operation in his prostatic cases, by means of the Bottini method, means cure with quick recovery, we will find that the death rate following this form of prostatotomy will be still further reduced. Freudenberg analyzed 753 operations and found that good results may be looked for in 86.63 per cent, failure in 7.66 per cent. Various writers have taken exception to the Bottini operation on the ground that it is uncertain in its results; that it is dangerous to perform, as the work is done entirely by the sense of touch; that relief is but temporary; the beneficial results obtain-

ed being due to rest and the drainage by means of continuous catheterism; and that finally in a certain percentage of cases stenosis of the vesical outlet is apt to supervene. The recorded experience of numerous surgeons whose positions and reputations are sufficient guarantee for any statement emanating from such trustworthy sources, is sufficient to refute the charges that this operation is "uncertain, dangerous and the results obtained are temporary in character." It is true that the surgeon must rely on his sense of touch for a successful performance of the operation, and in that sense it is a "blind operation," but by no means as much so as the bloody and dangerous procedure of tearing out the entire prostate gland through a small incision made in its capsule, the organ being reached either through an opening into the bladder or perineum, and so working, by sense of touch, at the bottom of a dark cavity. When we reflect that the prostate gland is supplied by large nerves derived from the hypogastric plexus of the sympathetic nerves, the sacral plexus of the spinal nerve, and through the lower sacral trunk with the lumbar plexus; as a result of this free interchange of fibres between the sympathetic and the cerebro-spinal system of nerves, the conclusion is readily reached that the prostate is in intimate connection not only with the component parts of the genitalia, but, through the agency of the spinal cord, with remote regions as well. Furthermore, the organ is surrounded by important structures which are liable to injury during its extraction, so that the operation of complete prostatectomy is a much more formidable undertaking than that of the Bottini, is fraught with greater danger to the patient, and is only to be attempted in rare instances.

Surgeons who decry the Bottini operation on the ground that it is a "blind procedure," the operator having to rely upon his sense of touch, must necessarily condemn the more modern method of treating vesical calculus by litholapaxy, an operation which is dependent entirely on the sense of touch for its success and which must be highly cultivated in order to perform it properly. Yet all authorities agree that in the hands of a skilled and experienced operator the crushing of stone is the most satisfactory and the least dangerous method of treating the majority of cases of this description.

It is worthy of note that the writers who object to the Bottini operation on theoretical grounds are those who have had the least practice with this method of treatment; their knowledge being limited to a few isolated cases, whilst on the contrary those who have performed it repeatedly become more fully impressed with its efficacy as their experience expands, when they become convinced that excellent results are obtained in the majority of cases, that there is comparative small risk attending it, and that it can be successfully employed in prostatic enlargements of various configuration and size. In order to perform the Bottini operation properly, the requirements are similar to those which enable the surgeon to crush a stone in a bladder successfully. It is essential that the patient should be properly prepared for the ordeal, the employment of faultless instruments, the observance

of a careful technique, requisite skill, and an educated touch which is only to be acquired by long experience with the use of genito-urinary instruments. In inexperienced hands the operation is of course attended by the same danger, though no greater than litholapaxy, when attempted by one who has had but little practice in urethral work. To those practiced in urethral instrumentation, prostatotomy, by the Bottini method, is not a "blind" procedure." If previous to the operation the urethra has been examined, its length determined, the size and contour of the prostate defined by means of the stone-searcher and a cystoscopic examination, together with rectal investigation, and a knowledge of the condition and capacity of the bladder, the operator has data to guide him which make the procedure one of exactness. He may feel certain of making an accurate cut of the length required in the desired location.

The question has been broached as to the permanency of the relief afforded by the operation. A few observers have reported a small percentage of cases where there was a tendency to recurrence within the year. Of the thirty-six cases that came under my control there was a tendency to recurrence of the obstructive symptoms in but three instances, making a second operation necessary. In each of the cases there was marked improvement in the physical condition of the patient. At the second operation a local anesthetic was employed, and the results were very satisfactory. In the light of a more extended experience I am inclined to believe that in the three cases referred to the cuts were not made of sufficient length at the time of the first operation. This, however, is a good fault, as the operation is easily repeated, and it is far better to do too little than too much. That the advantage derived from the operation is not due to rest and continuous catheterism is shown by the fact that these means were employed as a preparatory method of treatment where the individuals were suffering from the effects of a long-standing cystitis with temporary beneficial results. In a small number of cases the catheter was allowed to remain in situ for two weeks after the operation; in the majority the instrument was inserted only when required.

It has been suggested that contraction of the vesical outlet of the bladder might follow this method of treatment, necessarily giving rise to obstruction.

Three years have elapsed since my first operation; in all the cases under my charge no complication of any kind has resulted. In one instance I had an opportunity to perform a suprapubic cystotomy on a patient who had submitted to the Bottini operation seven months previously. I found that all obstruction had been removed and that a deep furrow existed in the middle line of the median lobe. At the meeting of the American Association of Genito-Urinary Surgeons, in May last, Dr. L. Bolton Bangs showed a post-mortem specimen of a prostate gland removed from an individual upon whom he had performed a Bottini operation six months previous to his death. The patient having died from an ailment not in any way connected with his prostatic trouble. The furrow that had been

cut through the prostatic tissues some months previously was found to be as well defined as if it had been freshly made, all obstruction to urination had been removed by the operation. It would appear as if the fear of constriction of the neck of the bladder following this operation is to be but little apprehended.

In an article that appeared in the *Medical Record* March 9, 1901, Dr. Bangs showed that there was a marked difference between the action of the galvano-cautery and the Paquelin cautery. The former leaves a fine, delicate scar, whilst that resulting from the latter is thick and leathery. Pyelitis is not a contraindication to the performance of this operation, it necessarily adds greatly to the danger and the prognosis in such cases should be guarded. I have operated upon four cases in which this form of complication existed. No injurious consequences followed; one was cured, the others were much improved. This result accords with that of Willy Meyer, who, in the *Medical News*, April 28, 1900, says: "I do not share the view expressed by various authors that the Bottini operation is absolutely contraindicated in the presence of a pyelitis. Among my twenty-four cases there were certainly at least two in which a marked degree of uni- or bilateral pyelitis was present. Both patients stood the operation very nicely, the one being absolutely cured, the other much improved." He then sounds a note of warning regarding the initial risk incurred when operating upon those in whom this complication is present. Age is not a bar to the employment of this method of treatment. In the series of cases operated upon by me, the youngest was 49 and the oldest 85 years of age. Successful operations have been reported in individuals who were in the nineties. It is hardly necessary to add that the younger the patient the better his physical condition; the greater his resisting power the lower is the mortality attending the operation. The operation should only be performed on the aged when the obstruction is such that something must be done for immediate relief.

Good as well as bad results have been reported by many surgeons operating upon the hard, soft and mixed varieties of prostate hypertrophy, from which it is to be inferred that the character of the growth has but little influence upon the result. Success or failure will follow the operation regardless of the character of the growth. If there be any distinction, it will be found to be in favor of the fibrous form. For reasons set forth in the previous paper (*Philadelphia Medical Journal*, June 22, 1901) I do not believe that a preliminary suprapubic cystotomy should be resorted to in order to expedite the employment of the galvano-caustic incisor. Experience has taught me that in many cases of incurable suprapubic fistula following suprapubic cystotomy, associated with hypertrophy of the prostate gland, the removal of the obstruction caused by the glandular enlargement, by means of the Bottini operation, will not infrequently be followed by a permanent cure of the fistulous tract. A typical case illustrating the truth of this assertion will be given later on.

(To be Continued.)

BOVINE TUBERCULOSIS AND MILK SUPPLIES.*

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The importance of any phase of investigation relating to tuberculosis and its relation to milk is unquestioned in these latter days when the general public is beginning to appreciate, for the first time, the magnitude of the problem that confronts them in attempting to lessen the ravages of the "great white scourge" of the human race.

In considering this subject, it may be approached from two points of view:

1. From the standpoint of animal industry.
2. From that of public health.

Bovine Tuberculosis and Animal Industry.

The rapid extension of the disease among cattle within the last few decades has forced upon breeders and dairymen the necessity of considering this subject whether they desire it or not. It is customary in many quarters, even yet, to deem all consideration of this matter as unnecessary, inexpedient and harmful to the dairy interests. But, as is too frequently the case, the motive for such action rests upon a financial foundation, and many breeders are averse to a calm, judicious discussion of the matter simply because it may mean a financial loss to them.

Since the introduction of the tuberculin test as an aid in the diagnosis of the disease in cattle, it has been positively determined that the malady, at least in its incipient form, is very much wider spread than was formerly supposed, but it by no means follows that all animals that react to the tuberculin test are actually in a condition in which they or their products are dangerous to man and beast.

The slow, insidious nature of the disease that characterizes it in the human is also to be found in cattle, and not infrequently an animal may be infected with the seeds of disease for a considerable time—even a year or so—without showing in any degree physical symptoms that are manifest to even the animal expert. Such animals are not diseased in the ordinary meaning of the term, i. e., they are not capable of transmitting the disease, either directly or indirectly, through their milk supply or meat. The affection in such cases is latent, generally confined to various lymphatic glands, but animals so affected are, however, potentially dangerous, for the latency of the disease may be overcome through the operation of various factors, and the chronic type may thus be awakened into an acute phase. It is in this way that the disease spreads slowly and unperceived through a herd. Before it has made such inroads as to cause actual death of any considerable number of animals, many more have acquired the trouble, at least in the earlier phases. Necessity of controlling its spread and eradicating it is evident for the sake of the herd itself, if from no other point of view. Successful animal industry, especially with cattle, requires that herds shall be kept free from all taint of this disease.

Bovine Tuberculosis and Public Health.

But the other phase of the question, viz., the re-

* Read before the Canadian Medical Association at its meeting in Winnipeg Aug. 29, 1901.

lation of bovine tuberculosis to the public health is undoubtedly of more interest to an audience of medical men than a consideration of the question from the viewpoint of the breeder and the stock-raiser.

The fact that both the human and bovine types of this disease have been shown to be causally related to the tubercle bacillus might, on the face of the matter, be taken to indicate that they were produced by the same identical organism, and yet every bacteriologist recognizes that, while the causative organisms found in this disease in man and animals show many common characteristics, there are also to be noted differential characters that serve to indicate that the respective organisms belong at least to different types or varieties rather than the same identical form, as in the case of anthrax in man and animals.

Special interest concerning the very practical question as to the transmissibility of the bovine type of the tubercle bacillus to the human and vice versa has been very recently awakened. Certainly, the practical importance of this problem is such as to demand most careful scrutiny. If there is any danger of transmissibility, it is needless to emphasize its importance to public health interests. On the other hand, if no such danger does exist, it certainly works a hardship on animal industry to expend so much time and energy on precautionary measures that have for their aim the elimination or at least the diminution of the reputed danger to the narrowest possible limits.

But, if the question of bovine tuberculosis is considered merely from the viewpoint of animal husbandry, restrictive regulations are still necessary; and if these must be maintained, it would seem the part of a sound public health policy also to continue the enforcement of such restrictive measures as are designed to safeguard human life, until it can be shown beyond all doubt that such measures are needlessly severe.

One fact should be borne in mind, and that is, that the virulence of the bovine type is much greater than the human variety of the organism. The conclusive researches of Theobald Smith* and others in this country, as well as a number of European investigators, indicate that the susceptibility of cattle to inoculation of tuberculous human sputum is relatively slight in comparison with similar inoculations with material of bovine origin. This in itself would indicate that the danger of cattle acquiring the disease from human sources would be so slight as to be practically negligible. Furthermore, comparative experiments made on various animals in which both types of bacilli were employed show uniformly that the bovine type is much more virulent than the human.

Pending the accumulation of sufficient observations relating to accidental infection to prove conclusively what could be quickly demonstrated beyond cavil, if it were possible to study this subject experimentally, it seems fair to consider that the danger of infection from bovine to the human would be greater than from the human to the bovine. It

will take some years at best to collect the data that from the very nature of the case must be derived largely from observations, before we will be in a condition to consider the evidence as absolutely conclusive either one way or the other.

In the meantime, it is desirable that restrictive measures should be maintained with sufficient rigor to ensure freedom from all possible danger, even though such measures may be found in the future to be to onerous. One might with equal propriety decry periods of quarantine that were enforced with rigidity during the middle ages, but such are now known to have been unnecessarily severe. At the present time, when our knowledge relating to the ways in which contagia are disseminated is much more complete, it is true that such rigid lengthy quarantine and complete isolation measures are not necessary; but in cases, even yet, where exact data are lacking, it is a correct principle for public health officials to insist upon such measures as are known to safeguard public health interests, even though it may become necessary to modify them subsequently as the actual conditions become more completely known. These restrictive measures should, however, not be unnecessarily severe and must, of necessity, be revised frequently as knowledge becomes more accurate.

Possible Danger from Tuberculous Cattle.

The main sources that may serve directly in the dissemination of tubercle bacilli from animal to man are the meat and milk. It is true that indirectly the possibility exists of inhaling tubercle organisms of bovine origin as these are thrown out from the respiratory passages of animals. Not only may they be ejected forcibly, as in the act of coughing, but in a dried form, they exist in the barn on surfaces with which the animal has come in contact. Not infrequently does this indirect method of transmission serve to introduce the disease into a perfectly healthy herd, if the same is brought into infected quarters, in a manner entirely comparable to that which exists in the tenement districts of the cities, where certain houses become so saturated with the virus of the disease that it is practically epidemic.

Infection from Meat.

The first direct source of infection referred to, viz., the use of tuberculous meat, is fraught with much less danger than that which arises from the use of milk. In the first place, the fact that meat is almost always consumed in a cooked condition diminishes the danger in a great measure, as ordinary cooking destroys the vitality of the organism, except where meats are done "rare." Again, it is also to be noted that by far the larger proportion of animals that are adjudged tubercular, on the basis of the tuberculin test, are affected to such a slight extent that the muscular parts used as food do not contain the seeds of the disease. Generally speaking, tuberculosis is a disease of the visceral organs and serous surfaces. Normally, it is not disseminated in the body by means of the vascular circulation, and consequently, in the earlier phases in any event, the muscular parts are not invaded.

* Journal of Experimental Medicine, 1898, Vol. I, 45.

With generalized and advanced stages this condition may be different, so that it becomes possible to transmit the disease by ingestion of the meat. To condemn and destroy all flesh of animals simply because of a positive tuberculin reaction is to follow a course needlessly severe and expensive. Much of the meat is just as good as any that could be purchased. In actinomycosis it is no longer considered necessary to sacrifice the entire animal, if the disease affects the jaw or some portion of the head. Such should be the case with animals in good condition that react to the tuberculin test where post mortem examination reveals a localized state of disease. It naturally follows that such a course ought only to be permitted under strict veterinary inspection. This method of disposal is practiced in various European countries, and if as large a percentage of our stock was affected, as is found in some of these countries, some such measures would of necessity have to be adopted here.

Infection from Milk.

With reference to the danger from milk the conditions are far different. This food is so generally consumed in a raw state that if tubercle bacilli are present, the opportunity for intestinal infection is much greater. The relative susceptibility of the intestinal tract, especially with children, is a question of magnitude in this connection, but here proof must rest on statistical evidence concerning which there is, unfortunately, considerable difference of opinion in interpretation. I shall therefore leave this question open and consider next the question as to how frequently the tubercle bacilli are to be found in market milk.

Prevalence of Tubercle Bacilli in Milk.

It is unfortunate that American data are so meagre on this point. The work of Ernst, Rabinowitsch and others has shown that the organism is to be found under our conditions, but it is impossible for us to apply the data gathered abroad, especially in Germany, for the reason that bovine tuberculosis is a very much wider spread disease in these countries than in our own. It would, therefore, be manifestly unfair to compare conditions in Denmark or portions of Germany, where from 25 to 40 per cent. of cattle are found to react to the test, with regions here that do not contain at most more than a few per cent. (2 to 4).

It must be borne in mind that although an animal may react to the tuberculin test, yet it may deliver milk, even for a long time to come, that contains absolutely no trace of tubercle bacilli. The important question as to just when the milk of a reacting animal becomes infectious is not susceptible of exact answer. Unquestionably, if the udder itself is affected, the milk is almost sure to contain tubercle organisms, but this condition does not occur so that the organ becomes visibly affected except in a relatively small percentage of cases. It more frequently happens, however, that less marked lesions may exist in the udder that would even escape close examination, and in such cases the tubercle bacillus is not infrequently found.

On the other hand, of the animals that react to the tuberculin test, but show no physical symptoms of the disease, either generalized through the sys-

tem or localized in the udder, the larger part of these does not contain the seeds of this disease. This fact has been determined as a result of experimental inoculation on laboratory animals, and has also been abundantly confirmed by tests upon young cattle and hogs.

There is ample evidence, though, that milk may possess infectious properties for animals and still be derived from cows that show no apparent symptoms of disease, but when one recalls that very frequently an animal may be in good flesh and apparently healthy, and yet the disease has made extensive progress in the internal organs, becoming well generalized, it is not surprising that tubercle bacilli are to be found in the milk supply. We need, however, many additional data as to the prevalence of the tubercle organism in milk, before the relative distribution of the germ can be at all accurately determined. In this work for accuracy animal experiments should take precedence over microscopic examination, for it is frequently possible to produce positive infections in guinea pigs by intraperitoneal injections where the microscope fails to reveal the specific organism.

Tubercle Bacilli in Milk Products.

If tubercle bacilli are at all numerous in milk it follows of necessity that milk products as cheese and butter must contain them. It seems quite improbable, though, that the danger from these products can approximate that of infected milk, for the reasons that a considerable number of the organisms must be eliminated in the process of manufacture, and also that these food products are consumed in less quantities than milk, and therefore the amount of simultaneous infection must be reduced. The conclusions derived from earlier experimental evidence on the subject of tubercle bacilli in butter have been rendered less satisfactory of late years by the discovery of organisms in this food that simulate the morphology of the tubercle germ and to a less degree in some cases even the pathogenic properties of the organism. Just how much the data previously accepted are vitiated by these findings can only be known by a thorough retest of the question.

Control of Tuberculous Milk.

But what shall be done with the products of animals reacting to the tuberculin test? While it can be readily demonstrated that a large proportion of animals responding to the test actually deliver tubercle free milk, still the impossibility of telling just when an animal may pass from the harmless into the dangerous stage necessitates the proper treatment of all milk.

Exclusion of Tubercle Bacilli by Means of Tuberculin Test.

This question has been solved in two ways, either of which accomplish the desired end in a perfectly practical manner. These methods are exclusion and destruction. By applying the tuberculin test to a dairy herd—especially one that is concerned in the production of milk for direct consumption—and excluding all animals that react to the test, it is easily possible to avoid all semblance of danger. This course has much to recommend it, especially in milk

supply herds, for not only does it insure a tubercle-free milk but it eliminates one of the greatest dangers to the continued well-being of the herd, for experience shows that bovine tuberculosis is a more serious menace to dairy herds than beef herds, because usually they are more closely housed, thereby increasing the danger of infection.

This method is very frequently followed in herds that produce extra fine milk, where the enhanced keeping quality is secured by exercising great care as to the milking conditions and to the manner in which the milk is subsequently handled. The bacteria associated with the ordinary fermentations of milk, such as souring, can be practically eliminated by keeping out all dust and dirt, invisible as well as the visible filth, but these methods of cleanliness have no effect on the bacteria derived directly from the cow. It therefore becomes necessary to rely on veterinary inspection to eliminate the animals unfit for milk production, and with reference to tuberculosis, the tuberculin test enables this to be done much more accurately than physical examination.

Destruction of Tubercle Bacilli by Heat.

The remaining method of treatment is to destroy any possible tubercle organisms (as well as any other pathogenic forms) by heat. The two methods of applying heat that have been the most successful are known respectively as pasteurization and sterilization, the essential difference in these two processes, as doubtless all of you know, being that the pasteurizing treatment aims to kill only the vegetating, growing bacteria, while the sterilizing process, at approximately if not reaching the boiling point, destroys also most of the spore bearing forms. As a rule, over 99 per cent. of the organisms contained in milk are in a growing vegetable condition. Therefore, so far as keeping quality is concerned, the pasteurizing method is almost as good as the more stringent treatment.

I need not enter into the relative merits of these two processes for the preparation of milk for infants or invalids. The standpoint that we are considering is that of the general consumer and from this point of view, the first method is more applicable. It is cheaper, more easily performed, changes the normal characterization of the milk to a less degree, and so far as destroying the pathogenic bacteria, is fully as satisfactory when properly done. It is true, pasteurized milk will not keep as long as sterilized, but this is of little consequence to the general user, for if the milk keeps perfectly sweet for even 24 hours longer than is usually the case with raw milk, it is sufficient to meet his needs.

With reference to the conditions in pasteurizing that are necessary to destroy the tubercle bacillus, our knowledge is much more exact at the present time than it was two years ago. Until very recently it has generally been considered that the tubercle bacillus ought to be taken as the standard test organism in pasteurizing, because this organism was considered the most resistant of any pathogenic germ that was likely to be found in milk.

Thermal Death Point of the Tubercle Bacillus.

De Man, working in Forster's laboratory, formulated a scale as to the time required to destroy this

organism at varying temperatures. His standard was as follows:

55	degrees	C.—	4	hours.
60	"	"	— 1	"
65	"	"	— 15	minutes.
70	"	"	— 10	"
80	"	"	— 5	"
90	"	"	— 2	"
95	"	"	— 1	"

Inasmuch as in pasteurized milk it is desirable to avoid the cooked flavor which appears when milk is heated to 70 degrees C. or above, the standard gradually adopted for pasteurizing was the requisite time to kill the tubercle bacillus at temperatures slightly below this point.

The more thorough work of Theobald Smith within the last two years has shown that the tubercle bacillus is not endowed with greater powers of resistance than that possessed by many other organisms. His experiments carried out under laboratory conditions at 60 degrees C. (140 degrees F.) showed that this species was totally destroyed in 15 minutes at this temperature. The great majority of the bacteria were killed in five or ten minutes. This result was obtained whether he exposed the culture of the tubercle in distilled water, dilute salt solution (0.60 per cent.), bouillon, and under certain conditions in milk, the thermal death point was no higher than with other media; where the medium was exposed to the air, the organisms were not killed, the protection in this case being associated, as he thought, with the scalded layer that forms on the surface of milk when this liquid is heated.

The practical significance of these investigations led us to retest these experiments, under commercial rather than laboratory conditions. This was done by pasteurizing milk infected with tubercle cultures in a closed rotating commercial pasteurizer. Guinea pigs were used to test the vitality of the heated bacteria, intraperitoneal injections being made in each case. The quantity of tubercle organisms thus inoculated was much greater than would ordinarily be found in even a badly infected naturally tuberculous milk. The results of these tests confirmed the data presented by Smith, and showed that even a ten-minute exposure at 60 degrees C. was sufficient to destroy the vitality of the tubercle organism so thoroughly that no trace of disease developed in any case. Where the milk was heated for five minutes disease was produced, although even in these cases the course of the same was much less rapid than in the control pigs which were inoculated with unheated milk and which died invariably within 13 to 19 days.

Relation of Thermal Death Point to "Scalded Layer" on Milk.

These experiments were still further continued in order to test the thermal death point in milk pasteurized in an open vessel in a quiescent state with that treated in a commercial pasteurizer. In domestic pasteurization, milk is frequently heated in vessels where its surface is exposed to the air. Under these conditions the surface pellicle forms readily. When such milk was infected with tubercle bacilli and pasteurized at 60 degrees C., the con-

tained bacteria in the milk exposed in the closed commercial pasteurizer were always killed in a ten-minute exposure, while that exposed in a quiescent condition in open bottles was not destroyed in a considerably longer period of time. The exact limit was not determined in these cases, but in an exposure for fifteen minutes the vitality of the contained organisms was not impaired. In Smith's experiments the organism retained its vitality heated in cotton stoppered tubes in one case for an hour.

To determine with certainty whether this increased resistance in open vessels was due to the surface pellicle or not, further experiments have been made at the Wisconsin Experiment Station this season. These have not yet been reported in full, but the results obtained are briefly as follows:

Samples of milk were inoculated with a peculiarly resistant coccus form that we have found in milk that has a normal thermal death point at 75 degrees C. (practically 15 to 18 degrees C. higher than that possessed by ordinary bacteria). Under these temperature conditions, the surface film forms very quickly. After an exposure of the milk for ten minutes at various temperatures varying from 70 to 85 degrees C. the surface pellicle was removed, and planted in an agar culture, care being taken to spread out the membrane as much as possible. Even where the temperature was raised to 82 degrees C., colonies of the inoculated organism developed quite abundantly in the membrane while the milk exposed in sealed tubes became sterile when a temperature of 76 degrees C. was reached.

To show that this increased resistance was not due to a lower temperature at the surface, the experiment was made by removing the membrane a few minutes after it had formed and immersing the same in a bath of sterile water. In this medium the membrane sank quickly to the bottom and even under these conditions the organism tested lived longer in the submerged membrane than it did where the milk was heated in a closed vessel. This throws the explanation of the phenomenon back on to the nature of the membrane itself. This surface pellicle is made up largely of dried casein, due to the fact that evaporation takes place at the surface faster than convection currents can occur in so viscous a liquid as milk, and the result is that the surface of the liquid dries out to some extent. Any bacteria, tubercle or otherwise, that are caught in this layer are thus artificially protected by being encapsuled in the more or less dried casein.

It is evident from these investigations that the conditions necessary for the destruction of the tubercle organism in milk are not simply to heat the milk to a certain temperature, but it is necessary to so protect the liquid as to prevent the formation of this surface film.

Advantages of Low Temperature Pasteurization.

One great advantage arising from the pasteurization of milk at this relatively low temperature (60 degrees C.) is that the consistency of the liquid is not changed. The chief objection that has hitherto been urged against the more common use of pasteurized products in general milk supplies is that the action of the heat destroys the creaming power

of the milk and so renders it apparently thinner in "body," due to the fact that the cream line does not form on the surface. It has been previously shown at the Wisconsin Experiment Station by Babcock and the writer* that this diminished viscosity is due to the separation of the characteristic fat globule clusters found in normal milk into the constituent isolated globules. This physical change occurs at about 60 degrees C., and therefore, if milk is heated at this temperature or below, even though the exposure be continued for a long period of time, the milk does not lose its creaming power. If, then, it is possible to destroy the tubercle bacillus with certainty at this temperature, where the physical condition of the milk is not changed, one may be assured that such milk is perfectly safe so far as pathogenic bacteria are concerned, and at the same time the use of pasteurized products is thereby removed. This method has now been in practical operation at the University of Wisconsin Dairy School for two years and has been thoroughly tested under commercial conditions. The keeping quality of such milk is satisfactory, retaining its sweetness for several days, where the product is kept with any ordinary degree of care. The introduction of this process into general milk supplies has been quite rapid during the past year, and there are now quite a number of plants in the larger cities in the States that pasteurize a very considerable proportion of their output under these conditions.

SOME POINTS ON INTRACRANIAL NEOPLASMS CONSIDERED FROM THE NEURONIC STANDPOINT.**

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History of Brain Tumor.—This subject is an important one to the general practitioner as well as to the neurologist, on account of the relative frequency of this disease as compared with other organic diseases not only in adults but also in children. Cerebral neoplasm is also of vital import in medicine, because of the possibility of its treatment by surgical procedures, if a diagnosis can be made early. It is the purpose of the present contribution, based on careful observation of this disease, to point out the possible reason in the neuronie theory so-called, for the great difficulty of determining the site and extent of lesion. Considering that the history of brain tumor dates back but a score of years, when Bernhardt first wrote upon the subject, the wonderfully rapid scientific development of this branch of medicine, through the study of anatomy and physiology of the central nervous system, is forcibly brought to our attention and we are indebted for this advance of knowledge to the line of workers represented by such authors as Steffan, Bramwell, Jacoby, Mills and Lloyd, Starr, Knapp and others. From the knowledge thus gained as shown in the final summary of 600 cases reported by Starr, at least 7% of tumors can be removed. This is en-

* 13th Rept. Wisconsin Expt. Station, 1896, p. 73.

**Read by invitation before the Section of Medicine, New York Academy of Medicine, May 21, 1901.

couraging as regards surgical technique, but shows a lack, withal, of ability to cope with this one of the most serious diseases; existing, as it does, in the highest structure of the body.

As early diagnosis and location is the essential point for successful treatment, therefore it is with the hope of advancing some reasons for inability to determine by the ordinary methods of cerebral localization, some cause for disturbances manifesting themselves in aberrations of function which are at variance with all anatomical and physiological knowledge. The history of the development of the neuron theory is naturally followed by the hope of explaining some diseases by this fascinating speculation. The writer has attempted explanations of epileptic seizures with this hypothesis in a paper on "Epilepsy," read before the Philadelphia County Medical Society in 1896.

Bechterew, Forel, His, and Cajal abroad, and Dercum, in this country, should receive the grateful thanks of the scientific mind for presenting this acumen of thought, although the materialistic, and therefore grosser, bases for nerve cell action and life may never be brought in accord by any determination of even anatomical changes as seen by the microscope. I say this discharge theory is most fascinating, if difficult to apply in all cases.

Physiological chemistry no doubt plays an important rôle in the determination of the toxic causes of brain symptomatology, much as in hemi-anesthesias of Bright's disease; still a certain number of phenomena remain as yet unexplained, but by the theory of neuron separation and sequent perversion of neural energy.

The phenomenon of hypnotism also comes forward in proof of the realism of the neuron theory.

Etiology of Brain Tumor.—The heredity of a tendency to cell degeneration and overgrowth in the form of neoplasms is a most intricate study; but we feel sure, with extending experience, that the cellular theory of Virchow must be considered tenable in the light of developing scientific truths in neurology as shown in the recent scientific researches. For example, as to intracranial neoplasms, a case seen in consultation with Dr. Dubbs, diagnosis of cerebellar tumor in a young lad, was fortified by the fact that the mother had died from the same condition. Traumatism also is a predisposing cause to tumor of the brain; though we are here again in want of actual proof of this, yet not of the fact that a cerebral neoplasm is frequently increased in growth by an injury to the head, as in one case seen in the Philadelphia Hospital this winter, in a man, 45, who had been in a *mêlée*, showing bruises about the head and chest, and suffering with aberrant symptoms of concussion of the brain with left hemiparesis. The case finally came to autopsy, when a tumor of the right parietal lobe was discovered. It had evidently been latent up to this time.

Or, again, the intoxication as of alcohol, lead or of specific disease, as syphilis or influenza, may be the precipitating cause of symptoms; much masked first by the said intoxications to which is frequently added a hysterical element. Finally, the resultant symptom of brain tumor alone will explain the fundamental cause of the disease. I take it here, that we have a most difficult problem to solve; but it is

likely in some cases, aside from mere disturbance of circulation cutting off proper neuron inhibition of nervous impulses, we have resident in the aforesaid exciting causes, the insult to the disturbed nerve function in the neurons alone, or which are working at a point near the "breaking strain." Then it is the association of impulses, at least, is ruptured and symptoms of brain tumor will present. The nature of the pathological growth in these obscurely developing cases, irritating cell contraction will much modify the method of onset of symptomatology; since the integrity of the association fibers will be more or less jeopardized by the essentially destructive nature of the disease, *per se*. Thus a soft simple-round-cell-sarcoma, a psammoma, or an extravasation cyst of slow development may exist without producing localized or general symptoms in proportion to the apparent injury to the cerebral neurons; whereas, a minute dense tumor, as a fibroma or endothelioma, when developing from within the encephalon, would, by destruction, produce more widespread symptomatology and more localizing special symptoms of the neoplasm. Pressure growths are also less symptomatic therefore.

With an increasing experience in observing my own failures, as well as those of others, to diagnose some of these cases, I am convinced more and more that underlying the anatomical basis of symptomatology, as it were, there is an individual element of resistance to nerve impulses in different sorts of protoplasm in this highest type of tissue—the neuron. So that scientific as we may be and great as its importance, there must be the general *ensemble* of abnormal physiology to reckon with, which still leaves this most difficult branch of medicine, in major part, within the realm of high art.

Special Symptomatology.—As we know to-day, the symptoms of cerebral neoplasm which change or modify the efferent impulses from disease within the brain mass, are the principal ones we most rely upon to diagnose brain tumor and allied conditions. Thus the hyperesthesias, paresthesias or anesthetics, depending upon irritation or destruction respectively in some part of the sensory tract, and depending also upon its localization, will be valuable signs in determining the situation of the tumor, in the typical case. On the other hand, the muscle rigidity, increase of reflexes, superficial and deep, convulsions sequent to such condition more or less transient, finally permanent paralysis of the part involved, will be important diagnostic signs of a neoplasm in the motor tract. Still it must be remembered that we have microscopic changes where the remaining neurons in immediate contact will carry on vicarious function for some time; and this is as yet undetermined by our want of knowledge of the physiological point of extreme tension; and where the symptoms of neurasthenia or hysteria may gradually grow to paramount place; finally, degeneration progressing, and symptoms of organic disease present when "too late to mend." This is a point in proof, it seems to me, of the neuron theory still tenaciously maintained in America by my colleague, Dr. Dercum. *Per contra*, as showing that anesthesia can also exist without organic lesion; and therefore in support of the neuron theory

ory, in separation of contact of one neuron with another, it would seem a recent case coming to a careful necropsy in my own wards in the Philadelphia Hospital, demonstrates pretty clearly. The case had been diagnosed one of hysterical anesthesia by Dr. C. K. Mills, involving the left face and arm down to the wrist and upon the left trunk as far down as the eleventh rib in the axillary line, below this point there being a hemi-hyperesthesia of the remaining left trunk, extending to the lower extremity. The anesthesia in the face came to the mid-line pretty accurately and obtunded sensation but little in the left cornea. The man died of lobar pneumonia involving the right lung. On careful examination of the brain by the pathologist, Dr. Joseph McFarland, and myself, there was found absolutely no change in the brain structure, every part of which was minutely investigated. Here, then, we have a proof of hysterical, if you please, lessening and absence of sensation on one side of the body accurately defined, and yet no lesion determined. It seems here a missing link is certainly found, albeit in a negative way, in support of the neuron theory of accounting for modification of nerve impulses in functional disease.

General Symptoms of Brain Tumor and the Neuron Theory.—Among general symptoms of brain tumor, headache is a most characteristic one. Since the ramifications of the fifth nerve are confined particularly to the dura within the cerebral cavity, the pain of brain tumor is necessarily the result of irritation of these fibers. This symptom may be extreme, however, even in cases where the growth is deep within the encephalon. I am not willing to believe that in every case, it is excess of intracranial pressure from the neoplasm that causes head pain in these deep-lying tumors, and I am therefore more free to feel that possibly irritation of the neuron produces an irregular flow of nerve impulse, which gives evidence as *head distress*, by the mere fact of such a perversion of function of nerve force, whatever that may be (*perhaps electricity*). Assuming this origin for pain in cerebral tumor, it would be somewhat likened to the less intense and more vacillating "helmet-like" distress of neurasthenia, in cases of which disease I have observed head pain not to be distinguished from that positively known to be of cerebral tumor origin. So that aside from evident cortical growth irritation and pressure symptoms as a cause of pain in cerebral tumor, it would seem plausible to add that head distress is due in part to irregular neuron activity and sequent disturbance of the proper distribution of nerve impulse, which can in some measure be accounted for by neuron separation within the brain mass. Headache due to galvanism of scalp is a point in favor of the theory of neuron activity, the energy of which may here indeed be well assumed to be electric force.

Cerebral or Reflex Vomiting.—The usually accepted view of cerebral vomiting being due to pressure of the growth, therefore causing irritation of the vagi and the resultant emesis, can also be explained to my mind (in the cases where there is no excess of intracranial pressure), by assuming an irregular discharge of nerve force through these particular nerves as the result of neuron irregularity of func-

tion; the discharge being but an exit to a stored up excess. That in some cases on taking food into the stomach, vomiting does occur at times in brain tumor, is another point in favor of the fact that the afferent impulse is carried to the brain, there to be reinforced by the irritability of the brain mass; then, being reinforced, is transmitted to the gastric walls through the vagi. This certainly could not be explained by a pressure, *per se*, even though we admit the pressure is the cause of irritability.

Stupor.—Mental obtundity in brain tumor cannot be entirely explained away, it seems to us, by assuming destructive lesion only; since in many of the cases with greatest amount of stupor (and not necessarily in the frontal lobes lesion), we have no other marked somatic evidence of irritability or palsy. So that slight irritation of a growth may be sufficient to produce retraction of the dendrites (or by excess of the intercellular serum pressure may thus separate one neuron from another), and preventing by this breach of contact, the abeyance of thought which is the most delicate action of the brain that would present, as is so in brain tumor, long before physical disabilities are "en evidence." The neuron theory is apparently tenable here. In judging of this theory, I reiterate, we recognize the impossibility of proof; but reasoning from analogy with other physical mechanisms, the evidence of such activity seems fairly conclusive.

Special Symptoms.—Subjective sensations as of tinnitus aurium may be due to irritation of the cells of the nuclei of the acoustic nerves, just as the pain of locomotor ataxia must be due to irritation of the posterior roots of the spinal cord; and how better can you explain this latter than by the assumption of an overflow of nerve impulse caused by irritation of the neurons, and perhaps through movements produced by irregular throwing off of energy from an overcharged system? So it would be with cerebral neoplasm concerning the other special senses from this neuron standpoint; which need not be detailed here.

Motor Phenomena.—Convulsions of the precedent tumor, and choreiform movements may be entirely due to excitation of the neurons through over-activity of the movement of them. This seems convincing to me, since specimens I have seen of tumor of the brain of large size which did not produce any convulsions whatever until very late in the disease, could in this way be accounted for, *viz.*: That immunity to excitation occurred in such gradually growing growths; and that finally, vicarious function being carried on well up to a certain period, a breach of function suddenly occurred, explosive impulses followed, and the patient is suddenly carried off. This happened in a case of my own recently, where there was no evidence of intracranial pressure, the patient finally going into convulsion and dying in this status from exhaustion. There was no toxic causal factor made out in this case.

Recent experiments by Charpentier, published in the *Revue Scientifique*, tend to prove an electric theory of nerve force. This electric theory was also upheld in a paper read by Dr. O'Brien before the Medical Society of the State of Pennsylvania in 1900, in which he ingeniously compares the finer electrical

apparatuses with the mechanism of the nervous system. And to my mind, it would seem that the neuronie theory also explains away the mechanism of nerve-force action in the human body. But I do not wish to weary you!

Conclusions.—From the evidence gotten in the symptomatology and pathological findings in cases of cerebral neoplasm, as well as in functional disease of the nervous system in particular, it would seem that there is ground for believing in the domination of electric energy as a cause of a continuance of life processes after birth, which from a theoretical point of view, as stated, would seem likely to be a form of electricity.

While appreciating the value of anatomical and, therefore, regular physiological perversions as most exact causes for determining the general and special symptoms of tumor within the brain, still the limitations of knowledge even of the said anatomico-physiological abnormalities produced by growths will not entirely explain our inability to diagnose tumors in a large minority of instances of this disease. Some evidence is here proposed to account for this inability to determine a cerebral neoplasm, through assuming perversion of functionation by disturbed neuron physiology; and with this neuron theory of separation of dendrites, we may account for otherwise unexplained symptoms.

The more we study life processes, the more it seems to me that protoplasmic life being established, electricity is the governing motor force. And following this line of thought, it must be that the mechanism of the central nervous system which contains the nerve force or electricity, if you please, should have some mode of action in the control of this vital energy—and that the neuronie theory best subserves explanation of the phenomenon.

A case coming to my attention at the last moment in the preparation of this paper, is "en evidence." A physically healthy woman in the insane department of the Philadelphia Hospital, subject to petit mal, died suddenly without any known cause. At the autopsy on May 9th, 1901, there was found absolutely no pathological condition to explain the cause of her death. In this case, an over discharge of nerve force to the inhibition of the heart through the vagi will alone explain the death; the normal heart being found in firm systole at the necropsy. The neuronie theory will partially explain this case.

My position certainly seems tenable as a cause of expression for nerve impulses that are *not normal*. This seems to me the more probable, as we seek more and more the intricacies of life processes which are styled normal and abnormal.

A quotation from Prof. Ranney's writings can be well given here to elucidate the normal action of the nervous system. "All day long, and every day, multitudinous apparent impulses from eye, and ear, and skin, and muscle, and other tissues and organs, are streaming into our nervous system, and did each afferent impulse issue as its correlative motor impulse, our life would be a prolonged convulsion.

"As it is by checks and counterchecks of cerebral and spinal activities, all these impulses are drilled and marshalled and kept on hand in orderly array till a movement is called for; and thus we are able

to execute at will the most complex bodily maneuvers, knowing only *why*, and unconscious or but dimly conscious how we carry them out."

NEURASTHENIA.*

By JAY G. ROBERTS, M. D.,

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It has been said, and not without reason, that the American people are fast becoming a race of neurasthenics. If this be true, then a consideration of this condition will not be amiss. It may be that this affection is not more common than heretofore, but that a varied number of symptoms and manifestations now known to be neurasthenic were formerly looked upon as symptoms of an undiscoverable organic lesion. Be that as it may, the fact remains that while, but a few years since, neurasthenia was a term scarcely known to the average practitioner, it has now come to rival hysteria in prevalence and popularity. One error formerly committed and often persisted in at this time is the confounding of neurasthenia with hysteria. Nothing could be more wrong, for while it is true that neurasthenia and hysteria often coexist, they are two distinct entities, hysteria being a disease with well marked stigmata of perhaps a doubtful or not well understood pathology, while neurasthenia is merely a condition, a condition of nervous exhaustion, pathological fatigue or, as Prof. Brower used very aptly to say, a condition of nervous bankruptcy wherein the expenditure of nervous energy has exceeded the supply.

The amount of nervous energy in store not being sufficient for the performance of the ordinary mental occupations and for the supply also of the various vital organs in the performance of their functions, they are both but poorly accomplished. The various functions of the body, which are but little or not at all under the control of that master, the will, are not forced to do their duty as is the mind, and therefore suffer first from lack of the necessary capital with which to do business. Impaired function with its train of evils is the result. Indigestion, mal-assimilation, auto-intoxication, impaired metabolism and failure to supply proper material and nourishment to replace the depleted store of nervous energy form a vicious circle which runs on with ever increasing intensity unless broken by proper management.

Osler (1) has characterized this condition as the physical counterpart of insanity, the essential feature of which is the abnormal response to stimuli from within or without upon the higher centre presiding over the mind; so in neurasthenia the inhibitory nerves, through exhaustion, lose control over the various functions of the body which then respond to stimuli and impulses which would otherwise pass unheeded, thus causing waste of energy and a further depletion of the already exhausted nervous system.

Eskridge (2) speaks of a primary neurasthenia in which an exhaustion and irritability of the nervous system constitute the chief derangement, and a secondary neurasthenia following organic lesions or acute disease. Such a division is, however, hardly

*Read before the Nebraska State Medical Society, May 8, 1901.

indicated, as neurasthenia is always secondary, whether to excessive mental effort, worry, fear, etc., or to exhausting disease. The various disorders of function, however, may be the result of disease or other extraneous causes, thus preceding the exhausted condition of the nervous system, or be secondary to the exhaustion which may have been, as stated above, the consequence of excessive mental effort or other nervous strain.

Etiology.—Hereditry is always given first place in the etiological consideration of neurasthenia, though, of course, it is evident that the condition itself is not transmitted but rather a predisposition in the form of an unstable nervous equilibrium, ambition, impaired physical organization, or a disposition to worry, discontent, etc.

Education is a potent cause not only in the senseless irrational methods of cramming, educating the mind at the expense of the body, indulged in by our public schools, but also in the home where displays of temper, worry, discontent, and fretfulness soon produce a demoralizing effect upon the younger generation. As stated by de Merritt (3), neurotic parents being in a constant state of irritability themselves, scold and nag their children incessantly but have not will power to enforce real discipline, thus destroying what little mental equilibrium their offspring may have been born with. Among the factors, which in the parent tend to the transmission of such a predisposition to the child, may be mentioned hysteria, neuroses, sexual and other excesses, overwork, excitement, emotions, gout, rheumatism, syphilis, tuberculosis, etc. Anything which lowers the resistance and vitality of the parent, likewise tends to lower the resistance and render unstable the mental equilibrium of the offspring and thus predisposes to neurasthenia.

Of the exciting causes not already mentioned, the struggle for existence in this age of fierce and unequal competition, entailing worry, excitement, overwork and disappointment, is a potent factor.

Psychic shock or insult of whatever origin, drug habits and eye-strain are frequent causes, as are also sexual excesses, or indiscretions, masturbation, gonorrhea, syphilis, or more frequently syphilophobia, the acute infectious diseases, especially influenza, for there is no acute disease in which the resulting nervous depression is so out of proportion to the severity of the illness as it is in grip. As a consequence we may expect to meet with an unusually large number of cases of neurasthenia after each succeeding epidemic of influenza.

Injury or trauma is credited with being among the most frequent causes of neurasthenia, but, as pointed out by me in my article read before you last year (5), it is undoubtedly the result of the psychic shock or insult rather than the injury itself, which is often so trivial as to be disregarded.

Pelvic disorders in women are important factors in the etiology, for though Peterson (4) holds that "the pelvic organs themselves play but a small rôle, the influence of exhausting pain in these organs being no greater than similar exhausting pain elsewhere," there are few, indeed, who agree with him. The intimate relation existing between the female generative organs and the nervous system is too well known to need mention, as is also the fact that

the nervous depression attending injury or disease of these organs is out of all proportion to the pain caused by them.

Excessive child-bearing and lacerations of the cervix or perineum are factors of some moment, also the disturbances occurring at puberty and the menopause. Another element in this connection which is usually disregarded is that of autointoxication from deficient menstruation. The disturbances following upon impaired or insufficient menstruation are so like the manifestations of autointoxication of other origin as to leave little doubt as to their practical identity. As it is probable that autointoxication is the fundamental cause of the majority of cases of neurasthenia, the nervous system being first to suffer from any toxic substance accumulating in the blood, it is readily understood how important is any form of intoxication. Indeed, too much stress cannot be laid upon this factor in the etiology of neurasthenia, for it is always present, and whether it is a primary cause or a result, the condition once established, it forms the main link in the vicious circle which keeps up the disorder.

Age and sex are of but little importance, though it may be said that cases of an hereditary predisposition usually occur at that trying period of life, puberty, or between the ages of 15 and 20, while the acquired form occurs more frequently during that period in which the trials of business and family affairs weigh most heavily, the period between the ages of 30 and 45. In women puberty and the menopause are the most critical times. As to sex, men are more frequently affected than women, which may be accounted for by the greater prevalence of hysteria in women.

Pathology.—Until recently very little was known of the pathology of this disorder owing, no doubt, to the infrequency of death, which was not the result of some intercurrent disorder, and to the little value of observations made in such cases. The researches of Hodge, Barker, Mann and others have all tended to demonstrate that the primary morbid change is not in the nervous system but in the entire organism.

Hodge has noted an actual loss of substance in the cells, especially in the nucleus. This loss of substance necessarily causes impaired function of the individual cells and of the organs which they go to make up. Impaired metabolism and impaired excretion of waste products, always the result of activity physical or mental, and the consequent accumulation of such products in the blood, give us an autointoxication.

The influence of such intoxication is first felt by the neurons and the nervous system. The depressing effects of the accumulation of the products of activity are well shown, as stated by Eskridge (2), in the experiment of stimulating a muscle to exhaustion by means of the electric current. After washing out the products of muscular activity, the reaction to electrical stimulus returns, showing the evil influence of such products when allowed to accumulate in the organism.

It would seem then, that the keynote of this condition is autointoxication, and upon this basis can be readily understood the influence of the toxins of the various infectious diseases in the production of

the condition and its frequency following the infectious diseases.

Symptomatology.—From the very nature of the affection, the most important symptom is fatigue which is frequently so intense as to be actually painful. Many, however, though to all appearances a picture of exhaustion, will insist that they are not tired. This lack of appreciation of weariness is a troublesome factor in many cases. Usually, however, patients complain that the slightest exertion either mental or physical "uses them all up," that they are unable to concentrate their mind, and forget easily, attempts at concentration being followed often by headache, vertigo, and tinnitus.

Mental Symptoms.—Fretfulness, irritability, a disposition to worry over trifles either real or imaginary, frequent attacks of the blues, and hypochondria are common. Patients are often morbid and depressed, sometimes bordering on melancholia, are introspective and believe themselves possessed of all manner of diseases. In advanced cases the disposition becomes entirely changed, a person often becoming envious, jealous, tyrannical, cruel, suspicious of friends and family. Will power is lost. The subject is easily provoked to laughter or tears, delusions and illusions occur. Indeed so pronounced do these symptoms oftentimes become as to lead to the suspicion of some mental aberration. Insomnia is one of the most pronounced and aggravating features, being complete for long periods or only partial, the patient being unable to get more than a few hours sleep in a night, which may be broken by dreams, nightmares, or night-sweats.

Sensory Symptoms.—Headache is one of the most constant symptoms and may be located in almost any part of the head, being usually however frontal or coronal. Backache is also a frequent source of complaint especially in women. It is usually located in the lumbar region, but may occur anywhere from the cervical to the sacral region. Coccygodynia may occur in women and there may be localized areas of tenderness over the spine. Pain in the legs is next in frequency, occurring in the knees or calves usually, and may be so pronounced as to suggest rheumatism. It is often present after exertion, as walking or climbing stairs, and may be so severe as to keep the patient awake nights.

The skin may be dry and harsh or damp and clammy. There may be hyperesthesia, formication, and sensations of numbness, but not anesthesia. Flushes of heat or localized areas of heat or cold are often complained of. Single localized pains in various parts of the body as the heart or stomach occur and are termed by Blocq (6) "topoalgias."

Special Senses.—Of the special senses vision is most frequently affected, a common symptom being an aching or weariness of the eyeballs upon reading. There may be flashes of light, narrowing of the field, difference of the pupils which is usually temporary and unilateral, or ptosis, all expressive of exhaustion of the visual apparatus. Hearing is sometimes disturbed, less frequently taste and smell.

Motor Symptoms.—The various motor functions display disturbances indicative of physical exhaustion.

Muscular power is deficient. Though it may be

extremely good for short exercises, upon prolonged exertion the muscular fatigue may become so great as to be actually painful. Tremor is sometimes present. The reflexes are usually unchanged, though the deep reflexes may be increased. There may be unsteadiness of gait due rather to dizziness or vertigo than to incoordination. It is especially marked when the patient is near a stairway or other open space. There may be short spasmodic contractions of isolated groups of muscular fibres, sometimes in the facial muscles closely simulating chorea.

Circulatory Symptoms. Palpitation and irregular heart action are usually present, while rapid heart action and decreased vascular tone, as shown by Webber (8), are of prognostic value. Throbbing of the arteries and capillary pulsation may be present and at the same time the extremities may be cold. There may be precordial distress or rarely false angina.

Gastric Symptoms. So important are these as to give rise to the term gastric neurasthenia, which is but a form of the disorder in which the gastric phenomena predominate. There may be all grades of gastric indigestion, chronic gastric catarrh with acid and gaseous eructations and heartburn. The gaseous distention often interferes with the heart's action, causing precordial distress and palpitation. There may be a condition of atonic dyspepsia in which the food lies a long time in the stomach, giving rise to fermentation and eructations. This fermenting and partially digested mass passed on into the intestines causes autointoxication and constipation, sometimes alternating with diarrhea. Actual hyperesthesia and the gastric topoalgia of Blocq are often present.

Genito Urinary Symptoms. The urine, according to Fleury (7), was diminished in 66 per cent. of cases, normal in 20 per cent., and increased in 14 per cent. The specific gravity was increased in 59 per cent., decreased in 11 per cent., and normal in 30 per cent. Acidity increased in 59 per cent., decreased in 12 per cent., normal in 29 per cent. Uric acid increased in 61 per cent. Urea decreased in 57 per cent. of the cases. The phosphates were decreased in 43 per cent. and normal in 31 per cent. Indican and skatol were present in 73 per cent. of cases.

There may be present a condition of lithemia, the so-called "lithemic neurasthenia."

Albumin is sometimes present, "neurotic albuminuria" (Barley 10), especially after exertion, and does not necessarily indicate a grave a lesion of the kidneys. Transient glycosuria is also noted. An irritable condition of the prostate is usually to be found, and perverted sexual function is nearly always present.

There may be spermatorrhea, nocturnal emissions with erotic dreams, impairment or actual loss of sexual power, and great depression after intercourse.

Hyperesthesia is often present, giving rise in the male to premature or painful ejaculations, and in the female to vaginismus. In the female there may

also occur erotic dreams, sexual excitement, and orgasm during sleep.

Diagnosis.—There is rarely any difficulty encountered in the diagnosis of an uncomplicated case.

Cases, however, complicated with organic lesions or hysteria, are sometimes puzzling and, as Osler says, it is not always possible to make a diagnosis.

A careful search should always be made for any organic disorder which might have a causative effect in the production of the neurasthenic condition.

Hysteria. The absence of the various stigmata of hysteria, the globus hystericus, faucial anesthesia, clonus, crises, and contractures, serves to exclude hysteria.

Locomotor ataxia. The preataxic may cause some confusion, but the Argyll-Robertson pupil and loss of reflexes do not occur in neurasthenia. The reflexes usually being increased if at all changed.

Exophthalmic goiter. Tremor, rapid pulse, nervousness and irritability are symptoms common to both affections, but it is only in cases without exophthalmos that there can be any difficulty in diagnosis. In such cases the occurrence of Von Graefe's sign, which is often present before exophthalmos, will enable one to make a diagnosis.

General Paresis. In the early stages this affection presents some symptoms in common with neurasthenia, such as tremor, impaired articulation, change in handwriting and inequality of pupils, all of which in neurasthenia are due to fatigue or exhaustion and disappear upon rest. In general paresis there are impairment of intellect and diminished mental activity, while in neurasthenia there is increased mental activity, and whatever impairment there may be, is due to exhaustion and is not present after rest. The defective articulation as is the handwriting is due to diminished will power and can usually be overcome by an effort, which in paresis only increases the difficulty.

Prognosis.—The prognosis under proper treatment is almost always good, unless organic changes have already occurred in the kidneys or other organs. Lapses are frequent, however, especially in those of a neurotic temperament, so the physician must ever be on his guard for manifestations of the old difficulty after a cure has been established.

The vascular tension is of considerable prognostic value as shown by Webber (9). The prognosis being good in cases in which the vascular tone is normal and in those in which there is a decided loss of vascular tone, but which regain a normal tone under treatment, while there is little hope of any permanent benefit in those cases in which the vascular tone is very much below normal and in which under treatment it may vary but makes no substantial gain.

In well marked "juvenile neurasthenia" and cases occurring after middle life, the prognosis should be guarded, as it should also in cases of profound neurotic tendencies or complicated with hysteria.

Treatment.—This being a condition of exhaustion or pathological fatigue, it necessarily follows that rest should be the first and most important requisite in its treatment—not only in the treatment of the condition already developed, but as a prophylactic measure, a proper amount of rest and relaxation in

time being sufficient to prevent the majority of cases.

In our efforts to secure this much needed rest, both mental and physical, great care must be exercised to avoid greater expense of nervous energy over the details of treatment and the worry incidental to a change from an active business life to one of idleness, than would result from the cares of the business itself.

Therefore, absolute rest is very seldom indicated and in many cases is actually harmful. Some advanced cases may require the Weir Mitchell rest treatment, but the majority of cases which come under our management will be most benefited by a short vacation followed by shorter hours of work, an hour or two rest in the middle of the day, regular meal hours and early retiring. Isolation is necessary in cases placed upon the Weir Mitchell treatment, but care should be used and the presence of a trusted attendant is imperative.

Isolation in other cases is often detrimental, as it encourages introspection and exaggeration of symptoms. One should beware of the wheel-chair or hammock, for, as Loveland (9) says, these patients easily become dependent upon props.

In connection with rest, proper attention should be given to exercise. In cases placed upon the absolute rest treatment, this must be replaced by massage, but for cases able to be about, outdoor exercise of a light and pleasurable nature is best. Here again care must be used to prevent overindulgence, which will undo all the good which may have been accomplished.

Of outdoor exercise there is none that can compare with golf. It takes one out into the open air, away from the noise and bustle of the busy streets, does not require great mental effort and is not apt to be overdone. Bicycling is another form of exercise which is of value, but is not to be compared with golf, requiring greater mental effort and is more likely to be carried too far. There is always a temptation to a sprint or a race which is hard to resist. Horseback riding is also of value. The great difficulty to be met in these cases in regard to exercise is the same as is with their work, they seem to have no appreciation of the limits of their ability and overplay as they overwork.

Diet. Next in importance to rest and properly regulated exercise is diet. When we consider that nearly every digestive disturbance which by failure to provide proper nourishment for the exhausted organism, together with the resulting autotoxemia, becomes one of the most important factors in the causation of the disorder, we can appreciate the importance of giving due attention to diet. The carbohydrates, as giving rise to fermentation and interfering with the digestion and assimilation of nitrogenous foods, should be avoided as much as possible. According to Brower (11) beef, mutton and eggs should form the basis of the dietary, in addition to milk, malted milk or a combination of the two may be used advantageously. It will sometimes be necessary to resort to predigested foods until the digestive organs have regained their tone somewhat. Tea and coffee should be avoided entirely, not only because of their detrimental influence upon the nervous system, but because of their

interference with digestion. Fluids in any quantity dilute the digestive juices and impair their action and should therefore be taken at other than meal times, preferably upon rising in the morning and an hour before meals. Hot water being best, to which may be added to advantage in some cases a teaspoonful of Carlsbad salts.

Bathing is of great value as increasing elimination and for its tonic effect upon the nervous system. The cold shower or sponge bath upon rising has in most cases an excellent effect. The hot bath and hot air bath furnish excellent means of overcoming insomnia, but should not be used except for that purpose, because of their depressing effect upon the nervous system.

Drug treatment. As in all treatment of this condition the first object to be gained is increased elimination. To this end the salts of lithia are of service. Vichy or Hunyadi water may be used in some cases.

Constipation should be overcome by the use of phosphate of soda or cascara sagrada, either alone or in combination with aloin, strychnia and belladonna, always where possible depending upon the cascara alone.

Of tonics the phosphorus-containing compounds are our mainstays, zinc phosphide, the hypophosphites and the glycerophosphates. I have obtained excellent results from a testicular extract, made from young bulls, these results being due probably to the lecithin and spermin.

Strychnia is of value in some instances, but it is a whip and must be used with care. I can conceive of nothing more irrational than the goading of an already exhausted nervous system to further effort with strychnia. Like alcohol in acute diseases it may be used to advantage to tide a patient over an emergency, but its continued use for any length of time is very likely to result disastrously. Alcohol should be studiously avoided, as should, as far as possible, the various hypnotics and sedatives, resort being had to the hot bath, the pack, gentle exercise or massage to overcome nervousness or insomnia.

A great deal can oftentimes be accomplished by suggestion or psychotherapy, and here the personality of the physician becomes a marked factor for good or evil, as the case may be.

As a last word, "Don't" use morphine. Morphine should only be used for insufferable pain, and that is not what we are dealing with here. God only knows how many of these poor unfortunates with their weakened will power and diminished resistance have received their passport hellwards in the shape of a dose of morphine, "Just to quiet them."

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ARCHIVES DE MEDICINE DES ENFANTS.

July, 1901. (Volume IV, No. 7).

1. The Contagiousness of Nodular Erythema. ANDRE MOUSSOUS.
2. The Galactogenous Action of Milk. VILDERMANN.
3. Weaning: Its Time and Preparation. DELOBEL.
4. Traumatic Herpes Zoster. R. MILLON.

1.—Moussous reports a case of nodular erythema with fever which persisted after the eruption had disappeared. The child left the hospital well, a month after admission. After this child had been in the ward ten days, another girl developed fever, followed by the appearance of nodular erythema. She also recovered without any complications. This was the second time that Moussous has seen a child, who has been long in a ward, develop nodular erythema from another who has just come into the hospital. He reviews the literature, finding other apparent instances of the contagiousness of nodular erythema. Though unable to explain it, Moussous believes that it must not be forgotten. [M. O.]

2.—Vildermann experimented upon nursing mothers, giving them from one to two quarts of milk daily. In all, nine women received the milk, with the result that their milk secretion increased, though in two cases this only lasted two weeks. The case-histories of five out of these seven patients are given in full. The condition of the infant improved in all cases, whether the mother was anemic or in good health. The women themselves noticed the relief afforded by the milk. He reports two more cases, in one of which the milk did the infant no good, in the other the results in both mother and child were excellent. Vildermann advises milk for nursing mothers, especially when the child is not well, on account of its galactogenous action. [M. O.]

3.—From the seventh month in a bottle-fed baby, from the ninth month in a breast-fed baby, starches may be included in the diet. After the first 12 or 16 teeth are through, the time of weaning comes. Sudden weaning is only justifiable when the mother is taken ill. The infant should be weaned during the spring or autumn months; never during the hot summer. As a rule the child can be weaned any time between the tenth and eighteenth month, better nearer the eighteenth month, if the mother keeps in good condition. After the sixth month the cereal can be given in place of the breast once in 24 hours; after 7 months, this can be given twice; from 8 to 9 months, soup may be given once a day; at 10 months the child should cease nursing during the night, and may have soup thrice daily. At the age of one year, chicken and meat may be added. The breast must gradually be decreased so that at 18 months it is given perhaps twice a day. Cow's milk should be given regularly, at all meals. Vegetables can only be begun later. Thus by gradual increase in the food and gradual decrease in the nursing, the child is weaned. [M. O.]

4.—Millon reports two cases of herpes zoster in girls which appeared two or three days after knocks. There were no general symptoms in either case, and both recovered quickly. The vesicles appeared upon the elbows hurt, on the arm and chest, distinctly localized to the distribution of the nerves injured. These cases are very rare. [M. O.]

A Case of Purulent Cerebrospinal Meningitis with Recovery.—Bolnet and Raybaud report the case of an Algerian, aged 19, with cerebrospinal meningitis. (*Bulletins et Memoires de la Société Médicale des Hôpitaux de Paris*, June 6, 1901). He often had attacks of malaria. From the age of 6, he has always used alcohol and tobacco in excess. He caught cold, followed by slight fever, three weeks ago. He had two chills during this time, and took quinine. On admission he seemed well. The next day a chill occurred with violent headache. All the signs of meningitis then appeared. Lumbar puncture showed a great number of polymuclear leukocytes, and diplococci, mainly intracellular, in the cerebrospinal fluid. Under warm bathing, ice to the head, and calomel, he recovered in a month. Then an epileptic attack occurred, lasting two days. Since that time he has kept perfectly well. [M. O.]

THE SURGERY OF PULMONARY ABSCESS, GANGRENE AND BRONCHIECTASES FOLLOWING PNEUMONIA, BY DANIEL N. EISENDRATH, A.B., M.D., of Chicago

TABLE I.
SIMPLE ACUTE ABSCESES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Results of Autopsy
Korte.	Male, 1 yrs.	Broncho - pneumonia after measles, 6 weeks before.	Marked dullness from 4th rib down. Above it large moist rales.	Present.	Exploratory puncture, 7th intercostal space, showed pus.	Yes.			
Korte.	Male, 37.	Pneumonia, left lower lobe, 3 weeks previously.	Dullness from angle of scapula down, with weak bronchial breathing, and many rales.	Yes.	Pneumotomy, found cavity in left lower lobe, admitting two fingers. Recovery after 8 weeks. Second operation one month later, to relieve accompanying empyema.	Recovery after 8 weeks.			
Korte.	Male, 3½ years old.	Influenza. Pneumonia two weeks previously.	Dullness posteriorly from angle of scapula downward, left side.	Yes.	1st operation, opened an empyema. 2nd operation performed 1 week, eight weeks later on account of pain to left of precordium. Abscess in left upper lobe opened.	Recovery in eight weeks.			
Korte.		Pneumonia four days previously.	Extensive dullness, anteriorly to third rib, posteriorly to spine of scapula.	Yes.	Thoracotomy: circumscribed empyema opened. Dullness continued. Fever and sputum like that of an abscess. Second operation: Opened encapsulated abscess of lung.	Recovery in three months.			
Edward Martin, (Philadelphia). Unpublished.	9 years.	Pneumonia.	Faint dullness, left of cardiac dullness, and merging into it.	Yes.	Pneumotomy: Half ounce of pus evacuated.	Recovery.			
George E. Brewer, (New York). Unpublished.		Acute septic pneumonia of right lung.	Patient almost moribund; very septic.	Yes.	Resection. Fifth rib in front.	Recovery.			
R. Matas, (Unpublished).	Male, 22.	Pneumonia.	Well defined area of dullness over base of right lung; bronchial breathing; hectic fever.	Yes.	Resected eighth rib and evacuated nearly a pint of pus, no odor; cavity had rigid, rough wall. Iodoform gauze packing.	Recovery.			
Bushnell, American Journal Medical Sciences, Oct., 1896.	Male, 30.	Croupous pneumonia. Left lower lobe, one month before.	Vesiculo-tympanic resonance and broncho-vesicular breathing anteriorly over left side chest. Axilla flat, no respiratory or voice sounds.	None.	Exploratory puncture in 6th space showed pus. Thoracotomy: Found empyema and abscess cavity in lower lobe.	Recovery.			
W. J. & C. H. Mayo, Rochester, Minn. St. Mary's Hosp. Report, 1901.	Female, 10	Grippe. Pneumonia four weeks previously.	Physical signs: Located abscess in left lung. X-Ray not of material aid.	Yes.	First operation failed to find abscess. Second operation, two weeks later, opened abscess in front of previous opening.	Recovery.			
H. Alexejew, (Archiv. f. Kinderheilkunde, Vol. 31, p. 278.)	Male 8.	Eight days, broncho-pneumonia.	Below right scapula, marked dullness and decreased respiratory murmur. Exploratory puncture showed thick pus. At first there were fine moist rales. High fever.	Yes.	Resection 7th rib, 3 cm. deep; in lung found cavity, which has perforated posteriorly, so that it communicated with an encapsulated empyema between diaphragm and lung.	Recovery in 8 weeks.			
H. Jablonsky, (Archiv. f. Kinderheilkunde, Vol. 31, p. 278.)	Male, 10.	Grippe. Pneumonia 5 weeks previously, of right lower lobe.	Dullness from 3rd rib in front, from angle of scapula behind, and spreading axillary regions. Increased respiratory murmur and fremitus and moist rales. A tumor appeared, 1 by 6 cm., over the 11th to 6th ribs. On coughing frothy mucus-pus came from wound.	Yes.	Evacuated four ounces of bloody pus from tumor. From incision could palpate cavity in lung (size of an egg).				Fever, etc. fell rapidly by 1st day. Still present.
Greene, Lancet, Jan. 24, 1901, p. 198.	Female, 6.	Pneumonia of entire left lung four weeks before.	Bulging and tenderness over 11th rib (axillary line). Large quantity purulent expectoration and dullness, tubular breathing and decreased fremitus.	Yes.	Opened abscess in lung with trocar as guide. Drained.	Yes, in a few weeks.			

TABLE I (Continued.)

SIMPLE ACUTE ABSCESSES.

Author	Age and Sex.	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Results of Autopsy
Massachusetts General Hospital.									
Runbeck, Deutsches Archiv f. Klin. Med., Vol. 41, 1887.	36 m. Female.	Pneumonia, 3 weeks.	One week after, fluid was found in chest. About a half-cup cranial fluid drawn off. Since then considerable pain in right side. Cough, with white, frothy expectoration. Shortness of breath. A distinct bulging in axillary region of the side.	None.	Either given. A portion of fifth rib removed, opening made in right lung. Considerable hemorrhage, and 1½ pints of pus evacuated. Patient also coughed up considerable pus and blood.	Recovery. Three weeks.			
De Jong, Nederl. Tijdschr., No. 13, 1889.	Male, 33.	Pneumonia, 4 weeks before. No crisis. Physical signs cleared up, but fever again began (remittent type).	Dullness from midaxillary line to spine of scapula.	Yes.	Exploratory puncture in sixth intercostal space showed pus. Resected rib (6th). Entered cavity in lung with soft walls, and evacuated pus. Drained. Temperature fell at once.	Yes, in four months.			
Greene, Lancet, 1886, I, 233.	Male, 6.	Traumatic pneumonia, 2 weeks before.	Signs of cavity in left lower lobe.	?	Puncture with aspiration. Repeated in fourteen days.	After a few weeks.			
Huber, Trans. Am. Med. Ass'n, Vol. 3, 1892.	Male, 1.	Croupous pneumonia, 5 weeks before.	Consolidation of left lower lobe.	Yes.	Puncture, later pneumotomy and drainage.	In 12 days.			
Quinke, Berl. Klin. W., 1888, No. 19.	Male, 24.	Pleuro-pneumonia, 1 month before.	High temp. and respiration rapid. Bronchial breathing.	Yes.	Exploratory puncture showed pus. Drained.	Eight months later.			
Rochester, Medical News, Jan. 29, 1891.	Male, 38.	Left lower lobe pneumonia, 3 months before.	Dullness behind as high as 5th dorsal spine. Vocal fremitus absent and respiratory murmur decreased. Very fetid expectoration; marked fever.	None.	After application of zinc chloride, resected rib. No cavity found.	Two months later.			
Sewerin, Botkin's Hosp. Zeitung, 1896, No. 11.	Female, 22.	Pneumonia of right middle and lower lobes. Tympany in inter- and infra-three weeks before first operation.	Elastic fibers found in sputum. Tympany in inter- and infra-scapular regions, with amphoric breathing and voice. Dullness below it.	Yes.	Resected 5th rib and drained. No relief, followed by pyemic symptoms. Three months later more extensive resection; cavity packed.	Recovered, three months after second operation.			
Karewski, Deut. Med. W., 1899, No. 13.	Female, 69.	Soon after an attack of croupous pneumonia signs of cavity.	Signs of cavity in axillary region.	Probably.	Incised and evacuated 350 c. c. pus, with necrotic lung masses.	Yes.			
Vereins Beilage.	Female, 69.	Double croupous pneumonia three weeks before. Right resolved in three weeks.	Over left lung behind dullness. Vocal fremitus and bronchial breathing. But little expectoration. High fever.	Yes.	Withdrew 30 c. cm. pus 3 weeks after onset from left lower lobe, with potan apparatus. Diagnosis then was made of empyema. Resected 9th rib and evacuated 2 ounces greenish pus from cavity in lung, followed by expectoration of considerable quantity of bloody pus.	Recovery in 3 weeks after operation.			
Arnold Edwards, Lancet, Dec. 18, 1897.	Female, 21.	Pleuro-pneumonia nine weeks before. Daily expectoration of pint of purulent pus, and high fever.	Dullness over right lower lobe laterally and behind; coarse, gurgling rales under right scapula and bronchial breathing.	Adhesions present with encapsulated serous exudate.	Chloroform. Exploratory puncture showed pus. Resected rib and found irregular cavity, of large size.	Recovery in 2 months.			
Elsner, Medical News, March 25, 1899.	Male, 34.	Severe pneumonia, eleven days before.	On eleventh day symptoms of pus accumulation in middle lobe of right lung. Localization very difficult.	Yes.	Lung incised and drained. Incision followed by considerable hemorrhage. Found pneumococci and staphylococci.	Yes.			
Elsner, Medical News, March 25, 1899.	Male, 20.	Pneumonia middle and lower lobes of right lung with delirium tremens, just preceding operation.	Crisis followed by intense pain below scapula and in axilla, and fever. Dullness and amphoric breathing.	Few adhesions	Exploratory puncture showed pus. Resected rib and opened on abscess in lung, just beneath pleura, containing half a pint of pus. Local anesthesia.	Recovery 2½ months after operation.			
Crerar, British Med. Journal, May 20, 1900.	Male, 9.	Right-sided pneumonia just before (1 weeks.)	Four weeks after crisis had passing cough, but no sputum. Marked emaciation, temperature, dull area toward axilla and from 5th dorsal spine down. Vocal resonance lost. Diagnosis of empyema made.	Yes; adhesions at upper part.	Could not find abscess at first, until several ribs resected. Opened cavity size of small orange in lung, with soft ragged walls. Gauze packing.	Healed in two months after operation.			

TABLE II.
ACUTE GANGRENOUS ABSCESES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Results of Autopsy
Korte.	41.	Pneumonia, 1 month previously.	Marked dullness over lower and lateral aspects of left lung. Putrid sputum and odor.	Yes.	Circumscribed empyema opened communicating with abscess in lung. Iodoform gauze drain.	In 7 weeks.			
Korte.	Male, 34.	Septic pneumonia, 1 month previously.	1 Dullness from 2nd rib down, on right side, with moist rales. Puncture in 6th interspace revealed fetid pus.	Yes.	Pneumotomy; opened cavity in right lower lobe which was gangrenous.	Recovery in 7 weeks.			
Korte.	Male, 56.	Pneumonia, 4 weeks before.	Dullness over right lower lobe laterally. Decreased respiratory murmur and fremitus. Puncture in 6th interspace showed thick putrid pus.	Yes.	Pneumotomy; large irregular cavity in right lower lobe opened.	Recovery in 6 weeks.			
Edward Martin, (Philadelphia.)	Female, 14.	Pneumonia.	Profuse and offensive expectoration, following subsidence of physical signs. Dullness over area size of hand at base of right lung, with large bubbling rales.	Yes.	Circumscribed empyema found under ninth rib, which was resected. Opening into pulmonary cavity found and enlarged, and drained.	Complete, but slow recovery.			
Edward Martin, (Philadelphia.) Unpublished Case.	Child, age and sex not given.	Pneumonia followed by symptoms of profound septic poisoning and fetid expectoration.	All pointed to abscess cavity in right lower lobe.	Yes.	Two ribs resected and whole right lower lobe found in a condition of acute gangrene.			Death in 24 hours.	
James H. Dunn, Minneapolis. Unpublished Case.	Female, 35.	Pneumonia, left lower lobe, 2 weeks before.	Chills, expectorations of fetid pus. Signs of cavity.	Yes.	Resection of 6th and 7th ribs in posterior axillary line. Exploring needle showed pus. Cavity opened and drained.	Complete in 9 weeks.			
W. L. Rodman, Am. Practitioner and News, Sept., 1891.	Male, 28.	Septic pneumonia following fracture of ribs.	Signs of cavity.	None.	Gangrenous abscess cavity opened. Packed with iodoform gauze.	Recovery.			
Chas. A. Morton, British Medical Journal, Feb. 17, 1890.		Acute pneumonia 4 days previously.	Dullness from angle of scapula down. Tubular breathing.	None. Held up lung with forceps.	Sutured parax and evacuated pus. No infection of pleura resulted.	Recovery in 4 months.			
W. J. and C. H. Mayo, St. Mary's Hosp. Report 1901.	Female, 42.	Pneumonia 3 months before.	Physical signs and X-Ray not of marked aid in localizing cavity.	None.	Suture of visceral to parietal pleura. Second operation five days later, abscess drained; gangrene of lung.	Recovery.			
Quincke, Mittheilungen aus den Grenzgebieten, 1896; also Berl. Klin. W., 1888, No. 18.	Male, 32.	Atypical pleuro-pneumonia, 10 weeks before.	Those of abscess in right lower lobe. Fever and putrid sputum.	None.	Zn Cl ₂ paste used to produce adhesions. Twelve days later pneumotomy.	Recovery in 4 months.			
Quincke, Mittheilungen aus den Grenzgebieten, 1896.	Male, 33.	Pneumonia 2½ yrs before. Fresh pneumonia probably cause of abscess.	Putrid sputum, containing elastic fibres, behind on right side of abdomen from 6th dorsal spine down dullness, bronchial breathing and metallic rales.	Yes. Shown by lack of mobility and respiratory ribs resected in scapular line. Three days later gangrenous cavity opened and drained.	Exploratory puncture in 7th space showed pus. Eighth, ninth and tenth ribs resected in scapular line. Three days later gangrenous cavity opened and drained.	Recovery in 6 weeks.			

TABLE II (Continued.)

ACUTE GANGRENOUS ABSCESES.

Author	Age and Sex	Etiology and Duration	Physical signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Result of Autopsy
H. C. Smith, Lancet, July 29, 1889	Female, 30.	Atypical pneumonia 9 weeks before.	Cavity symptoms at angle of right scapula. Putrid sputum.	Yes.	Exploratory puncture below angle of scapula negative. Pneumotomy with blunt dilatation of small cavities		Yes. Putrid odor disappeared.		
H. Jablonski, Archiv. f. Kinderheil- kunde, Vol. 31, p. 27.	Male, 10.	Probable pneumonia 3 weeks before.	Extensive dullness over right lower lobe with fine moist rales and bronchial breathing. High fever, rapid breathing and marked fetid breath.	Yes.	Resected 7th rib in axillary line; entered cavity filled with putrid fluid and fine lung detritus. Removed a 3 cm. piece of gangrenous (sequestrum) lung. Greatly improved, yet fever and expectoration continued. Opened 3 cavities one month later by resecting rest of seventh rib.			Five months later of mani- extensive adhesion of tion, although right lung. Around general condi- wound of operation tion had great- many pus cavities fill- ly improved. ed with gangrenous particles, and commu- nicating with several bronchi.	
H. B. Meakin, British Medical Jour- nal, 1883, Vol. II, p. 717.	Male, 31 Insane.	Pneumonia, base of right lung. May 20, 1891.	Three days after beginning of disease area of dullness increased, and noticed fetid breath. Dullness to clavicle and to left of sternum. No expectoration. High fever.	None.	Schleich anesthesia Exploratory puncture, obtained one ounce of fetid thick fluid. Sixth and seventh ribs resected. On opening pleura large quantity of fetid fluid escaped. No collapse of lung. Opened gangrenous cavity of lung, and drained.	Yes.			
Openshowski, Zeit. f. Klin. Med., Band 16, 1886	Male, 20	Pneumonia, 3 weeks before, followed by sud- den expectoration of a large amount of fetid pus (150-350 cm.) daily.	Decreased resonance over right upper lobe in front from a third rib down. Dullness further down with bronchial breathing and middle-sized moist rales. Later tympany, amphoric respiration and metallic rales in axilla.	Yes	Resected 5th and 6th right ribs, opened lung with cautery, and entered cavity communicating with bronchus.	Recovery in 8 months.			
Fenger, Centralb. f. Chir., 1885, p. 269.	Male, 30.	Croupous pneumonia 6 weeks before, fol- lowed by circumscribed area of gangrene in right lower lobe.	Cavity signs below nipple (right). Exploratory puncture showed gangreous pus.	Yes.	Inserted trocar after resection of fifth rib, and used cautery, opening cavity.		Small fistula left commu- n- cating with bronchus.		
Cavley and Gould, Medico-Chir., Trans., Vol. 67, 1884, p. 289.	Female, 18	Septic pneumonia in left upper lobe, followed in one week by symptoms of cavity and gangrenous expectoration.	Cavity signs.	Yes.	Exploratory puncture showed pus (fetid), at level of 8th spine (dorsal). Trocar inserted and used as drain.	In 6 weeks.			
S. C. Smith, Lancet 1889, Jan. 17, p. 81.	Male, 60.	Pneumonia (right lung), 11 days before.	Sudden fetid expectoration on 13th day after beginning of pneumonia. Tubular resp. around spine of scapula and below nipple. Diagnosed cavity of middle lobe.	Yes.	Opened cavity by incising between ribs and inserting tube. But little relief from toxic condition.			1 day's later.	
Hofmaki, Wiener Med. Presse, Vol. 32, Nov. 27, 1892.	Male, 32.	Pneumonia some years before. Fresh attack previous (11 days) to operation, followed by gangreous sputum.	On right side behind, dullness, and large moist rales.	Yes.	Resected 7th rib at angle of scapula. Pleura looked grey and lung felt firm. Made 3 negative exploratory punctures. The 4th penetrated 2½ inches into lung and showed small amount of putrid pus.	In 3 months.			

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended November 8, 1901.

SMALLPOX—United States.

ILLINOIS:	Peoria	Oct. 1-31	6
	Springfield	Oct. 2-Nov. 2	26
IOWA:	Ottumwa	Sept. 28-Nov. 2	31
KANSAS:	Wichita	Oct. 19-26	3
KENTUCKY:	Lexington	Oct. 25-Nov. 2	3
LOUISIANA:	New Orleans	Oct. 25-Nov. 2	1
MASSACHUSETTS:	Boston	Oct. 19-Nov. 2	22
	Newton	Oct. 19-26	2
MICHIGAN:	Detroit	Oct. 19-Nov. 2	2
NEBRASKA:	Omaha	Oct. 19-Nov. 2	14
	South Omaha	Oct. 17-24	6
NEW JERSEY:	Camden	Oct. 19-26	5
NEW YORK:	Elmira	Oct. 26-Nov. 2	1
	New York	Oct. 26-Nov. 2	5
OHIO:	Youngstown	Oct. 12-19	2
PENNSYLVANIA:	Allegheny City	Oct. 18-25	1
	Lebanon	Nov. 2	2
	Norristown	Oct. 26-Nov. 2	1
	Philadelphia	Oct. 19-Nov. 2	111
	Pittsburg	Oct. 26-Nov. 2	5
VERMONT:	Burlington	Oct. 26-Nov. 2	3

SMALLPOX—Foreign.

AUSTRIA:	Prague	Oct. 6-19	6
BELGIUM:	Antwerp	Oct. 6-12	2
CANADA:	Halifax	Oct. 19-Nov. 2	13
	Quebec	Oct. 26-Nov. 2	41
	Winnipeg	Oct. 26-Nov. 2	1
COLOMBIA:	Panama	Oct. 20-28	300
FRANCE:	Paris	Oct. 12-19	3
GREAT BRITAIN:	Liverpool	Oct. 12-19	1
	London	Oct. 12-19	172
RUSSIA:	Moscow	Oct. 5-12	5
	Odessa	Oct. 12-19	3
	Warsaw	Oct. 7-14	2
URUGUAY:	Montevideo	Aug. 24-Sep. 14	75

YELLOW FEVER.

COLOMBIA:	Bocas del Toro	Oct. 15-23	2
MEXICO:	Vera Cruz	Oct. 18-26	17

CHOLERA.

INDIA:	Bombay	Oct. 1-8	3
	Calcutta	Sept. 28-Oct. 3	3

PLAGUE—United States.

CALIFORNIA:	San Francisco	Oct. 20-30	1
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PLAGUE—Insular.

PHILIPPINES:	Manila	Sept. 7-21	5
	Taguig	Sept. 7-14	1

PLAGUE—Foreign.

GREAT BRITAIN:	Glasgow	Nov. 1	4
	Liverpool	Oct. 30, several cases	2
INDIA:	Bombay	Oct. 1-8	174
	Calcutta	Sept. 22-Oct. 5	19
TURKEY:	Samsoun	Oct. 1	9

JOURNAL DE CHIRURGIE.

June-July, 1901. (No. 6).

1. The Treatment of Joint Injuries. V. VAN HASSEL.
2. Umbilical Hernia in Infancy and Childhood. A. WALRAVENS.
3. Systematic Resection of the Omentum in the Radical Cure for Hernia. F. DEJARDIN.

1.—Van Hassel divides injuries of the joints into three classes, those without cutaneous lesions, those with wounds of the joint, and those due to the diathetic diseases. In the first division, the affections of the joints without skin lesions, he places arthritis, treated by puncture, irrigation, incision, and finally arthrotoomy; contusions with luxation, treated by reduction, massage, hydrotherapy, and electricity; contusions with torn tendons, treated by suture; and contusions with fracture, treated by immobilization and massage, or if ankylosis occurs, by arthrectomy. The wounds of the joints may be large or penetrating, when incision, irrigation, or finally arthrotoomy, may be necessary; or the wound may be complicated by bony fragments, when arthrectomy, resection, or rarely amputation, must be done. The two diseases in which joint symptoms appear are syphilis and tuberculosis; in the former specific treatment also being carried out. To illustrate these various joint conditions, van Hassel reports the case-histories of 40 patients observed by him.

[M. O.]

2.—Walravens divides umbilical hernias of infants into

those due to a malformation, embryonal in character, and the true umbilical herniae, due to a failure of consolidation in the umbilical tissue. The former may be of two kinds, funicular, which are small, and those due to an absence of the abdominal wall, which may be large. Both varieties may contain liver and intestines, and other anomalies are generally found with the hernia. Therefore the diagnosis is easy. These herniae are lined by peritoneum. The treatment should be laparotomy, with radical cure for the hernia, as soon as possible. A table of 78 cases follows. The true umbilical herniae may rarely be fetal, i. e., congenital, yet with all the symptoms of true umbilical hernia. Phimosi seems to influence the production of umbilical hernia. During childhood an umbilical hernia has a tendency to heal spontaneously, decreasing as the child grows older. Yet radical cure is advised in all cases, as soon as possible. Only among the rich, where the infant receives the best care, should the operation be postponed. A table of 50 cases follows. The technique of the operation for the radical cure of umbilical hernia is given, with illustrations. [M. O.]

3.—Dejardin, who reports in detail the histories of seven cases of resection of the omentum in the radical cure for hernia, concludes that systematic resection of the omentum in the radical cure for hernia, should be abandoned because it is useless; it does away with a useful organ, and it is dangerous, as it may cause pain, hemorrhage, infection, and the formation of adhesions. He also reviews the literature of the subject. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

June, 1901 (22 Jahrgang, Volume VI. No. 2).

1. The Bacteria Found in Aseptic Wounds. FERDINAND SCHENK and ERNST LICHTENSTERN.
2. The Pathogenesis of Pancreatic Cysts. PAUL LAZARUS.

1.—After a detailed review of the experiments of different investigators since the time of Lister's discovery of antiseptics in 1867, performed to show the presence of bacteria in aseptic wounds, Schenk and Lichtenstern report their own experiments in this direction. They used sterilized silk threads, two thirds of which were left in the wound after operation. These were removed and placed in bouillon. Laparotomy was performed in every case, and healing followed by first intention in all but four cases where small stitch abscesses developed. There is no doubt that bacteria exist in the secretion of wounds which heal by first intention. The temperature charts and pulse curves are given, with abbreviated notes, in 43 cases. Only in exceptional cases was the wound sterile. In 7 patients. The staphylococcus pyogenes albus was most commonly found, in 39 cases. Streptococci were never seen. In but one case were the bacteria found to be pathogenic. Bacteria are most frequent on the second day after operation and disappear after the fifth day, as a rule. They conclude that surgical fever with aseptic wounds is due to the absorption of organic matter and of the products of bacterial assimilation; and that it is impossible to tell how much the fever is due to the organic or bacterial toxins. In the preparation for operation, Saenger's sand-soap was used in 22 cases, in 16 of which the skin was found sterile. In the 16 cases operated without sand-soap preparation, the skin in only 9 was sterile. Thus in 13 out of 38 cases, bacteria were found in the skin, the staphylococcus albus twelve times. They conclude that the bacteria in the wound secretion come from the skin of the patient or the hands of the operator.

[M. O.]

2.—Will be abstracted when concluded.

An Interesting Case of Extra-genital Infection, with Soft Chancre.—Blansch de la Rosch (*Voenno-Medicinski Journal*, May, 1901; *Frutch*, vol. xxii, No. 22) reports the case of a young man who developed a soft chancre on the penis on the second day after his marriage. The young bride was found to have a number of soft chancres on the vulva. In looking for the origin of the infection the author examined the servants, and discovered that the chambermaid was afflicted with a soft chancre. She admitted that, upon seeing her mistress wash her external genitals with a sponge, she used the same sponge for a similar purpose.

[A. R.]

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See Advertising Page 8.

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The Bacteriology of Smallpox.—The recent epidemic of smallpox in Philadelphia and other cities of the United States naturally forces upon us a closer scrutiny of the disease which has assumed at present more than a theoretical aspect. The first question that arises in the mind of the inquirer is, What is the specific cause of this dreadful malady? Unfortunately, the answer to this query is far from satisfactory, and, briefly stated, may be summarized by the negation "we do not know." Our ignorance, however, is not due to a want of effort on the part of the bacteriologists. On the contrary, there is hardly another disease on the etiology of which so much untiring labor has been spent, but there seems to be something subtle about the smallpox germ which baffles all efforts at detection. It is both curious and instructive to glance through the long list of various "specific" germs discovered from time to time only to be cast into oblivion, or else to be classified among the accidental contaminations of the lymph. The desire to unearth the hidden foe seems to have been master to cool and dispassionate judgment, and as a result hasty conclusions were drawn from insufficient data. Thus in 1809 Sacco claimed to have found granules in vaccine lymph which he considered specific. His observation was confirmed by Beale in 1863 and again by Hallier, Zurn and Keber in 1867-68. In 1872 Cohn described a coccus (*micrococcus vaccinia* or *variola*) found by him in lymph and considered as the specific agent in the causation of the disease. In 1873 Klebs found a micrococcus in lymph, which occurred in the form of tetrads. This organism was looked upon as specific and received the name of *tetracoccus vaccinae*. In 1882 Koch placed on the list another "specific" micrococcus observed by him in the vaccine vesicle of a child. In 1883 Cornil and Babes described another "specific" micrococcus. In 1884 Voigt isolated from gelatin plate cultures a coccus which, when inoculated on calves, rendered them immune to subsequent vaccination. *Vaccinococcus* was the pretentious name given to this organism. In 1886 a coccus was described by Marotta, who regarded the organism as specific. In 1887 Carmichael presented his claims for the discovery of a "specific" micrococ-

cus. In the same year Garre reported successful animal experiments which established to his own satisfaction the specific nature of a coccus isolated by him from vaccine lymph. In 1889 Grigorieu described a micrococcus (*micrococcus vaccinia*) which he regarded as specific. This organism produced a papular eruption on a calf, affording immunity to subsequent vaccination. In 1893 a "specific" bacillus was cultivated by Besser. In the same year Maljean described a coccus which was capable of producing a vaccine eruption on a calf. About the same time Klein and Copeman, independently of each other, described a minute bacillus occurring constantly in the vesicle and the epidermis surrounding it. Klein failed in his attempts to cultivate this organism, while Copeman, on the other hand, was more fortunate, having selected the hen's egg as his culture medium. At a later date he succeeded, in conjunction with Blaxal, in growing the bacillus on agar. This organism, deserving as it does more consideration than the other "discoveries," is still forming the subject of a thorough study. Quite recently Kent (*The Lancet*, 1898) reported successful experiments with the diplo-bacillus. He succeeded in cultivating it on glycerin-albumin, milk and sterile lymph, and by inoculations on calves produced typical vaccine vesicles. However, we must suspend final judgment until further evidences are brought forward. In 1894 a "specific" micrococcus was brought forward by Ruete. However, experiments on human beings failed to establish his claims. A short thin bacillus was claimed as the specific organism by Martin and Ernst in 1895.

To the long list of "specific" micrococci and bacilli might be added a no less lengthy one of "specific" protozoa. These were observed by Renault, Van der Loeff, Hlava and Pfeiffer and others. However, there is little experimental proof either of their pathogenic relations, or of their identity. It is quite probable, as Copeman suggests, that "they are nothing more or less than the fragments of ameboid leukocytes which had originally invaded the peripheral circulation and, in turn, the particular tissue affected, under the influence of chemiotaxis." The protozoa of Guarnieri (*cytocytes vaccinia*) de-

scribed by him in 1892 has received considerable attention, having been observed also by Monti, Ruffer and Plimmer, Pfeiffer, von Sicherer and Clarke. On the other hand, the specificity of the parasite, if it is one, is questioned by Massari, Ferroni, Salmon and Huckel.

The many conflicting results noted above would appear inexplicable, were it not for the fact that the various investigators dealt with a tissue ordinarily swarming with pathogenic and saprophytic organisms, especially the pus-forming cocci. It is quite possible that in some of the cases of successful animal inoculations minute particles of the lymph were carried along with the isolated organisms, thus imparting to the latter specific properties. It is also conceivable that in a few instances a mixed culture was obtained, the smallpox germ remaining undetected until lost by successive cultivations of its visible neighbors. In this connection one recalls the appropriate passage in one of Koch's earlier publications (*On the Investigation of Pathogenic Organisms*, 1881). Saye he: "To mistake the granules of granular corpuscles for micrococci is much more excusable, especially of those bodies termed by Ehrlich plasma cells (*Mastzellen*). The granules in many of these corpuscles appear to be loosely held together, the corpuscles are easily destroyed in spreading out the material on the cover glass, the granules become freed, and to the unpracticed eye simulate micrococci either single or arranged in groups. Similar corpuscles of essentially large size and regularly developed occur in the blood, and especially in the spleen and lungs of white rats, less frequently in white mice, and I have seen preparations from the above-mentioned organs in which deeply stained masses of granules from the crushed corpuscles lay distributed in broad streaks in such quantities that the sight would have elicited a cry of joy from an enthusiastic micrococcus hunter."

Applying the well known postulates formulated by Koch to any and all of the microorganisms observed in connection with smallpox or vaccinia, we find them wanting in one or more (usually more) points, and therefore conclude that none of them could be considered as the specific germ, which is still awaiting discovery.

The Municipal Control of Smallpox.—When smallpox appears in a community, one of the first things to be done, in order to arrest the spread of the disease, is to select a suitable site on which to erect an isolation hospital for the treatment of those who become infected with the malady. In locating this hospital, its effect on the dissemination of the disease should not be overlooked. At the present time it appears that the contagion of smallpox is

air-borne, and it seems that the presence of such a center of infection as a smallpox hospital influences the number of cases of the disease in its neighborhood. When the bacteriology of smallpox is known, it may be shown that the air has little or no effect in carrying the contagion, just as a knowledge of the bacteriology of malaria and yellow fever has destroyed the theory of infection through the air in these diseases. At present, however, it has been shown by Blyth, quoted by Moore in the *Twentieth Century Practice of Medicine*, that the influence of the hospital, in the Sheffield epidemic of 1887-88, extended four thousand feet, and Evans showed that at Bradford, in 1894, the influence of the hospital was felt within a radius of one mile.

Formities must be disinfected, and the rooms or public conveyances which the patient has occupied or traveled in, must be fumigated in order to lessen the likelihood of spreading the disease. Power, Herberden, Watson, Hewitt, Osler and Buck have shown that contact with convalescent patients and with fomites is responsible for the spread of the disease. The period of infectiousness probably lasts until the last scab has disappeared, and until desquamation is complete. In order to control the disinfection of houses and of articles that have come in contact with the sufferer, notification of the disease is an essential. The true control of smallpox, however, depends upon thorough vaccination and revaccination.

The mortality of smallpox is 50% in the unvaccinated and 2.3% among the efficiently vaccinated. Before the introduction of vaccination the death-rate in England and Wales was three thousand per million of population. In April, 1890, there were only 15 deaths from this disease, about one-seventieth the former death-rate. In 1890, the year in which the eleventh census was taken, there were only 398 deaths from smallpox in the United States. The statistics of the German Army should be familiar to every one. During the present year, owing to the fact that the immunity conferred by vaccination is gradually being exhausted, several municipalities have seen the beginnings of smallpox epidemics. The one way for these communities to control this pest is by insisting that every individual who has not been successfully vaccinated within the past five years shall submit himself to vaccination at once.

Vaccination Statistics.—Immermann states that, long before Jenner introduced vaccination, it was known that cowpox was communicable to man (*Nothnagel's Specielle Pathologie und Therapie*, Band IV, Heft 2). In 1763 Heim had noted that the accidental inoculation of individuals with cowpox was followed by immunity to smallpox. Von Hum-

boldt, in the account of his travels published in 1803, spoke of this immunity among the natives of Mexico, and Brun noticed it in Beludschistan. Sutton and Fewster attempted vaccination in 1778, but were unsuccessful. Pesty, however, had successfully vaccinated his wife and children in 1774. The results of Jenner's investigations, begun in 1796, were published in articles which appeared in 1799 and 1800. In spite of the manifold objections at once raised against vaccination, the practice became widespread.

Upon the continent Bavaria was the first to adopt laws making vaccination compulsory, in 1807. This example was followed by Baden, Württemberg, Oldenburg, Saxony, Gotha, Meiningen and Brunswick, from 1815 to 1832. Prussia had some vaccination laws as early as 1810, and in 1816 it was made indirectly obligatory. Following the severe epidemic of 1870, vaccination became compulsory throughout the German Empire in 1874. It is now necessary for every German child to be vaccinated in its first year, and to be revaccinated in its twelfth year. Some children elude vaccination for a year or two, but they are sure to be vaccinated eventually, so thorough are the laws. Proust states that in 1874, 1,374,436 children should have been vaccinated for the first time, yet 179,469 escaped vaccination, from absence, illness, or other causes. (*La Tribune Medicale*, September 11, 1901.) In Austria, where vaccination was practiced as early as 1801, compulsory vaccination only became a law in 1886. Vaccination, which was voluntary in Sweden, Denmark and Norway from 1801, became compulsory in 1816. In Italy the doctrine of vaccination was well advocated by Sacco in 1799. About the same time the practice was made optional in the Netherlands. Nor has vaccination ever become compulsory in Holland, Belgium or France. In Russia voluntary vaccination was the practice in 1801; in France, Spain and Portugal in 1809. Vaccination began in Strassburg in 1810. From 1797 to 1810 there had been 117 deaths from smallpox out of 50,000 people; from 1811 to 1875 15 deaths occurred out of 70,000; while from 1875 to 1884, with obligatory vaccination, out of 90,000 inhabitants there were but two deaths. Switzerland, where vaccination had early been compulsory, suspended the law in 1883. While there had been 15 deaths from smallpox during the three previous years, 11 deaths occurred in 1884, 52 in 1885, and 85 in 1886.

England made vaccination compulsory as late as 1867, Ireland in 1868, and Scotland in 1864. In England, however, certain amendments were passed by Parliament in 1871, which provided a loophole for escaping vaccination. Then again, in 1890, the fa-

mous "conscience clause" was inserted, by which vaccination was no longer made obligatory, should parents fear that it might prove prejudicial to the health of their child. While the deaths in England from variola in 1889 numbered 23, and in 1890 16, in 1891 there were 49, in 1892 431, and in 1893 1,456 deaths from smallpox. These figures, with these laws, make more striking the fact that vaccination was discovered in England. The United States attempted optional vaccination in 1800, but in spite of frequent epidemics, not one State has made vaccination compulsory. The only laws existing refer to school children, who must have been vaccinated before they are allowed to enter the public schools. No laws concerning revaccination exist in any country but Germany. All this leads to one inevitable conclusion, that, to completely stamp out smallpox, there is but one method available, compulsory vaccination.

The Diagnosis of Smallpox.—The diagnosis of smallpox is in the great majority of cases comparatively easy, but the few exceptions which prove this rule are of vast importance to determine precisely, for there are few diseases in which a mistaken diagnosis causes more discomfort to the patient, and anxiety to his friends than in smallpox. Its ravages and the dangers of an epidemic have led to the present legislation by which the State endeavors, by isolation and strict quarantine, to safeguard the interests of the community. In a typical case there are several factors which aid in the diagnosis. The prominent initial symptoms in the adult are a severe chill or repeated chills during the first day, and in children a convulsion or a series of convulsions. Vomiting, agonizing frontal headache, excruciating pain in the lumbar region and in the limbs, are so much more severe in this disease than in the other exanthemata, that they should at once put the physician on his guard. The fever is present very early, the temperature reaching 103° to 104° or perhaps higher on the first day. The pulse is rapid, full and strong, but not often dicrotic. If the pyrexia is extreme, delirium, sometimes very violent, may be present. On the second day of the disease as a rule, the initial rashes make their appearance, and it is in this stage that a mistaken diagnosis is most frequently made. These rashes are of two forms: The diffuse and scarlatinous in character, and the macular and measly forms. Petechiae in a few instances are present. The rashes may be general, but as a rule they are limited to the inner surface of the thighs, to the axilla and the lateral regions of the chest. Occasionally, as Osler has pointed out, they may be present on the extensor surface, particularly in the neighbor-

hood of the knees and elbows. It is not until the fourth day that the distinctively smallpox eruption occurs. This is at first felt, rather than seen, as a shot-like papule under the skin. It appears usually on the forehead and wrists at first, but is soon nearly universal. Only one crop of papules appears in contradistinction to varicella. On the fifth or possibly the sixth day the nodule contains a clear or slightly cloudy serum, and at this point umbilication of the vesicle is noted. About the eighth day the vesicles change into pustules, the umbilication disappears and the contents become purulent in character. Surrounding the pustules there is an injected area, and the skin between the pustules is swollen. With the early appearance of the papules the fever falls and the patient feels greatly relieved. At the pustular stage the fever again rises, and this usually lasts until the tenth or eleventh day, when convalescence sets in. It may be said that the most likely of the eruptive fevers with which smallpox is confounded, are varicella, scarlet fever and measles. In making the diagnosis the presence of an epidemic is to be remembered, as well as the especial characteristics of the diseases named. The rash of varicella appears within twenty-four hours, is not confined to any one locality, and frequently occurs in successive crops. It consists of clear vesicles without umbilication, but, in occasional cases, this may occur. In scarlet fever the rash appears within forty-eight hours, sore throat is present, and the rash appears first on the chest to spread rapidly over the trunk, the face and the limbs. It is bright, lobster-red in color and disappears on pressure except in the malignant cases, and it is followed by large, flaky desquamation, which is peculiar in that it continues longest on the hands and feet. The rash of measles appears on the fourth day, first on the forehead than the limbs, and soon spreads to the trunk. It has a characteristic crescentic appearance with healthy areas of skin between. The eruption is mottled and does not disappear absolutely on pressure. The vesicles are small and bran-like. It has been pointed out by clinicians that while these are the diseases which are usually mistaken for smallpox, or smallpox mistaken for them, more rarely relapsing fever has been diagnosed smallpox and cerebrospinal fever has been mistaken for the hemorrhagic form of smallpox. The pustular syphilitic eruptions as well as certain drug eruptions may also raise some doubt as to diagnosis, but it is to be remembered that the syphilides rarely cause pyrexia. It is only in the initial stages that relapsing fever would suggest smallpox, especially in the occurrence of intense

muscular pains in the back present in the two conditions, but the eruption in smallpox will remove all doubt. Authorities are agreed that the diagnosis of smallpox should not be positively made during those days in which either scarlet fever, measles or other exanthemata are to be regarded as a possibility, but the patient should be isolated and carefully watched until the certainty of the diagnosis is without question.

Teachers Must Be Vaccinated.—In the Court of Common Pleas in this city last week, Presiding Judge Arnold refused to grant an injunction in the proceedings begun by a teacher in the Public Schools against the Board of Public Education, restraining them from discharging her for refusing to comply with the order to show a certificate of vaccination. The teacher in question was dismissed from her position by order of the Committee of Hygiene of the Girls' High School, and she applied for the aforesaid injunction, which has now been denied her.

We understand that this teacher maintains that vaccination would be injurious to her health, and that the Board of Education had no right under the law to dismiss her. Judge Arnold very properly discusses the subject from, and bases his opinion upon, the legal aspect entirely. He disclaims any right or intention to discuss the merits of vaccination as a preventive of smallpox, and he holds that the law applying to cases of this kind is the ordinary law of master and servant. If the servant disobeys the reasonable orders of his master, the master may suspend or discharge him. The Judge thinks that in this case the plaintiff is "too self-opinionated," and that she has refused to comply with the rules of the Board of Education and is therefore subject to dismissal. It seems to us that the whole case is thus properly stated in a nutshell. The question involved is not a medical, but a legal one. It is evidently within the province of the Board of Education to decide what constitutes disobedience to its orders, and like all other employers it has a right to dispense with the services of an employé if that employé has disobeyed its reasonable commands. It seems to us that from her own standpoint the plaintiff in this case made a sad mistake in trying to sustain her prejudice against vaccination by seeking a vindication in the Courts. From the purely medical standpoint, which especially interests us here, it is evident that teachers as well as scholars must be under the one law. Certainly the teacher is just as capable of carrying the infection with her as a pupil, and the whole object of the law would be nullified if a contumacious teacher were to be allowed to have her own way in such an emergency as has been threatening this city.

The Accidents of Vaccination.—The varied nature of the casualties attributed to vaccination strongly suggests that sequence and consequence have too often been confounded. It is but in the nature of things that amongst the thousands of people who are vaccinated each year, we should hear of various morbid phenomena following immediately or remotely upon the performance of vaccination. The *post hoc propter hoc* is a judicial weakness of the medical as well as of the lay mind. We may rest assured that many accidents which are attributed to vaccination bear no relation to it save a chronological one. To prove that vaccination is the cause of any untoward manifestation, the latter must occur with a sufficient degree of frequency to preclude its being a mere coincidence. There are, however, certain accidents which, in an inconsiderable percentage of cases, follow upon the performance of vaccination. The manner of their production will be the more easily comprehended, if vaccinia be regarded as an acute exanthematous disease plus a local wound. It is claimed that various diseases of the skin occur after vaccination. It is true that eczema, psoriasis, urticaria and pemphigoid eruptions have been recorded as having developed for the first time after vaccination. Authorities are pretty well agreed that in such cases vaccination only determines the outbreak in individuals predisposed to these disorders. A casual relationship could equally well be established with measles, scarlet fever, etc.

The true vaccine eruptions are usually of trivial import and of short duration. The measles-like eruption known as **roseola vaccinosa**, which is not infrequently seen about the 8th or 10th day after vaccination, appears to be the result of absorption of the specific virus and has its analogue in the **roseola variolosa** which occasionally appears just before the outbreak of the papules of smallpox. A vesicular and papular eruption designated respectively **vaccine miliaria** and **vaccine lichen**, may accompany the vaccine process. Generalized vaccinia, which appears to be rarer now than in former days, may occur through the blood, or more commonly through early auto-inoculation. Among the eruptions produced by the vaccine virus plus something else, may be included **impetigo contagiosa**. This may be engrafted upon vaccinia by infection of the wound at the time of vaccination or subsequent to it. Quite a number of recurrent **bulbous eruptions** resembling pemphigus and dermatitis herpetiformis, have within late years been recorded following vaccination. It is probable that these are due to some superadded infection through the vaccine ulceration. **Dermato cellulitis** characterized by redness, swelling, tension, heat and pain, occurring around the vaccine wound and sometimes spreading over a considerable portion

of the inoculated member is, since the general employment of bovine lymph, not at all uncommon. In rare cases **gangrenous ulceration** may occur at the site of vaccination. **True erysipelas** is much rarer than it was in former years when less care was paid to asepsis. Erysipelas has in years gone by been responsible for most of the fatalities of vaccination. **Pyemia** is at the present day an extremely rare complication. From time to time deaths from **tetanus** have been reported after vaccination. There is no reason to believe that tetanus occurs any more frequently after the wound of vaccination than it does after any other wound. Many of the accidents above referred to are preventable; improvement in technique and further perfection in the collection and preservation of the virus will doubtless eliminate most of them. Considering the inestimable benefits conferred upon humanity by vaccination and the trifling incidence of complications among the multitudes of vaccinated, no one should hesitate to avail himself of the great protection against smallpox afforded by Jenner's immortal discovery.

Vaccination and Tetanus.—The occurrence of tetanus in some children during the course of vaccination in a neighboring city has probably led to a great deal of unnecessary alarm in reference to the accidental dangers of vaccination. In a careful search of statistics in reference to the previously mentioned condition, it is found that almost invariably is tetanus an accidental complication and in no wise due to the virus itself. Tetanus is liable to occur in the vaccine poek, as it is liable to occur in any open wound by admixture of dirt and filth and similar material. We doubt whether there is a well authenticated case on record in which it has been proven that the occurrence of tetanus during the course of vaccination has been due directly or indirectly to the virus used in vaccinating. This same also holds true of cancer and tuberculosis. Careless vaccinating, dirty hands, dirty instruments, failure to wash the skin upon which vaccination is to be performed, handling of the wound by the patient, such as scratching, etc., are all causes for the occurrence of tetanus in a vaccinated person. The operation of vaccination, while it is a simple one, must nevertheless be carried out with extraordinary care. The instruments should be scrupulously clean, and the part upon which vaccination is to be performed should be carefully washed with soap, water and alcohol. It is not wise to use the ordinary antiseptic solutions, as they are liable to destroy the efficacy of the virus. We are certain that the prophylaxis which will effectually prevent the occurrence of tetanus in vaccination is cleanliness.

The Ocular Complications of Variola.—Since the introduction of vaccination there has naturally been an extensive decrease of blindness. Indeed, we need no more forcible reminder of this fact than the statistics of Carron du Villard (*Guide pratique des maladies des yeux*, Paris, 1838) which show that out of every one hundred cases of blindness during prevaccinal times, thirty-five were due to variola. However, these statistics must be considered in a relative sense, especially since the introduction of vaccination, there being no prophylactic treatment for the eyes during the disease except the employment of usual antiseptic measures like bichloride of mercury solution and even methylene blue. The ocular involvements in variola may vary from the conjunctivitis, which is always present, to destruction of the whole globe, blindness and phthisis bulbi. In favorable cases there may be but a chronicity of the conjunctivitis, with possibly a few isolated eruptions on the ocular conjunctiva, not unlike those seen in phlyctenular conjunctivitis. During the stage of eruption, corneal involvement is usually due to an extension of the process from the conjunctiva, but during the period of decrustation, and especially in the confluent variety, the cornea often becomes the seat of primary involvement, consisting of deep infiltration, perforation and hypopyon. Iritis and choroiditis have been observed, but are comparatively rare, while, with the exception in the hemorrhagic varieties of smallpox, there is rarely, if ever, retinal involvement, unless during the destructive process of a panophthalmitis. In the hemorrhagic varieties there occur not only subconjunctival ecchymoses, but hemorrhages into the anterior chamber, and from the retina. The lids may participate in the eruption to such an extent, that grave deformities ensue. Pustules situated near the ciliary margins may eventually give rise to ectropion, symblepharon and even ankyloblepharon. Adler, in a treatise on this subject, published in Vienna in 1875, states that the skin of the lids is affected in 20 per cent. of the cases. Dufour, in the *Annales d'Oculistique* of May, 1901, quotes the statistics of Landesberg which show the following, as obtained from a study of 270 cases: Affections of the conjunctiva, 57.78%; affections of the lachrymal apparatus, 5.55%; affections of the lids, 1.11%; affections of the cornea, 30.00%; affections of the iris, 2.96%; affections of the uveal tract, 1.48%. Transmission to the lid, of virus from vaccine vesicles, has been observed by Schirmer, Schweigger and others. Finally, cicatricial deformities of the lids may prevent them from closing properly, thus exposing the eye to subsequent injury and infection. The present epidemic of variola is an ex-

cellent opportunity for ophthalmologists to observe, if they will, the ocular involvements of variola. For an organ like the eye, which represents such a composite histological structure, cannot remain exempt from the ravages of smallpox, and for this reason the manner of invasion and the sequelæ closely resemble those in other portions of the body, from the eruption on the mucous membrane of the lids and eyeballs to the suppurative destruction of the whole globe. Nevertheless, if we consider, that blindness may result from a single pustule on the cornea, or from an extension of a suppurative process from the lids or conjunctivæ, we cannot overestimate the necessity for expert treatment of the eyes in smallpox.

Venereal Diseases in the Army.—The report of the Surgeon-General contains some significant figures on this subject—figures that should be cogitated by the hygienist as well as by the moral statistician. Vice always looks unusually hideous in the aggregate, but physicians must not close their eyes to its effects on health and are obliged to face it with particular earnestness when it sends in its official reports. The Surgeon-General's figures throw some curious lights on some of the effects of "imperialism" in dark corners. We know not whether they will be made the text for still further philippics against foreign conquest—and this question does not concern us here—but we are deeply interested in the medical problems involved.

The admission rate for venereal diseases for the whole army for the year 1900 was 133.97 per thousand of strength. For 1899 the rate had been practically the same, 133, while the mean annual rate for the decade, 1889-98 had been only 71.45. These figures seem to show—what, we believe, has usually been observed—that active service among troops increases the prevalence of the venereal diseases.

But an analysis of the figures seems to reveal that it is the soldier in foreign service who is especially vulnerable. A creditable exception, however, is found in the volunteer troops serving in the Philippines, among whom the rate was only 70.94, while the regular troops in those islands maintained the high rate of 138.88, as against a still higher rate, 155.39 among the home troops. In China the admissions rose to 173.60. In Cuba the rate reached 190.68, and in Porto Rico it rose to the excessive height of 367.88. The latest reports, not yet tabulated, show that the venereal diseases are increasing materially in the Philippines. In April of the present year they constituted 20.42% of the total sickness as compared with 8.97 in the preceding April. This apparently discouraging increase is in part explained, however, by the fact that the

troops are now more critically inspected than formerly for the symptoms of these diseases.

Efforts are being made also to control prostitution in Manila, but by what methods and with what success the report does not fully show. It is an old and a difficult problem—probably as old as the race, and certainly as difficult as continence seems to be among soldiers.

Surgeons Versus Hematologists.—The problem of the examination of the blood for clinical purposes has been approached from two standpoints. One of these is that of the hematologist, the other that of the clinician; and curiously enough—or perhaps the matter is not so very curious, because on almost every question of methods this same result has ensued—there has been a considerable lack of agreement between the two parties, the clinician arguing that the results are too indefinite to enable him to diagnose his cases with accuracy; the hematologist, that the clinician—insufficiently familiar with the technique employed—is incapable of interpreting the results accurately.

As a matter of fact, we believe that in this dispute the fault lies largely with the hematologist, for if his results are not sufficiently precise and conclusive to enable the clinician to use them in his actual practical work, they are, from the clinical standpoint, of minimal value. Furthermore, if his reports are returned to the clinician so late that the latter is compelled to act upon the ordinary symptoms and signs of disease before receiving them, their value can be regarded as nil. On the other hand, the clinician, as the man upon whom the responsibility for action is placed, has the right to demand precise, definite reports, returned in the briefest possible space of time, and when such reports are not forthcoming, his criticisms and complaints are fully justified.

Dr. John B. Deaver, of this city, is undoubtedly a man whose clinical experience in surgery has qualified him to speak upon the question of surgical diagnosis; and as a man employing, or having employed for him, all methods of the ward or laboratory to confirm his diagnosis, he is qualified to express an opinion upon such methods that is worthy of the most respectful consideration. Recently he has called forth the protests of certain hematologists by his criticism of the value of blood examinations in surgical conditions, and in his most recent article, published in this number, as a sort of reply to these protests, he has reviewed the entire subject of blood examinations. The one point concerning which there has been the greatest amount of dispute is the value of leukocytosis as a symptom of disease. Now leukocytosis, it must be admitted, is a sign

of certain general states, and practically never a distinguishing sign of a particular local lesion; and when Dr. Deaver argues that it is insufficient to establish a differential diagnosis between tubal suppuration and appendicitis, he assumes a position that is absolutely unassailable. We think that on the whole his standpoint is a good one; that leukocytosis is not to be regarded as a final arbiter in questions of operative interference, but that it is simply a contributory symptom of considerable value, not yet as thoroughly understood as it might be, but never to be entirely neglected in any case.

Dr. William F. Norris.—In the death of Dr. William Fisher Norris the medical profession in general and the ophthalmic fraternity in particular lose one of their most distinguished members. Early in his career, which began with distinction as a surgeon in the Civil War, Dr. Norris devoted his energies to ophthalmology, and by virtue of his scientific labors and his skilful practice, soon took a foremost place in that group of men who thirty years ago gave the impetus to American ophthalmic work, which has secured for it the high and honorable position it now holds. As a clinician, a teacher and an operator, Dr. Norris's work was characterized by accuracy and thoroughness. It was a privilege to watch his examination of a patient, so perfectly conscientious and searching were his methods. It was more than a privilege—it was a profit, as the many men who have followed his teachings and his practice know. He was not a specialist; he was a liberally educated physician who had added to his knowledge an intimate acquaintance with the principles and practice of one of medicine's greatest specialties. The medical world can ill afford to part with this honest, earnest, scholarly gentleman, whose impress fortunately remains as a lasting heritage.

The Department for the Insane, Philadelphia Hospital, now has a population of 1485, a number far in excess of its healthy capacity. It is to be hoped the City Councils will quickly respond to the urgent recommendations of the Directors of the Bureau of Charities for funds to build a modern insane hospital in a suburban locality. This humane need has been too long delayed. The medical management of the Hospital has the confidence of the community, both professional and lay, and those who conduct it are deserving of praise for the results obtained under so very many unfavorable conditions.

Current Comment.

MONKEY AND MAN.

A despatch published recently in the daily press on the authority of a Paris newspaper asserts that Prof. Haeckel, the well known evolutionist, has revised his belief that man is descended from an ape-like ancestor. The story goes that Professor Haeckel, while traveling in Java re-

cently in search of the "missing link," discovered striking evidence that monkeys are descended from man, and not man from monkeys; also, that children lost in the woods adopt monkey habits. This tale is regarded by scientific men as due chiefly to the lively imagination of some Parisian reporter. Professor Haeckel has not been heard from directly, but in his latest published statement, made originally before the Zoological Congress, he says that "the direct descent of man from some extinct ape-like form is now beyond doubt, and admits of being traced much more clearly than the origin of many another mammalian order." That he has discovered new evidence that would warrant the rejection of this belief is not likely, although it may be that he has found instances of degeneration from the human species to something resembling an ape-like form.

—*The Literary Digest.*

WOMAN AND HER DELUSIONS.

We have only to let the mind follow the procession of believers in every 'ism and 'ology and 'osophy under the sun, from those who gave heed to the utterances that crept from under the poke-bonnet of the early Shaker Ann, to those who hung on the words of wisdom issuing from the yellow turbaned monks of the Orient, to know that the long ranks are largely feminine, not in numbers only but in loyalty and in zeal * * * * *

It would be foolish to deny that extreme phases of religious teaching have always found many devoted followers among women. In every abnormal movement they not only outnumber men, but outrank them in advocacy and outdo them in sacrifice for whatever cause has won their allegiance * * * * *

Is it best that way? Who knows? There's something lost and something gained. We do not judge; we only know that because women cannot always find the "old things good enough for them" they plunge quite too often into something infinitely worse.

—*Mary Loue Dickinson, in Christian Work.*

THE FRUIT CURE.

The curative value of fruit is becoming more and more insisted upon by those who make a study of dietetics. Grapes are recommended for the dyspeptic, the consumptive, the anemic, and for those with a tendency to gout and liver troubles. Plums, also, are said to be a cure for gouty and rheumatic tendencies. The acid fruits, especially lemons and oranges, are particularly good for stomach troubles and rheumatism.

It is not sufficient, say the advocates of the fruit cure, to eat a small quantity at breakfast or dinner. One should eat from two to eight pounds of grapes a day, or, if oranges are the curative agency, the number to be eaten in a day may vary from three to six.

A healthy condition of the body depends upon a perfect balance of foods taken. There are many other factors entering into the question, but this feature must not be forgotten. Few people there are who can keep healthy without fruit.—*The Syracuse Clinic.*

EXHIBIT OF THE MEDICAL DEPARTMENT AT THE PAN-AMERICAN EXPOSITION.

The exhibit, which was in charge of Captain E. L. Munson, assistant surgeon, U. S. Army, consisted of a brigade field hospital of 100 beds, and was excellently located on a plot of ground immediately south of the Government Building, very accessible to visitors and of sufficient size not only to contain the hospital tentage without crowding, but also to furnish an adjoining space suitable for drill purposes. The hospital was fully equipped in all its details according to the provisions of the latest supply table; the purpose being to leave nothing to the imagination of visitors, the majority of whom would be unfamiliar with military matters, but to demonstrate the equipment of the Medical Department, in respect to the brigade hospital unit, in quality, size and capacity as well as in form, variety and quality.

The number of visitors who have inspected the field hos-

pital and witnessed the exhibition drills of the hospital corps is very great, and my expectation that this exhibit would prove an attractive and interesting as well as instructive feature of the Exposition has been amply justified. The character of the exhibit is such as would naturally attract military and medical men, and in addition, the recent war with Spain and hostilities in the Philippines and in China have aroused a general interest in military matters. A large proportion of visitors at the Exposition have had relatives or friends in the regular or volunteer forces and these, particularly the women visitors, have shown much interest in the methods and appliances by which sick and wounded soldiers are cared for by this Department in the field. As a means of educating the popular mind with respect to the efficiency of the Medical Department, this exhibit has thus been of very great value.

—*Report of the Surgeon General, United States Army.*

Reviews.

A Text Book of Physiological Chemistry for Students of Medicine and Physicians. By Charles E. Simon, M. D. 8 Vo. 430 pages and Index. Lea Bros. and Company, Philadelphia.

The accumulation of facts in the domain of physiological chemistry goes on in increasing ratio, yet so far from solving the problem of life, progress seems only to add new difficulties. "Hills peep o'er hills, and Alps on Alps arise." The work before us is a finely printed volume containing a large amount of valuable matter, and will be a useful addition to the literature in this field. The main object is to serve as a text-book for students who have had sufficient instruction in general chemistry to understand the structural formulae and to carry out the experimental work when described in moderate detail. The first section of the book gives an account of the three main classes of food stuffs. The enzymes, digestive secretions and processes of digestion and resorption and chemistry of important secretions are then considered. The concluding one hundred and thirty-five pages comprise the chemistry of the principal tissues and organs.

The theoretical chemistry is presented in much detail, structural formulae being freely used, indeed, some may think that they are too liberally used, for although such formulae aid chemistry very much, they are discouraging to many students and to most practicing physicians. Still, it is best to err in this respect on the side of fullness than of deficiency. Among the many tests given, we note that the author favors the phenylhydrazine test for sugar and Folin's modification of Hopkin's method for uric acid. The literary quality of the book is high and the descriptions and directions are clear and concise. We would be more pleased if the chemical nomenclature was more rigidly framed for while, as a rule, the expressions conform to approved forms, we note lapses into antiquated terms. Among instances of the latter, attention must be especially called to the use of the word "glucose" for "dextrose." It is true that "glucose" is the term by which the dextrose of urine is usually designated by clinicians, but a scientific work of this standing should explain the error of this use and employ the proper term. A reader who is intelligent to comprehend the structural formulae given on page 89, for example, will surely be able to comprehend the approved nomenclature in this field. The only reference we find to dextrose is in the otherwise good index, in which the exasperating "see glucose" occurs. Under the monosaccharides, levulose, galactose and glucose are enumerated. One incidental objection to this method of nomenclature is that many clinicians may be led to think that commercial glucose is identical with the carbohydrate of the urine.

The general execution of the work—proof reading, press work and paper—is very satisfactory. On page 33 the specific rotatory power of albumins is given without the minus sign; this may have been deemed necessary in view of the statement in the text that they are all levorotatory, but it would be better to follow strictly the accepted

method. The work will undoubtedly find a wide field of usefulness. It is not illustrated, except with an uncolored plate of absorption spectra. [H. L.]

Eczema, With an Analysis of Eight Thousand Cases of the Disease, by L. Duncan Bulkley, A. M.; M. D., Physician to the New York Skin and Cancer Hospital, etc. Third Edition of "Eczema and its Management." Students' Manual Series on Diseases of the Skin. G. P. Putnam's Sons, New York and London, 1901.

In this volume Dr. Bulkley has gone thoroughly, but concisely, into a consideration of the subject of eczema, especially as regards the underlying, exciting and contributory causes, and the measures and medical management necessary for its treatment. After some general considerations the author takes up a brief analytical study of the 8000 cases, discusses the frequency and nature of the malady, and presents in succinct form the etiological factors which experience has shown have a bearing of variable import in provoking an outbreak. The various lesion forms are then discussed and types as regards acute, subacute and chronic character of the morbid processes described. Brief consideration is then given to the differential diagnostic points from twenty-seven diseases. A large part of the book is given to the practical subject of treatment. Dr. Bulkley has always contended, and rightly, too, that while the value and necessity of external treatment cannot be too highly appreciated, the proper constitutional management of the disease must receive full consideration and its importance recognized. And no better introduction to the latter can be given than his statement, "The first fact to be remembered in the treatment of the disease is that there is not, and never can be any specific for eczema, as the practice of some would seem to indicate; indeed, in many cases it is useless and unnecessary, and in many others it does actual harm."

After general consideration of the subject, regional eczema is taken up. Diet and other like subjects are discussed, and the work ends by the addition of a series of formulae most commonly employed.

The book can be recommended for its good, sound sense, its careful and explicit, though brief directions, and if properly perused will be of practical use to the general practitioner and consequently to his patients, keeping both him and his cases from the pitfalls of the proprietary and semi-quack cure-all ointments, to the employment of which seductive advertisements, and his lack of knowledge of the subject might lead. [H. W. S.]

Illinois State Board of Health. Report of Sanitary Investigation of the Illinois River and its Tributaries. 8 Vo. 204 pages, index and map. Phillips Bros. State Printers. Springfield, Ill.

The establishment of the Chicago main drainage canal has not only aroused interest as an engineering operation, but has awakened much alarm among those who depend for drinking water upon the stream into which the enormous volume of sewage enters. The present volume is a special report giving chemical and bacteriological results of extended investigations of the streams likely to be involved in this pollution, as well as of tributary streams, with a view of establishing comparisons. The general question of self-purification of streams is discussed by Dr. Egan, Secretary of the Board. We need not present here a detailed study of the chemical and bacteriological statistics. They are all made by the most approved processes, and it is claimed that the investigation shows that the sewage of Chicago is not likely to cause injury to those using water below the mouth of the Illinois river. As a matter of fact such investigations as these have little more than academic interest. No observant sanitarian will believe that the introduction of the sewage of a large and very filthy city into a running stream will do otherwise than render that stream more unsafe as drinking water than before. The practical issue is, however, complicated by the fact that these streams are in all probability unsafe in their original

condition. The small streams flowing through flat cultivated or populated land are sure to become polluted, and the addition of Chicago sewage will increase the danger, not create it. The best remedy is the restriction of water-waste in the main city, and the efficient filtration of all surface waters by the towns below the point of pollution. [H. L.]

Anatomy, Descriptive and Surgical; by Henry Gray, F. R. S. Edited by T. Pickering Pick, F. R. C. S., and Robert Howden, M. A.; M. B., C. M. A Revised American, from the Fifteenth English Edition. With 780 Illustrations, many of which are new. Published by Lea Brothers & Co. Philadelphia and New York.

We know of no medical text book in continuous use that can hold the record with "Gray's Anatomy." It has now reached a revised American edition, which is a reprint from the fifteenth English edition. The editors are Mr. Pickering Pick and Mr. Howden, and they announce that the entire work has undergone a careful revision. The section on embryology, especially, has been amplified, and some 60 illustrations have been added. Throughout the rest of the work many new diagrams also have been added, and some of the old ones redrawn. As the publishers announce, this work has held the front place in works on anatomy for forty-five years, and its merits are only brightened by the numerous works which have endeavored to contest its supremacy. It hardly calls for an extensive review, as the work is too familiar both to the student and the practitioner to need more than a notice. In this present edition it retains its old familiar lineaments, and we doubt not that it will continue to be an indispensable handbook to every practitioner in every department of medical and surgical work. [J. H. L.]

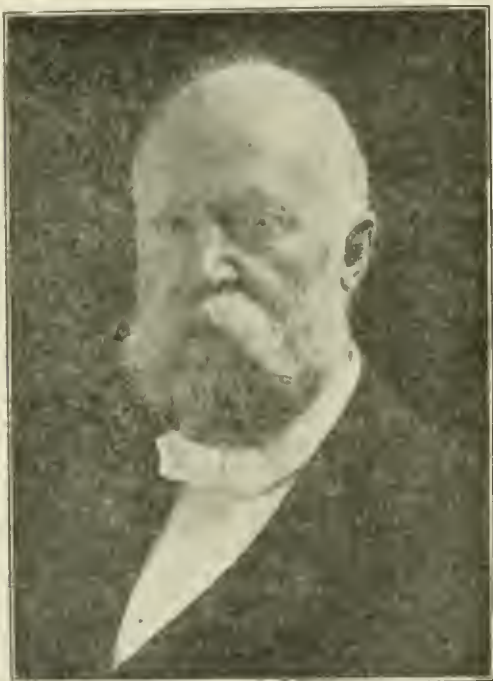
A Case of Rupture of the Uterus.—In the (*Revue Médicale de l'Est*, 1901, No. 10) Dr. A. Herrgott reports the case of a woman of 33, who was pregnant for the seventh time. Her former confinements had been normal. Three days before admission to the hospital the amniotic sac had broken. Labor had already lasted 48 hours. The fetal heart-beat was not audible, and the abdomen was tender. The vulva was much congested, the left arm of the fetus protruding, the shoulder being caught in the external orifice. An anesthetic was given and embryotomy done with much difficulty. After some time, delivery of the body followed normally. As there was hemorrhage, Herrgott suspected rupture of the uterus. This was found upon examination, along the left side of the cervix, continued at a right angle. The rupture was complete, through the peritoneum. As there was subcutaneous emphysema, Herrgott performed laparotomy, and removed the uterus. The patient died. Herrgott shows how dangerous may be premature rupture of the membranes in transverse presentations. [M. O.]

Quantitative Determination of Methylene Blue in Urine.—Ivanoff (*Medicinskoje Obozrenie*, May, 1901) finds that the determination of methylene blue in the urine, after the injection of the substance for the diagnosis of renal insufficiency, is best accomplished in the following manner: A number of filters are prepared by immersing them for 15 minutes in a 2.5% solution of tannin heated to 50-70°C. They are then dried and again immersed in a 1.5% solution of tartar emetic at a temperature not exceeding 20°C., for 15 minutes. The filters are finally washed in water and dried. Several of these are employed for the purpose of making a color-scale. A quantity of methylene blue is dried to a constant weight in a hot air oven; solutions of various strength, as 1:50,000, 1:100,000, 1:200,000, are prepared and 10 cc. of each passed through the filter several times, until the filtrate is entirely free from color. Thus a series of colored filters is obtained, corresponding to definite amounts of methylene blue. To determine the methylene blue in the urine, 10 cc. of the latter are passed repeatedly through one of the specially prepared filters until the disappearance of the least trace of blue from the filtrate. The colored filter is then compared with the standard. The author claims for this method accuracy as well as convenience. [A. R.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Death of Dr. Norris.—Early on the morning of November 18, Dr. William F. Norris died at his home in Philadelphia, the best known ophthalmologist in America, the most renowned American not only in Europe, but throughout the entire world, in his especial line of work. While it was generally known that Dr. Norris had been suffering from pneumonia for several weeks past, he was considered convalescent, so that the news of his death came as a shock to those who were accustomed to seeing him daily, up to a few weeks ago, at the University Hospital. A member of one of Philadelphia's oldest families, born January 6, 1839, the son of Dr. George W. Norris, William Fisher Norris was graduated from the University of



DR. WILLIAM FISHER NORRIS.

Pennsylvania in 1857, receiving his A. M. degree in 1860 and his M. D. in 1861. Two years later Dr. Norris entered the United States Army, holding the position of assistant surgeon during the Civil War. In 1864 he had charge of the Douglas General Hospital in Washington. Then Dr. Norris passed some years in Europe, at work upon ophthalmology. While in Vienna he met and married Fräulein Rosa Clara Huchmann, who was the mother of his sons.

Dr. Norris held many prominent positions: Professor of ophthalmology in the University of Pennsylvania from 1876 up to the time of his death; president of the American Ophthalmological Society from 1885 to 1889; fellow of the College of Physicians of Philadelphia, and president of the Section on Ophthalmology in 1894; visiting surgeon to the Wills' Eye Hospital for thirty years, having only resigned this fall, when he became consulting surgeon; companion in the military order of the Loyal Legion; manager of the Mutual Assurance Company; vice-president of the Pathological Society of Philadelphia; member of the Academy of Natural Sciences; member of the American Philosophical Society; and one of the founders and president of the Board of Managers of the University Hospital.

Though in his sixty-third year, Dr. Norris still possessed a certain shyness, modesty, or diffidence of bearing, which was most noticeable when among strangers. Yet this was soon forgotten when one heard him talk, so well did he impress upon his audience the fact that he thoroughly knew his subject. Nor was his delivery at all dramatic.

His spare time was passed at his beautiful country place, "Woodburne," near Montrose, Susquehanna County, Pennsylvania. After having been an invalid for several years, Mrs. Norris died about five years ago. Dr. Norris later married Miss Annetta Culp Earnshaw, of Gettysburg, who survives him. He also leaves two sons, Dr. George William Norris, resident physician at the Pennsylvania Hospital, and William Felix Norris, a student at the University of Pennsylvania Law School. Dr. Norris was the author of many widely known books, pamphlets, and papers upon ophthalmological subjects. Among the more prominent of these may be mentioned his work in Pepper's "System of Medicine," "Medical Ophthalmology," "Versuche über Hornhaut Entzündung," written in conjunction with Professor Stricker, "A Contribution to the Anatomy of the Retina," written with Dr. James Wallace, and several large works, in editing which he was assisted by Dr. Charles A. Oliver, a "Text-book of Ophthalmology" and a "System of the Diseases of the Eye," by American, British, French, Dutch, and Spanish authors. This comprehensive work, in four large volumes, the greatest of its kind in the world, appeared between the years 1897 and 1900.

His genial manner, his straightforward way of doing just what he considered his duty, endeared him, not only to his patients, but also to those of his students who had the opportunity of knowing him. Thus it was that many scientific positions which he held during his life came to him unasked, the simple reward of merit. Great as is the loss in the death of Dr. Norris to the University of Pennsylvania, the University Hospital, Philadelphia, and the medical profession, his works will live long after him as the best ophthalmological books of reference in the English language.

Smallpox in Philadelphia.—During the week ending November 16th, but 50 new cases were reported, with 12 deaths. A church has been closed and disinfected in Frankford, where services were held by a clergyman still in the period of smallpox invasion. Up to the present time fourteen schools have been closed for forty-eight hours each, for fumigating purposes, and orders have been given to have all schools properly disinfected. There are now eight schools temporarily shut up, so that they may be fumigated and disinfected. Dr. William Welch, of the Municipal Hospital, speaking of the efficacy of vaccination as a preventive in smallpox, said that of the fifty men and fifteen women employed in the hospital all were vaccinated except one, and that one had caught smallpox. Over 4000 patients and 300 employés in the Philadelphia Hospital have been vaccinated. One death from tetanus is reported, in an imbecile who, after being vaccinated successfully, scratched the wound. He was employed in the yard hanging clothes from the laundry. Three weeks after vaccination, the wound became infected, lymphangitis followed, and symptoms of tetanus developed on the 5th day. In 52 hours death in convulsions resulted, in spite of the serum treatment, morphine, stimulants and sterilization of the wound.

Smallpox in Pennsylvania.—Outside of Philadelphia many cases of smallpox are reported. These seem most frequent near this city. Norristown has fifteen houses now under strict quarantine, and fifteen cases are under care at the hospital which has been established in the old hotel building at Oakview Park, which itself is isolated. A doctor and two nurses from the Municipal Hospital in Philadelphia are there in charge. The disease was imported into the town from Philadelphia, and since then only twenty-one cases have developed, all of which were properly quarantined. They have been scattered through the town. There are a few cases reported in Pottsville, some in Chester, and some near Wilkesbarre. The epidemic of smallpox in Plymouth, which was not thoroughly stamped out in the summer, when it was rather severe, has manifested itself again, and is once more becoming serious. Four new cases have been reported since Sunday, and several houses are quarantined and are being closely watched.

Society Meetings Next Week.—The following societies will hold meetings at the College of Physicians, next week,

at 8.15 P. M.: Monday, November 25, Neurological Society; Wednesday, November 27, County Medical Society; and Thursday, November 28, Pathological Society.

Berks County Medical Society.—At the November meeting of the Berks County Medical Society, Dr. Kaiser read a paper upon cerebral disease. Vaccination was discussed, and the following resolution was passed unanimously: "In view of the alarming increase of smallpox in Philadelphia and this vicinity, the Berks County Medical Society urges the general public to observe the recommendation of the Board of Health and protect themselves against this disease by resorting to vaccination."

Emergency Hospitals in Coal Mines.—The mining department of the Lackawanna Railroad is teaching its employes to give first aid to the injured in case of accidents. Medical men are engaged instructing the foremen of the various mines in attending the injured pending the arrival of a qualified surgeon. A room will be fitted up in each mine, to be used as an emergency hospital.

National Academy of Sciences.—The American National Academy of Sciences met at Hutton Hall, University of Pennsylvania, November 12 to 14th. Among the papers by medical men was one on "Snake Venom in Relation to Hemolysis Bacteriolysis and Toxicity," read by Drs. S. Weir Mitchell and Simon Flexner, and one "On the Vaso-Motor Supply of the Lungs," read by Dr. Horatio C. Wood, Jr. Dr. Noguchi, of the Pathological Department of the University of Pennsylvania, discussed the first paper.

The Woodward Fellowship in Physiological Chemistry.—Dr. George Woodward has given the trustees of the University of Pennsylvania \$20,000 to establish the "Woodward Fellowship in Physiological Chemistry" in the Pepper Laboratory. The incumbent of that position is supposed to devote himself entirely to original work in the field of physiological chemistry. The character of the work will be varied and will consist of chemical investigations of diseases. Dr. Alfred C. Croftan, the incumbent, is a physician who has made a specialty of chemistry as applied to medicine. Dr. George Woodward, the donor, was graduated from the University Medical Department in 1891.

The Germ of Dysentery.—Investigations carried out during the past summer by the Department of Pathology of the University of Pennsylvania have discovered the occurrence of the specific bacillus of dysentery in the disease prevailing in the United States. Several epidemics of dysentery occurring in different parts of the country were studied, and in all the same germ was obtained. The results of the investigation, the expenses of which were borne by the Rockefeller Institute of Preventive Medicine, go to show that the dysenteries of tropical and temperate climates are identical.

Physicians' Rights.—A woman called on a physician last March for the purpose of having him visit her sister, who was suffering with a sprained ankle. She testified in court last week that he not only refused to listen to her story, but ejected her from his office without any provocation on her part. The physician, however, testified that the prosecutrix became so abusive that he was obliged to eject her, after she had refused to leave voluntarily. He insisted, however, that he used no more force than was necessary. The defendant, the Judge said, had the right to eject the prosecutrix if her conduct was objectionable, even to the extent of using force.

Municipal Hospital Site.—Councils' Sub-Committee to consider the removal of the Municipal Hospital at Twenty-second street and Lehigh avenue, met last week. Two sites for a new Municipal Hospital, in case Councils decide to remove the present buildings, were considered, a tract of land in the Thirty-third ward, adjoining properties of the Greenmount Cemetery, New Cathedral Cemetery and the Philadelphia and Newtown Railroad, described as being ninety-eight feet above tide water, containing 53¼ acres, obtainable for \$140,000; and a plot of ground on the Delaware river front above Venango street, 1000 feet front, extending westwardly 3500 feet to Richmond street, to cost \$200,000.

New Clinical Laboratory.—The Philadelphia Clinical Laboratory, Incorporated, has been opened for the analysis of urine, gastric contents, milk, calculi, etc., the examination of blood, sputum, pus and tissues, and other bacteriological, histological and chemical work at moderate prices. The president is Mary Pennington, Ph.D., director of the chemical laboratory in the Women's Medi-

cal College, while Elizabeth Atkinson, Ph.D., is secretary.

Resignation.—Dr. Ralph F. Sommerkamp has resigned the position of assistant physician in the Insane Department of the Philadelphia Hospital.

Death of Dr. Samuel Ashhurst.—News has been received of the sudden death of Dr. Samuel Ashhurst from asthma, November 12, in London. Dr. Ashhurst, who was a graduate of Amherst College and the University of Pennsylvania Medical School, was 61 years old, a widower without children. He had been connected with the Children's Hospital for many years, and was always a great favorite among children. He was a first cousin of the late Dr. John Ashhurst, Jr.

NEW YORK AND NEW JERSEY.

New Hospital for Convalescents.—New York is to have a new hospital for convalescents, according to the plans of St. John's Guild. The trustees of the Guild have decided to establish a hospital on the Guild property at New Dorp, S. I., to be open the year round, for the care of women and children during convalescence. Tentative plans have already been prepared.

Tubercle Bacilli in Milk.—That tuberculosis in cattle is transmitted in milk to human kind, though only rarely; that children can and do drink infected milk with only a remote chance of becoming victims of the disease, and that 20 per cent., roughly speaking, of a city's milk supply contains tubercle bacilli, were some of the points in the paper read before the section on pediatrics at the New York Academy of Medicine by Dr. David Bovaird, Jr., November 14th. Dr. Bovaird also briefly touched upon the point that, with the exception of very rare cases, the eating of meat from tuberculous animals will not transmit tuberculosis.

The New York State Railway Surgeons began their eleventh annual meeting on November 18th. Dr. W. R. Townsend presided. Papers were read by Dr. G. P. Conn, of Concord, New Hampshire; Dr. N. H. Hartey, of Indiana; Dr. M. J. Rosenau, of Washington, D. C.; Dr. William H. Park, of New York, and L. J. Gilbert, of Pittsburg.

Purveyor of Degrees.—John W. Norton-Smith, M. D., Ph. D., LL. D., president of the Central University of Medicine and Science, in Jersey City, who offered to sell honorary degrees at cut rates, was in court in Jersey City, November 16, on a charge of obtaining money under false pretences. The charge was based on a letter received by the police from Dr. D. H. Harrison, of Swanville, Texas, to whom Norton-Smith had offered a diploma for \$10. The false pretence consisted in a presentation made in the letter that the Central University was incorporated under the laws of New Jersey. It was incorporated two years ago, but, in July last complaint was made to the police that Norton-Smith was conducting an illegal business, selling diplomas to anyone who was willing to pay \$10. It is said he offered to cancel his act of incorporation, if the authorities would drop the prosecution. This was agreed to, and the certificate was cancelled. Subsequent developments show that he resumed business immediately.

Passaic Fears Smallpox.—The Board of Health of Passaic, N. J., issued orders that all employes of local mills be vaccinated within ten days, or else the work will be done at the expense of the city. Though only one case of smallpox has been discovered there, the authorities fear that others may develop.

Tetanus Following Vaccination.—Six deaths from tetanus following the infection of the vaccination wound have occurred in Camden, N. J. Almost all cases clearly show the secondary infection in the history. The physicians are now taking great care to observe cleanliness. There was a special meeting of the Board of Health, November 18th, to consider the question of tetanus following vaccination. While the majority of the physicians present did not believe that vaccination produced tetanus, they did believe that the air was so full of tetanus germs that any scratch, whether for the purpose of inoculation or otherwise, became dangerous. Resolutions were therefore passed that children be received in the schools, though never vaccinated, and that physicians for the present discontinue vaccination.

To Report Malarial Fever.—In New York the Board of Health is to require the physicians in public institutions, hospitals and asylums to report all cases of malarial fever

coming to their notice. All the other physicians of the city are requested also to make such reports. Presumably, if the results warrant it, such reports will be made generally compulsory later.

Medical Inspection of Schools has been inaugurated in three of the smaller cities during the month past—Syracuse, N. Y.; Orange, N. J., and Newark, N. J.

Dr. Albert L. Gihon Dead.—Dr. Albert Leary Gihon, medical director of the United States Navy, retired with the rank of commodore, in charge of the Naval Hospital for four years, died from apoplexy in Roosevelt Hospital, New York, November 17. He served during the Civil War, and was well known as a writer on medical subjects, many of his works being in use as text books. Born in Philadelphia sixty-nine years ago, Dr. Gihon received his education there and at Princeton. He was professor of chemistry and toxicology in the Philadelphia College of Medicine and Surgery in 1853. He entered the navy in 1855. "The Annual of Universal Medical Science," "Handbook of the Medical Sciences" and "Twentieth Century Practice of Medicine" are the titles of some of the books in which the did editorial work. He was the author of nearly thirty volumes on medical subjects.

NEW ENGLAND.

Great Man Honored.—On November 11th a distinguished gathering in Tremont Temple, presided over by Senator George F. Hoar, did honor to Samuel Gridley Howe, on the occasion of the 100th anniversary of his birth. His widow, Julia Ward Howe, formed the most conspicuous figure in the platform group. An excellent picture of Dr. Howe fronted the chancel, while in the galleries sat some thirty pupils from the Perkins Institution and Massachusetts School for the Blind. The band of the Perkins Institution was also present, and helped to provide a musical programme. A souvenir in raised letters, containing a poem by Whittier, with an event in the life of Dr. Howe, was given each person attending the meeting. Dr. Hale finally read a letter from Helen Keller. Mr. Richard C. Humphreys reminded the audience of Dr. Howe's connection with the Massachusetts School for the Feeble-Minded, incorporated in 1850. To define Dr. Howe's connection with it would be simply to say that it was his school, organized and conducted almost alone in addition to his work for the blind. Dr. Howe was a truly great philanthropist. He was born in Boston, November 10, 1801, taught in the public schools and graduated at Brown University in 1821. It was through Dr. Howe's influence also that the New York Institution was started. Several other speakers eulogized Dr. Howe.

Smallpox in Boston.—The number of smallpox cases reported to the board last week is 28, with three deaths. This makes the total number for the current year 159. A careful examination of the medical records of the 217 cases of smallpox, which have appeared in Massachusetts since June 6, shows that only half a dozen of the patients had been vaccinated within a month prior to contracting the disease; 118 had never been vaccinated at all; 65 persons of mature age had not taken the treatment for at least ten years—most of them not since infancy—and 25 who claimed to have been vaccinated, and are so reported, showed no scars. Thus it appears that 143 of the 217 were absolutely without vaccine protection, inasmuch as the operation was performed so long ago as to have lost its value. Consequently only 34 of the 217 patients can be credited with having taken due precautions against the disease. But in some of these cases the records are incomplete and in others it is just ten years since the operation was performed, while in the remaining few the time varies between nine years and five days. It is safe to state that not more than 20 of the 217 Massachusetts people who have been suffering from the dreaded disorder since last summer, had taken the precautions that the ordinary physician would advise. Some cases were reported in Hyde Park last week, also.

Dr. Weldon Awarded \$6750.—A verdict of \$6750 for the plaintiff in the case of Dr. John Weldon of Willimantic,

Conn., vs. Otis Clapp & Sons was last week returned in the United States Circuit Court before Judge Lowell. The action was brought to recover damages for breach of an alleged warranty of a static X-ray machine, which the plaintiff bought of the defendants, to the effect that it would not burn. The plaintiff was burned severely by the machine, so that his leg is still lame. The defendants denied that the warranty was made, and claimed that the machine was harmless when properly used. The doctor had sued for \$20,000 damages.

Diphtheria Epidemic in Lowell, Mass.—Owing to an epidemic of diphtheria, an order was introduced in the board of aldermen, November 12, appropriating \$30,000 for a contagious hospital. At present there are about 90 cases of diphtheria in Lowell. The local board of health has called upon the state board for advice and Dr. Morse has been in the city making investigation as to the causes.

Gives Morse Hospital \$15,000.—The trustees of the Morse Hospital, Natick, Mass., have received from Hollis H. Hunnewell, Sr., a gift of \$15,000 in C., B. & Q. R. R. 4 per cent. bonds, there being no restrictions as to how the money shall be used. This is the largest donation made for the benefit of the institution since its establishment.

Bequests.—The will of Alfred Henry Hersey, of Hingham, Mass., probated at Plymouth, makes bequests of \$5000 each to the Massachusetts General Hospital and the Perkins Institute for the Blind; \$3000 to the Massachusetts Eye and Ear Infirmary; \$2000 each to the Carney Hospital, Kindergarten for the Blind, Channing Home and Boston Home for Incurables; and \$1000 for the Free Hospital for Women.

WESTERN STATES.

Tetanus in St. Louis.—The St. Louis Health Department was on November 18 found by the coroner to be negligent on account of the preparation of diphtheria antitoxin, from the administration of which seven children died of tetanus. The antitoxin had been prepared and issued by the St. Louis Board of Health in bottles bearing the dates of August 24th and September 30th. The Coroner's verdict is based upon the testimony of physicians who attended the lockjaw cases, the inquest, and the report of the bacteriologists employed by the city to make tests of the infected serum and ascertain the responsibility for it.

Insanity Among Teachers.—Statistics of the Illinois State Hospital for the Insane at Elgin, in the last biennial report, show that out of 660 persons admitted to the institution in the last two years ten were women school teachers. At the same time was elcted a report of Professor Zimmer, of Berlin, after an investigation carried on in Austria, Switzerland, Russia, and Germany, in which he said that one in every 85 female patients in the asylums for the insane was a teacher. The experience of alienists in Philadelphia has not been similar to that found in Illinois and in Europe. Whether the atmosphere East of the Alleghenies is less conducive to insanity among persons engaged in confined occupations or whether the school rooms of Chicago are less sanitary in their arrangements than those of Philadelphia, and the work of the school teachers more harassing and exacting, could not be learned. At the women's department of the Pennsylvania Hospital for the Insane there was a much larger proportion of saleswomen who became insane than of teachers. In the last year and ten months there have been admitted to the Pennsylvania Hospital for the Insane only seven women and one man whose occupation has been that of teaching. The man was 76 years old, his condition being chiefly if not wholly due to senility. At the Philadelphia Hospital the superintendent said that out of 299 women patients admitted to the insane department in the year 1900 only one was a school teacher, and among the 353 men there was no school teacher. Dr. Edward Brooks, superintendent of public education, said, in his experience the ratio of insanity among teachers was very small. "In ten years," he added, "I have known only two cases, in both of which the sufferers were women. I was connected with the State Normal School for 28 years and in that time knew of very few instances of insanity among teachers."—*Philadelphia Times*.

CANADA.

Fewer Deaths in September in Ontario. The total number of deaths in Ontario during September was 1959, against 2160 a year ago, consumption showing a slight decrease. Some time ago the provincial Board of Health, believing that municipalities were becoming lax in making statistical returns which are required by law, sent out official circulars cautioning against neglecting these returns. The result of this warning is seen in the fact that for the month of September no less than 99 per cent. of the population was reported. Scarlet fever claimed 13; diphtheria, 45; measles, 2; whooping cough, 17; typhoid fever, 41; and consumption, 165, seven less than in the corresponding month of 1900. In Toronto alone sixteen cases of typhoid fever were reported in October.

The Medical Course at McGill is to be extended. Following the action of the Science Faculty, which has lately increased the percentage standard requirements for pass, second and first-class honors, the Medical Department now contemplates making the course at McGill University five years instead of four, the sessions to remain periods of nine months in extent. This is not likely to be put into effect until Dr. Roddick's bill upon Dominion Registration has been passed by the Houses of Parliament. So soon as this becomes law, in order to comply with the recommendations of the British Medical Council, the standard will be raised at McGill. It is fully expected that Dominion Registration will become adopted in 1903 at the latest.

The Toronto Board of Health has again recommended to the Council the submission to the people, in January next, of a by-law for the purpose of granting \$50,000 for a sanitarium for poor consumptives, to be situated not further than 40 miles from the city and to comprise at least fifty acres of land. The city will then grant the usual forty cents per patient, as soon as the institution is ready for the reception of patients. Toronto will also place notices in public places requesting citizens not to spit upon the streets, pointing out the dangers of the habit.

A Medical Inspector for Northern Ontario has recently been appointed by the Ontario Board of Health. Dr. O. A. Hodgetts, who has for some time been connected with the Board as a special inspector, received the appointment. His duties will be to see that the regulations recently adopted by the Board with regard to sanitary matters in lumber camps are being strictly and efficiently carried out. This immense unorganized district has a frontier of 6000 miles on lake, river and railway, and has a population of 100,000, stretching from the Ottawa River to Rat Portage, near the boundary of Manitoba. Already the regulations are having marked effect, many of the lumber camps having appointed medical officers, with hospitals properly equipped.

The Yukon Territory has a well-organized medical body. In September, 1898, the College of Physicians and Surgeons was organized, with a Medical Council of five members, who conduct the affairs of the College. Any one desiring a license to practice in the Yukon Territory must pass the prescribed examinations, upon furnishing proof that he has put in the proper time in medical studies. The fee for registration is \$100, and there is an annual assessment at the option of the Council, of from \$20 to \$50. Members of the College of Physicians and Surgeons of Ontario, Quebec, Manitoba, the Canadian Northwest Territories, Great Britain, and Ireland, are registered without examination. The membership now reaches forty, although this number of physicians is not in actual practice in Yukon Territory now.

Research Laboratory Promised.—The free hospital now being erected near the Muskoka Cottage Hospital will soon be ready for patients. The main building is the gift of W. J. Gage, of Toronto, and the late H. A. Massey. It is located in a beautiful park of 56 acres half a mile from the town of Gravenhurst. Fifty beds for Toronto's poor are being provided; the Grand Trunk Railway will carry free of charge 100 patients each year to and from the institution. All in excess of that number will be carried at half rate. Physicians and nurses will also be carried free of charge. This hospital will be for those in the earlier stages of consumption; the National Sanatorium has purchased a fine site near Toronto at a cost of \$30,000 for ad-

vanced cases. It is understood that the late W. E. H. Massey has bequeathed \$30,000 for a research laboratory in connection with the Gravenhurst institution.

MISCELLANY.

The Morphine Habit in Porto Rico.—The Insular Board of Health of San Juan estimates that there are 1,000 victims of the morphine habit in Juana Diaz, a town with a population of 2,500.

Measles Fatal in Alaska.—Dunlap More, Assistant Surgeon United States Quarantine Service, stationed at Nome during the past season, confirms the report that the natives of Western Alaska are rapidly disappearing from the effects of disease. He states that at least one-third of the native population at Cape Nome, Prince of Wales, Nome, Port Clarence, St. Michaels, Kuskokwim, Unalaska, Pribyloff Islands, Nunivak Island, and St. Lawrence Island, and those along the Yukon River, have suffered from the effects of an epidemic, which at first was thought to be small-pox, but upon investigation proved to be measles.

Pan-American Congress.—The Mexican delegates to the congress oppose obligatory arbitration. *El Imparcial* says the Mexican delegates are united in a determination to advocate the principle of suppression of quarantine. England has shown the way, and her public health has not suffered by the removal of quarantines.

Oxygen as an Antidote.—That pure oxygen may be made a successful antidote to poison is the important result of experiments now in progress in Berlin, at the Institute of Physical Diagnosis, under the direction of Dr. Rogovin, a Russian medical scientist, and Dr. William Cowl, of New York. Unqualified cures from poison by morphine, strychnine and arsenic have been made in the cases of cats, rats, mice, and guinea pigs affected. The experiments have been guarded with the utmost secrecy, with the intention of making the discovery public for the first time at the German Medical Congress in 1902. The following, however, is a synopsis of the discovery; the treatment contemplates the substitution of pure oxygen for the means generally employed in giving medical relief in poisoning cases. The inhalation of oxygen provides four times as much nourishment as breathing air, as has been shown in the demonstrations, accurately recorded by means of an instrument resembling the sphygmograph heretofore used for pulse writing. Berlin's health authorities are interested in the experiments on account of the possibility of saving the lives of suicides. It is pointed out that ninety per cent. of suicides result from morphine dyspnea, against which medical antidotes are powerless.

Obituary.—Dr. J. Marcus Rice, at Worcester, Mass., November 11, aged 74 years—Dr. T. O. Linthicum, at Corbins, Va., November 12, aged 45 years—Dr. William S. Latta, at Lincoln, Neb., October 20—Dr. J. Sappington Pyle, at Delta, Pa., November 12, aged 81 years—Dr. David C. Reynolds, at Philadelphia, Pa., November 12, aged 71 years—Dr. Calvin Edward Hull, at Black Rock, Conn., November 13, aged 84 years—Dr. Jarvis S. Wight, at Brooklyn, N. Y., November 15, aged 67 years—Dr. Samuel Ashurst, in London, Eng., November 13, aged 61 years—Dr. C. L. Harmanson, at Onancock, Va., November 15, aged 43 years—Dr. Albert L. Gihon, at New York City, November 16, aged 70 years—Dr. Joseph N. Narcross, at Old Town, Me., November 9, aged 50 years—Dr. L. L. Todd, at Indianapolis, Ind., November 16, aged 66 years—Acting Assistant Surgeon Stuart Eldridge, at Yokohama, Japan.

GREAT BRITAIN, ETC.

The Health of the Troops in India.—The number of men arriving in India for service at an age peculiarly susceptible to typhoid fever has fallen from 16,911 to 3,363 as a result of the war in Africa. On this account also there are nearly 25,000 men still in India whose time is up and whose places have not yet been taken by younger men. Men who have spent six or seven years in India are much less likely to contract disease than those fresh from home, and are therefore of greater value from a military point of view.

Westminster Hospital, London.—The Westminster Hospital has recently opened an electrical laboratory and a room with X-Ray apparatus, at a cost of \$5000.

London School Board.—Dr. W. R. Smith, professor at King's College, who has been medical officer to the London

School Board for over 11 years, has recently resigned that position. His resignation was sent to the Board because it had been decided to reduce the salary paid the medical officer of the London School Board from \$4000 to \$2000.

Munificent Bequests.—The late Mr. Matthew Whiting, of Wandsworth, has left \$600,000 in equal shares to St. Thomas's Hospital, St. George's Hospital, Guy's Hospital, King's College Hospital, the Westminster Hospital, the Middlesex Hospital, the London Hospital, the Royal Free Hospital, St. Mary's Hospital, the Great Northern Hospital, the Brompton Hospital for Consumption and Diseases of the Chest, the New Hospital for Women, Euston Road. Sir Robert Sexton has left \$65,000 to the Dublin Hospital, and Mr. T. K. Hardie has bequeathed \$400,000 to various hospitals in England and Scotland.

Gartnavel Asylum, Edinburgh.—Dr. Yellowlees, superintendent of the Gartnavel Asylum, has resigned on account of eye strain. He will, however, continue his lectures and consulting practice.

Medical History.—The Royal College of Physicians of London has accepted a gift of \$10,000 from Mrs. Fitzpatrick to found a lectureship on the History of Medicine in memory of her late husband, a distinguished member of the college, born in Ireland in 1832. This brings England into line with the recent advances made on the Continent and in the United States.

A School for Cripples.—The London School Board has opened the first of a series of schools for cripples. The children are taken from their homes to school and afterward taken home by ambulance. The school curriculum includes a substantial midday meal.

Simple Remedy Cured Cancer.—Lady Margaret Marsham, aged 67 years, was ill with a throat affection pronounced cancer. Analysis and clinical research in the Medical Association's laboratory confirmed the diagnosis. Death was expected within a week, when a neighbor recalled an old remedy, a handful of fresh green violet leaves put in a pint of boiling water, allowed to stand for twelve hours; after straining off the liquid, a piece of lint dipped into the heated infusion was applied hot and covered with oil silk. The infusion was made fresh every other day. Its effect was described as miraculous. The large, hard external swelling disappeared in a week, the pain ceased, and the cancerous growth of the tonsils disappeared in a fortnight. The patient now seems to be in good health.

The Water Famine in Edinburgh has become so serious that householders have been recommended to dispense with baths in their houses and local authorities to discontinue public baths.

The Plague at Liverpool.—Although no new cases have been reported since October 25th, Assistant Surgeon J. F. Anderson, of the U. S. M. H. S., who has been detailed by the President to investigate the outbreak of plague in Liverpool, sailed from New York November 16. He will make such recommendations as may be necessary to protect ports of the United States which ships from Liverpool enter.

Obituary.—Dr. A. H. Bennett, consulting physician to the Hospital for Epilepsy and Paralysis, formerly physician to the Westminster Hospital, graduate of the Universities of Edinburgh, London and Paris, died in London November 1, aged 53 years.—Dr. H. S. Smith, consulting surgeon to St. Mary's Hospital, a graduate of St. Bartholomew's Hospital, died in London October 29, aged 89 years.—Dr. W. J. Marshall, a graduate of Edinburgh University, physician to the Edinburgh Hospital, died in Edinburgh, October 24, aged 57 years.—Dr. C. M. Robertson was killed in action at Whitbank, South Africa, October 25. He was 26 years old, and graduated at the University of Edinburgh.

CONTINENTAL EUROPE.

Mozart's Skull.—The reputed skull of Mozart, (the only known remains of the great composer), has been deposited in the Museum at Salzburg, Austria. Though his grave is unknown, the late Professor Hyrtl kept this skull in his home. That it is Mozart's skull was shown by the evidence of a grave digger, an engraver, and Professor Hyrtl.

Women in Medical Schools.—Germany has, until late years, generally discouraged the study of medicine by women, and there were certain restrictions, mainly in the

matter of examinations, that it was impossible for women to overcome. The barriers have been removed slightly, and now a small contingent of women studying medicine will be found at a number of the leading German universities. At Berlin there are twenty-five registered women medical students; at Leipzig 24; at Freiburg 18; Halle 12; Heidelberg 6; Bonn 5; Breslau 2. Dr. Ludwig Stieda, professor of anatomy, Wilhelm Lossen, professor of chemistry, and Carl Pape, professor of physics of the University of Königsberg, will not allow women to attend their lectures. At the Swiss universities, however, are found the largest number of registrations, by far the greatest number being Russians. For instance, at Berne, there are 188 female students of medicine, and 180 of the number are Russians. At Lausanne University there are 61, and at Zurich 85 women students.

Quacks.—Besides about 24,000 legitimate physicians, there are in the German Empire nearly 6000 individuals who are allowed to carry on the nefarious business of quacks.

A Rare Diagnosis.—The doctors of Vienna are greatly interested in the case of a young man, 23 years old, who died after a six months' painful illness which puzzled the physicians. Shortly before his death his ailment was diagnosed as the result of the hatching of eggs of a blue-bottle fly, which the patient had swallowed, causing perforation of the intestines. The sufferer was then too weak to undergo an operation. The autopsy confirmed the diagnosis. Part of the large intestine was riddled. Professor Nothnagel will shortly read before the Vienna society of physicians a paper on the case, which is almost unprecedented, though one or two similar cases are recorded in medical literature.

Feeble-Mindedness of Women.—The Congress of Progressive Women recently held in Berlin, which has already been well advertised, attracted considerable attention. It is a strange coincidence that while the women were passing resolutions in favor of coeducation and higher education for girls, a book dealing with women should be published by Prof. Möblus of Leipzig, one of the most eminent German physiologists. This book is entitled "The Physiological Feeble-Mindedness of Women." Women, according to the professor, occupy a position midway between men and children. Their intelligence is receptive rather than creative, imitative rather than original. The professor declares that women have not advanced the intellectual life of mankind a single step. Even in their own branches, such as cooking, tailoring and education, the discoverers of new methods are always men. He points out that the increasing intellectualism among women is dangerous, and tends to bring on sickness, barrenness, and blunting of the instinct.

The Fourteenth International Medical Congress.—The general committee of organization of the Fourteenth International Congress of Medicine, to be held in Madrid, April 23 to 30, 1903, decided at a meeting October 15, 1901, that the second section (otology, rhinology, and laryngology) be divided into two sections, IIa., otology, and IIb., rhinolaryngology. Each subsection is to have its own officers. It was announced that the sixteenth section (medical jurisprudence) be called the section upon medical jurisprudence and toxicology.

A Polyclinic in Paris.—A number of former dispensary chiefs have decided to found a polyclinic in Paris. They intend copying those of Vienna, Berlin, and the United States. No physician who has not already been chief of a dispensary will be admitted to the teaching staff of this institution.

Pasteur Institute, Constantinople.—Dr. Paul Remlinger has been appointed director of the Pasteur Institute in Constantinople, in the place of Dr. Nicolle, who returns to the Paris Pasteur Institute.

Norway, Ireland and Spain have more blind people in proportion to population than any other European countries. Spain has 216 per 100,000; Norway 208, and Ireland 111.

Dysentery.—The epidemic of dysentery which has affected so many people last year in the department of Finistère, France, has reappeared in Carhaix, Gléden-Po-

her, Kergloff and other cities. Pupils in boarding schools seem most affected and several deaths have occurred.

Suicides in France are decreasing, though perhaps not as fast as is the population. In 1894 there were 9,703 suicides, and in 1898, 9,438. Illness, poverty, drunkenness, family trouble, love and jealousy were the causes, in the order named.

Professors Agree.—The cancer investigations made by Professor Roswell Park, of the University of Buffalo, have given results in every way identical with those secured by Professor Maximilian Schüller, of the Berlin University, although the investigations were made independently of each other.

Antityphoid Serum.—It is announced that Dr. Chantemesse, of the Pasteur Institute of Paris, has discovered an anti-typhoid serum which has invariably reduced the mortality in desperate cases. The serum also cures albuminuria.

A New Cure for Leprosy.—A simple treatment for leprosy has been advised by a Paris physician, Dr. Toffrin. He has already effected a wonderful cure in a patient suffering from gangrene. To stop fresh decomposition he used permanganate of potassium in solution, twenty grammes to a quart of water, washed and cleansed the sores with this solution, applied compresses saturated with it for a whole day, and on the second day he was able to take off part of the decomposed flesh by the aid of bread crumbs soaked in the solution. By continuing the application of compresses he removed all the dead flesh in a few days, which, owing to the permanganate's decomposing action, came off readily. Then the sores began to heal quickly. He is confident that leprosy will yield to the same form of treatment with the permanganate solution made stronger. As soon as a case of leprosy becomes manifest through small shiny spots on the skin one must wash the affected parts with the solution and apply compresses. If scales begin to appear over the spots they are to be cleaned with bread crumbs soaked in the solution to take away the scales, and one must go to the quick if necessary.

Biological Research in Northern Waters.—A Copenhagen dispatch to the *Morning Leader* says that Dr. Nansen, the Arctic explorer, is negotiating concerning the proposed institution of a great biological research expedition in Northern waters; Norway, Sweden, Denmark, England, Holland, Russia and Germany are to take part in it.

The Plague in Turkey.—Two cases of bubonic plague are reported from Constantinople.

University Notes.—**Rostock:** Dr. Theodore Thierfelder, professor of medicine, has been retired, and Dr. Martius has been appointed director of the medical clinic in his place.—**Vienna:** Professor Josef Englisch, director of the First Surgical Division in the Rudolf Spital, has been retired.—**Bremen:** Dr. Tjaden has just been appointed director of the Bacteriological Institute.—**Freiburg:** Dr. Thomas, director of the medical clinic, celebrated the anniversary of his twenty-five years' professorship on October 31.—**Giessen:** Dr. Leutert, of Königsberg, has been appointed professor of otology and director of the clinic, replacing the late Professor Steinbrügge.—**Christiania:** Dr. H. A. Schiötz has been appointed professor of ophthalmology.—**Ghent:** Drs. Van Duyse, Gilson and Van der Schricht have been made professors.—**Liege:** Dr. P. Smyers has been appointed professor of medicine.

Obituary: In Stettin, on October 28th, Professor Karl Schuchardt, director of the General Hospital Dispensary, died after an operation. A pupil of Volkmann's, he had lived in Stettin since 1889.—Dr. Arthur König, professor of physiological optics and director of the Physiological Institute in the University of Berlin, died recently, aged 46 years.—At Prague, on October 28th, Dr. Alois Kaulich died, aged 62 years. He was formerly assistant in several departments of the Prague General Hospital. The death of Dr. Wilhelm Strasser is also reported.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

November 2, 1901.

1. Two Lectures on Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. FELIX SEMON.
2. A Remarkable Case of Aortic Aneurysm, etc. T. R. C. WHIPHAM.
3. A Case of Ulcerative Endocarditis, with Recovery. H. E. WHITEHEAD and H. W. SYERS.
4. Remarks on a Case of Infantile Scurvy. JOHN McCAW.
5. Contract Practice and Its Difficulties. ARTHUR E. LARKING.
6. Preliminary General Education of Medical Students. W. GORDON.
7. A Discussion on the Relation of Gonorrhea to Disease of the Eye. J. B. LAWFORD, R. J. HAMILTON, R. A. YELD, A. DARIER, H. POWER, F. R. CROSS, E. F. DRAKE-BROCKMAN, S. STEPHENSON, C. D. MARSHALL, L. V. CARGILL and G. W. ROLL.
8. On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work. GUSTAVUS HARTRIDGE.
9. Recent Therapeutic Discoveries in Ophthalmology. A. DARIER.
10. Remarks on Suprarenal Gland in Ophthalmology. JOHN A. BOWER.
11. A Note upon General Tuberculosis of the Choroid. GEORGE CARPENTER and SYDNEY STEPHENSON.
12. The Varieties and Treatment of "After Cataract." F. R. CROSS.
13. The Workmen's Compensation Act and the Testing of Workmen's Eyesight. HUGH E. JONES.

1.—Semon's lecture on local treatment in diseases of the upper air passages is a protest against unnecessary operative measures. He points out that in the treatment of diphtheria local have been victoriously superseded by general measures. The symptoms and objective manifestations arising in pathological conditions of the upper air passages may be subdivided into (1) affections of a purely local character; (2) local manifestations of general or systemic diseases; (3) local manifestations in the nose and throat dependent upon local diseases in correlated areas; (4) affections of the upper air passages, supposed to exercise a direct or a reflex influence upon other organs and parts of the body; and (5) local symptoms and sensations of obscure origin. If a disease of the upper air passages be purely local, causing considerable local discomfort or serious disturbance of the general health and amenable to local treatment, such should be adopted. Foreign bodies ought never to be allowed to remain impacted and energetic local interference is always indicated in the early stages of malignant disease of the larynx. In all purely local affections of the upper air passages there are certain cases in which all reasonable men will agree that local treatment is required, and others in which it is not. [J. M. S.]

2.—Whipham reports the case of a man who had a rheumatic family history. He had no history pointing to syphilis. In 1884, the patient began to suffer from an incessant cough and indefinite thoracic pains, accompanied by loss of flesh. In April, 1886, he first noticed a swelling on the right side of the sternum, after having had anginal pains for two months previously. The tumor was expansile, but no bruit was heard over it, though one was present in the right subclavian and carotid arteries. The aortic second sound was accentuated. The voice was hoarse, the cough suggestive of pressure and there was inspiratory stridor. The patient declined distal ligature and was treated with potassium iodide and morphine. The fluid part of the diet was restricted to a pint in the 24 hours. The tumor began to decrease in size steadily under this treatment and seemed to consolidate. The patient was kept in bed for 8 months, at the end of which

time the pulsating area had greatly lessened. He was discharged in January, 1887. A year later he returned to work, and followed his employment with intervals of rest until the early part of 1892, when he took cold and began to notice shooting pains in the neck and left arm, and a rapid bulging of the aneurysm at the site of the episternal notch. His condition was regarded as imminently serious. The iodide treatment was resumed, the pressure symptoms gradually became less marked, and in three weeks the man was able to take solid food. In 1895 he had an attack of pleurisy and pneumonia, and was in the hospital for a period of six months. From this time the aneurysm became markedly worse. In February, 1897, an increase in the size of the tumor was noticed, but after five months rest he was discharged improved. Oozing was first observed in August, 1899. In February, 1901, the aneurysm had increased in size and anginal pains had been severe. The temperature soon became irregular and the patient had much pain in the neck with occasional hemoptysis. After a month the temperature subsided to normal; the aneurysm became more conical in shape, and the leakage of blood, which had ceased, recommenced. On April 9 the patient had a rigor, and 60 hours later a large conical mass of laminated fibrin, the whole of the superficial part of the aneurysm, became detached, leaving a considerable cavity in the chest in which no definite pulsation could be seen. There was only slight leakage, and the patient continued fairly comfortable with the exception of pain for about nine days. The aneurysm then suddenly burst externally, and the man died in about a quarter of an hour. At the necropsy the whole of the ascending and transverse portions of the arch of the aorta were found to be greatly dilated and very atheromatous. A sacculated aneurysm projected from the upper and anterior aspects of the arch. The trachea was eroded about $\frac{3}{4}$ of an inch above its bifurcation, and the lung showed signs of bronchitis. The heart was slightly dilated, but not obviously hypertrophied, the aortic valves alone being a little thickened. The remarkable points about the case are: (1) the length of time, 15 years, during which the patient was known to have had an aneurysm; (2) the frequent and at times rapid variation in the size of the aneurysm; (3) the marked benefit that accrued from prolonged periods of complete rest and treatment; (4) the recovery from an intercurrent attack of pleurisy and pneumonia; (5) the fact that the entire external portion of the aneurysm sloughed and came away, after which the patient lived for nearly nine days; (6) the termination by rupture externally. [J. M. S.]

3.—Whitehead and Syers report the case of a man, aged 35 years, who complained of *carache*. Three days later he suffered from attacks of shivering, and at the same time it was noticed that his urine was dark and thick. On microscopic examination it was found to contain a granular detritus, but no complete bloodcorpuscles. The temperature was 102°, and a distinct systolic murmur was audible over the aortic area. A week later, rigors set in and the temperature presented the most characteristic features of septicemia. During the attack the patient had parotid inflammation, pleural effusion and pleuropericardial frictions. Expectoration ceased somewhat suddenly and the temperature fell and remained normal. On examination a loud systolic murmur was heard in the aortic area and there was dulness and diminished entry of air over the base of the left lung. The treatment was with salines, quinine, strychnine, iron and sodium sulphocarbolate in 15-grain doses every four hours. The latter drug was continued until the patient became convalescent. A diagnosis of *ulcerative endocarditis* was made. [J. M. S.]

4.—McCaw reports a case of *infantile scurvy* in a baby aged 10 months. A week before he was first seen the child suffered from a mild gastric attack during which he vomited a considerable quantity of blood, and this was followed almost immediately by copious, loose motion, which was undoubtedly composed largely of altered blood. The child had been fed from birth upon condensed milk, and later, upon a proprietary food and oat flour; it had never been given any fresh milk or other food of an antiscorbutic kind whatever. Treatment consisted of one

teaspoonful of orange juice every two hours, whey and cream at frequent intervals, and in small quantities; with one teaspoonful of raw meat juice every 4 hours, and an icebag was applied to the epigastrium for half an hour. Eight days afterward arsenic and iron were given, a small quantity of scraped potato or other fresh vegetable was added to the diet and the child was taken to the seaside. He made a satisfactory recovery. [J. M. S.]

8.—Gustavus Hartridge calls attention to the disadvantages and limitations which accompany the employment of *nitrate of silver* in diseases of the eye. These are the pain and irritation, the caustic effect of silver, and the staining of the conjunctiva which may ensue after long continued application of the drug, finally the superficial action of the nitrate of silver on account of the facilities with which it is precipitated by albumin and chloride. In discussing the comparative value of the various preparations of silver in ophthalmic practice, the author alludes separately to the following compounds that have been supplied by manufacturing chemists: Actol, itrol, argonine, argentamine, nargol, largin and protargol. [M.R.D.]

11.—The authors state that the results of their observations oppose the current idea which is prevalent among ophthalmic surgeons that *tubercle of the choroid* is a rare condition and almost confined to cases of acute military tuberculosis, but that on the contrary in their experience it may be met with in any form of tuberculosis, although by far more common in the acute variety. In 42 unselected cases of acute military tuberculosis and tuberculous meningitis they found the choroid affected in one half of the cases. In 119 cases of chronic tuberculosis examined ophthalmoscopically, choroidal changes were found in eleven. In 18 instances there were choroidal lesions in patients with quiescent tuberculosis. There are several varieties of tuberculosis of the choroid as manifested ophthalmoscopically, and the knowledge of this fact is *absolutely essential* at the outset of the examination. Thus in acute military tuberculosis, generally but one eye is affected, and generally confined in that eye to the central region of the fundus, and is seen as an oval round grayish or fawn colored spot. The aggregation and proliferation of the pigment epithelium of the retina give rise to the formation of a darker narrow zone around the edge of this spot. In chronic cases, on the other hand, the lesion may be single, multiple, disseminated or diffuse. [M.R.D.]

12.—F. Richardson Cross believes that, whatever the nature or variety of an *after cataract*, it can be assumed to be due to faulty operative technique or to imperfect healing. In regard to the question as to whether any special precautions can be taken at the time of extracting the lens in order to avoid the subsequent obscuration of vision due to the after cataract, he offers the following suggestion: rapid healing is facilitated by a peripheral corneal section or a peripheral conjunctival flap, both of these lessening the likelihood of adhesions between the cornea and lens capsule. He advocates a free laceration in the performance of the capsulotomy for the purpose of leaving a large opening, but calls attention to the care that must be exercised not to dislocate the lens or damage the hyaloid membrane. When a distinct capsular membrane co-exists with a lenticular cataract, it should be removed with the latter. Furthermore it is of the greatest importance to thoroughly remove the remnants of cortex which remain after operation. He does not favor early secondary operations and rarely operates at an interval less than three months between the original cataract extraction and operation for secondary cataract. While the primary object of a secondary operation is to provide an aperture sufficient for good vision, at the same operation nevertheless the correction of anatomical defects such as synechiae and the tendencies to glaucoma are to be carefully looked into, avoiding as much as possible damage to the surrounding tissues. There are cases where the secondary membrane cannot be effectually removed or disturbed by means of the discission needle or even the knife. In such cases capsular or iridotomy scissors must be employed. Extraction of the capsule by means of forceps should be our last resource. [M. R. D.]

LANCET.

November 2, 1901.

1. A Lecture on Metallic Poisoning. W. R. GOWERS.
2. Introductory Address on Human and Bovine Tuberculosis. EDGAR M. CROOKSHANK.
3. Presidential Address on Ventilation. (Abstract of paper.) H. WYNTER BLYTH.
4. Milk or Whey in Enteric Fever. PRIDEAUX SELBY.
5. Advances in the Treatment of Diseases of the Nose. H. LAMBERT LACK.
6. The Removal of Superfluous Hair by a Combination of X-Ray Exposure and Electrolysis. DAVID WALSH.
7. A Case of Septicemic Plague in a European. J. M. ATKINSON.

1.—Gowers delivered a lecture on metallic poisoning at the National Hospital for the Paralyzed and Epileptic, Queen Square, W. C., on October 22, 1901. In this address he points out the difficulty of recognizing some cases of lead poisoning; describes the chief symptoms of this condition and arsenical poisoning. He presented a case of lead poisoning which showed a great variety of symptoms and he emphasizes the importance of not overlooking the cause in consequence of the equivocal character of the effects. In chronic cases the symptoms largely depend on the manner in which the poison acts and on personal predisposition. He had observed the following symptoms: Peripheral neuritis; slow chronic atrophy of the muscles, wrist-drop, sclerosis of the cord, optic nerve atrophy, tremor, chronic convulsions not unlike epilepsy; hysteria with its various manifestations in predisposed subjects; neuralgia; headache and general nerve weakness. He remarks that all of these symptoms do not suggest the cause unless the occurrence of other associated cases of lead poisoning, or the occupation of the patient or the presence of the great sign, the lead line on the gum, is inquired into. Occasionally the lead line is absent in cases of lead poisoning, and not infrequently it exists upon the gums in a fragmented form so that only two or three isolated spots are to be seen. With regard to arsenical poisoning, he points out that the skin lesions, particularly the pigmentation induced by this drug, are of great importance in the diagnosis. [F. J. K.]

2.—Crookshank delivered an introductory address on "human and bovine tuberculosis, at the Royal Veterinary College, Camden Town, on October 1, 1901. The author makes a plea for higher education in Veterinary Science and clearly shows that there is a demand for well trained Veterinary Surgeons. He does not accept the theory that abdominal tuberculosis in children is due to infection from tuberculous milk and believes that the advocates of this opinion set aside the view that infection is possible from human sources, such as self-infection from a concurrent disease of the lungs or from infection by the mouth with bacilli from human sources. He does not believe that there is any great danger of infection from tuberculous meat and cannot recall a single recorded instance. He remarks that the Jews have a very thorough system of meat inspection, but they are by no means free from tuberculosis. The Hindoos who eat sparingly of meat and who live for the most part in small and badly ventilated buildings, are particularly liable to tuberculosis. He concludes that the destruction of every animal with tuberculous deposits would almost involve the ruin of the agricultural industry. If a carcass is well nourished, the meat is perfectly wholesome in spite of local deposits of tubercle in organs and glands which should of course be condemned. Eradication of tuberculosis in cattle should be looked upon as a special duty for the Veterinary Surgeon to undertake and one to which they must direct all their energies. [F. J. K.]

3.—This is an abstract of an address on ventilation delivered at the annual meeting of the Incorporated Society of Medical Officers of Health by A. Wynter Blyth. In this abstract there is discussed mainly the necessity of using mechanical ventilation especially by electric fans in the ventilation of sewers, dwelling houses, work-places, and mines. [F. J. K.]

4.—Selby believes that whey is a food possessing distinct advantages over milk in the treatment of enteric

fever cases. He remarks that milk curd is apt to give rise to pain, intestinal hemorrhages, perforation, and death, through their mechanical effects, and that milk acts as an excellent culture media for the bacillus typhosus. In this article there is included a table showing the details of 75 cases of enteric fever in which the patients were fed on whey. With this treatment the mortality has been decidedly decreased. The following formula for the preparation of whey is given: "To two quarts of milk stir in two table-spoonsful of rennet. Put into a pan, warm slowly until it curdles. This takes about 20 minutes. Break up the curd and stir the whole through fine muslin, the curd is thus separated from the whey." If required, cream may be added to the whey, and in summer whey can be sterilized. By the addition of tea, coffee, or other flavoring substance, it may be made more palatable. The following table, which is included in the article, represents the results of an analysis of whey and milk expressed in percentages:

	Whey.	Milk.
Total solids	7.4	12.43
Lactose	4.9	4.9
Fat	1.2	3.4
Albuminoids	0.8	3.3
Mineral matters	0.49	0.73

In conclusion, the author makes an urgent plea for the adoption of this treatment and that the results of such trials should be published. [F. J. K.]

6.—Walsh writes on the removal of superfluous hairs by combination of the X-rays and electrolysis. The author has found the following method useful: "Exposure to the focus is made in the ordinary way and a week or ten days later when the hair becomes loose, each hair is abstracted and the electrolysis needle is passed into the follicle." This method requires a large number of electrolytic punctures and a considerable amount of time is required to complete the operation. At times a second exposure of the focus-tube is needed in order to loosen the hair.

[F. J. K.]

7.—Atkinson reports a case of septicemic plague in a European boy, aged 11 years who was admitted to the Government Civil Hospital, Hong Kong, September 11, 1901, with the following symptoms: He complained of pain in the abdomen particularly in the iliac fossa, the tongue was coated and the temperature was 102.4°F. On the following day the pain still persisted and the patient was very drowsy. A papular rash developed on the 11th, which was confined to the face, neck, and chest. Delirium and tympanites set in. On the 12th there was vomiting of bile-stained fluid tinged with blood. On the 13th, the urine was albuminous and its specific gravity 1030. Death occurred on the 14th. Necropsy revealed enlarged glands which were full of plague bacilli. The author remarks that this case developed after the epidemic had practically ceased for some weeks. [F. J. K.]

MEDICAL NEWS.

November 16, 1901. (Vol. LXXIX, No. 20).

1. The Making of a Modern Medical School: A Sketch of Rush Medical College. JOHN EDWIN RHODES.
2. On the Nature of the Process of Fertilization. WILLIAM J. GIES.
3. Infantile Pleurisy with Effusion. W. T. ENGLISH.
4. Tendon and Muscle Transference and Arthrodesis in Infantile Paralysis. E. H. BRADFORD.
5. The Management of Acute Gonorrhea. LOUIS BROTER.

1.—J. E. Rhodes, in his Sketch of Rush Medical College describes the Quarterly System which has been in vogue since December, 1898, in that college, as follows: The year is divided into quarterly divisions, instruction being given throughout the entire year. This permits the student to enter any time during the year at the beginning of a quarter and graduate at the end of any quarter when all the requirements are fulfilled. The number of months attendance required is forty-five. Instruction in all depart-

ments continues throughout each quarter, or in special cases for a single term, that is, half of a quarter. The advantages are numerous: (1) the expensive equipment is in use the entire year; (2) a student may begin his studies at the beginning of any quarter; (3) special course students may avail themselves of the summer quarter, and this season appeals strongly to the practitioner; (4) students who are paying their way can study during the summer and earn money in the winter (5) more abundant clinical material; (6) it stimulates all members of the faculty to do their very best work; (7) it favors the conservation of courses; (7) it lends itself admirably to the systematizing and grading of courses. [T. M. T.]

2.—W. J. Gies, in his paper on the nature and process of fertilization gives a few of the important experimental results: (1) extracts of the spermatozoa of the sea-urchin, which have been made by the ordinary methods for the preparation of enzyme solutions, do not possess any power of causing proliferation on the ripe ovum; (2) no evidence could be furnished of the existence of a zymogen in spermatozoa; (3) extracts of fertilized eggs, in the earlier stages of development, were likewise entirely devoid of segmental activity; (4) enzyme seems to be excluded from the catalytic substances which Loeb and others have thought may influence the initial divisions of the ovum after the introduction of the spermatozoon, although it is possible that the conditions of these and previous experiments were unfavorable to the manifestation of activity on the part of fecundative ferment. It seems more probable, however, that Loeb's theory of the influence of spermatic ions in fertilization affords the true explanation of the phenomena in question. [T. M. T.]

3.—W. T. English states that the disease most commonly confounded with infantile pleurisy with effusion is pneumonia. In examining a case of this kind it will be found that a history of chilliness, if any, will range from slight chill to severe rigor. The fever is irregular and intermittent and the chart shows extensive excursions and even suggests septic processes. Pain cannot be definitely located. In inspection loss of mobility is the same as in pneumonia. Flattening of the intercostals or distension is observed in few cases, but flattening is rarely perceptible and fluid sufficient to cause bulging does not often accumulate in the infant thorax. Displaced heart beat is seldom seen, but when seen is important, especially in left-sided effusion. Vocal fremitus is generally absent. Nervous symptoms are quite marked and in purulent effusions have been those of meningitis. In percussion a subtympantic note can be elicited over the thorax of the child. Immediately over, as well as around the fluid in the pleura, a clear note may be secured. Flatness belongs to a massive effusion and the tone elicited is a compromise between the tympanic and the dull note. Aspiration is advised when fluid is suspected, and evacuation of serous fluid should leave no bad results. The pressure of pus requires immediate evacuation and this can only be done by drainage, although resection may be required. As to treatment, the use of strychnine, iron, arsenic, etc., with plenty of fresh air is advised. The most important is the after treatment and should include pulmonary gymnastics with light exercises, especially for the side that was effected. [T. M. T.]

4.—E. H. Bradford reports three cases illustrating three methods of treatment: (1) medicinal; (2) muscular and tendon transference; (3) stiffening of the joint. The author calls attention to the value of tendon and muscular transference and arthrodesis in many cases of poliomyelitis and says it is frequently the case that some muscles remain which are not paralyzed, and these are generally the sartorius, the adductor group and the hamstrings. The transference of the sartorius to the rectus can be done without difficulty. The obstacle met is usually the abnormal position of the sartorius, which is often nearer the hamstring at its lower attachment. A curved incision at the lower end of the femoral will expose the attachment of these muscles, which should be entirely freed, brought up and transplanted into the firm sheath of the extensor cruris. Where the sartorius is

found to be weaker, the outer hamstring or adductor can be detached and brought forward and inserted on the outer side into the fascia and tendon of the extensor cruris. If the adductor jump is completely paralyzed, it is a more serious condition. It is a question whether the transference of the glutei can supplement the weakened adductors, but this is possible as is also the shortening of the paralyzed adductors that they may act as a cord to check extreme abduction. In paralytic disabilities of the knee, arthrodesis is a method only to be resorted to in cases where no mechanical treatment is possible. In the paralysis of the muscles controlling the feet the combined employment of arthrodesis and tendon transference is of great value. [T. M. T.]

5.—L. Broter divides the treatment of gonorrhea into (1) abortive; (2) local; (3) constitutional. The abortive treatment finds no favor in the author's eyes. He believes it does more harm than good. In the local treatment he finds irrigation the best method. The standard solution of potassium permanganate, 1-4000 to a quart of water with a temperature of 100°F. is advised. This is placed in the percolator. It will be found after a while that the strength and the temperature of the solution can be increased. When using the irrigation method chordee has been absent, no complications have arisen and the duration has been shortened. In the constitutional treatment alkalies and diuretics are employed to keep urine unirritating. For the first two weeks a pill may be given of the following: methylene blue, grain one; boric acid, grains five, one pill three times a day. After two weeks oleum santali, balsam copaibae, etc., in capsules. [T.M.T.]

MEDICAL RECORD.

November 16, 1901.

1. Pathology and Treatment of Migraine.
WM. H. THOMSON.
2. The Present Position of Ophthalmic Science and Art.
D. B. ST. JOHN ROOSA.
3. The Official Relation of the Medical Profession to Private Charitable Institutions.
ENOCH V. STODDARD.
4. Nasal Obstruction and Ear Disease.
A. C. BARDES.
5. Butyric and Acetic Acids in the Contents of the Stomach, and Tests for their Detection.
MARK I. KNAPP.
6. Gangrene Following the Use of Carbolic Acid.
JOHN GLENDON SHELTON.
7. Food as an Etiological Factor in Disease.
GEORGIA MERRIMAN.

1.—W. H. Thomson presents a paper on the pathology and treatment of migraine. As to the etiology of the condition, the predominance of purely nervous symptoms is cited in favor of migraine being due to a specific derangement of the nervous system. The undoubted fact that migraine is more distinctly hereditary than any other nervous disease, or, in fact, than almost any disease, is brought forward to show that it is caused by an original constitutional defect in the nerve nutrition. Not unfrequently in the course of years the patient's general health becomes deteriorated, and there is emaciation and anemia. The writer believes that this state will be present as long as the conception of the disease being a neurosis is held by the physician. He believes that the proper conception of the disease must take into consideration a great class difference and the sufferers from the condition, which is as unmistakable as it is significant, viz., the physical habits of life or those physical habits which most affect the portal circulation. He believes that the condition is due to chronic portal stasis; that many of the poisonous properties of the products of imperfect digestion are exclusively nerve poisons, and that one of the great functions of the liver is to neutralize gastro-intestinal nerve poisons, so that when its functions are experimentally interfered with, prompt poisoning with distinctively nervous symptoms follows. As to treatment. First, prophylaxis is of the most importance. All severe cases, without exception, are chronic dyspeptics, and of this one of the commonest symptoms is chronic constipation followed by an intestinal anti-

septic. He believes that prophylaxis is the main indication in the treatment of this complaint, but that for the attacks themselves the fluid extract of ergot given in drachm doses with a drachm of elix. cinchona in water, by the stomach or rectum, is the most certain agent to cut the attack short. The patient should lie perfectly still after taking it until all pain passes off. In some cases the dose may be repeated after two or three hours. In those who cannot take the ergot without vomiting, the writer relies on ten grains of lactophenin with two grains of caffeine citrate, repeated every two hours until relief occurs; or fifteen grains of antipyrin, always taken with a teaspoonful of aromatic spirits of ammonia. [T. L. C.]

2.—D. B. St. John Itoosa contributes a paper on the present position of ophthalmic science and art. He reviews the contributions of many ophthalmologists to their specialty including the introductions of the ophthalmoscope and the ophthalmometer. He believes that a great advance has been made in the treatment of myopia of high degrees by the invention of the method of lessening the refraction of the eye by the removal of the lens. He devotes considerable space to the subject of strabismus, in the treatment of which, he believes, advance has been slow. He states that the mistaken conclusions of Dieffenbach, who first proposed operative means for the relief of strabismus about fifty-five years ago, led to sanguine hopes which could not be realized, for the deformity was supposed to depend upon something morbid in the muscle. This, at the most, we now know to be a spastic condition, while the origin of strabismus, as Donders endeavored to show, is found in fixed condition of the eyeball. The writer discusses the operative measures employed in the treatment of senile cataract, the various operations of iridectomy, and the use of the magnet in the removal of foreign bodies from the eye. The treatment of acute glaucoma, and detachment of the retina are also briefly discussed. [T. L. C.]

3.—E. V. Stoddard treats of the official relation of the medical profession to private charitable institutions. The object of this article is to call the attention of the profession to the responsibility of medical officers in order to establish the well-adjusted systems of education and training for those institutions which have for their inmates the young and adolescent. He believes that the suggestion should come from the medical profession connected with such institutions as to the best methods of educating the defective and delinquent in them. [T. L. C.]

4.—A. C. Bardes presents an article upon nasal obstruction and ear disease. Nasal obstruction may exert its pernicious influence upon the ear in one or more of the following ways: By the extension of a catarrhal or other inflammatory affection along the tubes, or by the actual passage of disease germs. It may cause a swelling of the walls of the tubes or may obstruct their orifices. It may interfere with the action of the tubal muscles, or may impede the venous return from the middle ear, or by the passage into the ear of inflammatory or septic matter by means of the blood or lymph vessels. This paper goes over the well beaten ground of the symptoms and complication of adenoids and deviation of the septum. This writer believes that the use of nasal sprays, douches, and washes is to be deprecated, on account of the fact that they irritate and inflame the delicate nasal membrane. The restoration of the diseased ear, by the proper treatment, is brought about in one of the following ways. Removal of cause, cleanliness of the parts, astringents, and constitutional treatment. Those cases of ear disease that are benefited by tubal inflation are usually assisted by a nasal operation; in the others the infirmity is certainly retarded, and increasing deafness prevented. [T. L. C.]

5.—M. I. Knapp contributes a paper upon butyric and acetic acids in the contents of the stomach and tests for their detection. He states that the present method to prove the presence of these acids in the chyme is by the very cumbersome process of distillation. The test which he describes requires but one glass apparatus, a separatory funnel, and a small amount of time suffices to perform it. The reagents necessary are: A ten per cent. solution of ferric perchloride and ether. The test is made in the same way as described in his test for lactic acid (See *New York Medical Journal*, August 10, 1901), only the color of the ring at the line of junction, between the ether and the iron solution differs—the color of the ring in the lactic

acid test is sulphur yellow, the color of the ring in butyric acid is a reddish-orange color. The method of procedure is as follows: One c.c. of the filtered gastric contents is extracted with about 5 c.c. of ether in a glass separatory funnel. The ether with the filtered chyme is shaken up a few times, and then allowed to stand for a short while to allow the ether to separate from the underlying stratum. In the meanwhile, a solution of the iron is made in the following way: One drop of a ten per cent. solution of iron perchloride is dropped into two c.c. of distilled water in a narrow test tube. Now, the lower stratum in the separatory funnel is allowed to escape by opening the stop-cock and the remaining clear ether is floated on the clear iron solution. At the line of junction of the two clear fluids an orange-colored ring appears if it is butyric acid, and a rather rusty-colored ring if it is acetic acid. A few drops of alcohol will increase the intensity of the color of the ring. To differentiate between the two—butyric and acetic—acids, a little more alcohol is added, the finger placed on the test tube, and the test tube shaken a few times by inverting it. If it is butyric acid, the ether layer will be colored a beautiful orange; but if it is acetic acid, the ether layer remains clear. Acetone and aldehyde respond to the same method of testing, but the color of the ring formed is different. Acetone and aldehyde give a light ochre-yellow color, shading somewhat into a light green. The ring in aldehyde is very distinct, the line between it and the other being very sharp, looking almost black; acetone gives the same color, but is not so distinctly and sharply marked off. A sheet of white paper held back of the test tube, our back turned to the source of light, will make us better appreciate the colors.

[T. L. C.]

6.—John G. Sheldon reports a case of gangrene following the use of carbolic acid. The patient entered the hospital complaining that his foot was very painful and felt cold and dead. A few days previously, he noticed a sore on one of his right toes. A physician gave him a dilute solution of carbolic acid with instructions to use it on the affected member. While preparing to follow directions, he accidentally spilled some of the carbolic acid solution on his left foot. This frightened him, and he neglected to apply any of the medicine to his right foot. All went well for five days, and then the left foot began to feel numb. This numbness increased, and on the eighth day the foot had become numb and painful. The left toes and foot presented the appearance of dry gangrene, and no definite line of demarcation could be made out. Amputation was performed at the middle of the leg. The gangrene extended, being now of the moist type, and in two days reached the knee. Sixty hours after the first operation was performed, a second amputation was done at the junction of the middle with the upper third of the thigh. From this recovery followed. The general condition of the patient previous to his first operation was good. The heart and blood vessels were normal. Urinalysis was negative, no sugar and no albumin being found after repeated examinations.

[T. L. C.]

7.—Georgia Merriman contributes a brief paper upon food as an etiological factor in disease. He believes that the proper digestion and ingestion of food contributes the most important field of therapy now known. He emphasizes the importance of supplying a written dietary, being most exact as to the quantity of food which the patient should take. He believes that the study of digestion and the food value of articles of diet are most important, and that correct dietarys for the brain-worker, the manual laborer, and the average citizen in good health, have been carefully estimated by Government experts, and that physicians should be familiar with the general scope of these studies. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

November 16, 1901. (Vol. LXXIV, No. 20.)

1. An X-Ray Stethoscope. LOUIS A. WEIGEL.
2. On a Case of Sarcoma Treated by the Röntgen Rays. CARL BECK.
2. Devitalized Air Toxemia, a Prime Cause of Tubercuosis. CHARLES DENISON.
4. The Lane Lectures on the Social Aspects of Dermatology. MALCOLM MORRIS.

5. Pyopericarditis. HERBERT O. COLLINS.

6. The Daily Medical Inspection of Schools.

D. S. LAMB.

2. C. Beck gives the following in treating a case of sarcoma by Roentgen Rays. He began to irradiate the defect left after the last extirpation. The first exposure was ten, the following twenty and thirty, increasing to forty-five minutes. With the longest exposure the patient felt an itching sensation over the whole area, lasting for several hours. In the case reported irradiation was done seven times. Up to six weeks there was no trace of relapse, but a number of metastatic nodules on the calf, especially those near the area of irradiation have disappeared, while others have shrunk. [T. M. T.]

3.—C. Denison, in his article on devitalized air toxemia as a cause of tuberculosis gives the meaning of the above as follows: That tuberculosis mainly springs from, and must be the outgrowth of, a common predisposing or uniform cause, which will account for its finding a congenital "soil" in birds, cattle, horses and other animals as well as in man. The author also says that the first thing to do is to make a most thorough and searching investigation to determine the amount per head of air and ventilation needed in order that the predisposition to tuberculosis may be prevented. [T. M. T.]

5.—H. O. Collins gives three indications for opening the pericardial sac: (1) When the sac is distended with a large exudate which shows no tendency to absorb; (2) when there is an intense dyspnea; (3) when the exudate is known to be purulent and the liability of absorption is so small that it need hardly be considered, and prompt measures are necessary. There are four different methods of operation (a) aspiration; (b) simple puncture; (c) incision through an intercostal space; (d) incision with the resection of one or more ribs and thorough drainage. The last procedure is recommended on account of the fairly clear view of the field and thus avoiding injury to the cardiac walls, besides obtaining a more thorough drainage. [T. M. T.]

6.—Will be abstracted when concluded.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 14, 1901.

1. Medico-Legal Examination of Blood Stains.

EDWARD S. WOOD.

2. The Correction of Old Lateral Displacements of the Nasal Bones. J. L. GOODALE.

3. Cleft Palate. J. S. STONE.

1.—One of the most important parts of the medicolegal examination of blood stains is the preliminary examination, which consists of a very careful observation of the gross appearance of the stains. This includes the color of the stain, its exact form, and whether it is completely or only partially dry. After examining each stain carefully with the naked eye, it should then be examined with a magnifying glass to detect foreign matters mixed with the blood. Foreign substances that are liable to be of importance in medicolegal cases are pieces of hair coming from the victim, or a cloth fibre, which may throw light upon the nature of the body from which the blood came, or particles of tissue, such as adipose muscle fibre, or pieces of bone with the muscular attachment. In cases in which the body of the victim has been sufficiently mutilated by a club or hatchet to separate portions of these tissues. The great value of the gualacum test is as a preliminary one. It is easily performed, and gives a marked reaction quickly. If we obtain a negative result we may be sure that the stain tested does not contain any blood. If the result of the gualacum test is positive, the hemin test may be employed. There are many agencies that will decompose normal blood pigment to such an extent as to prevent this reaction. The sodium tungstate test is of great value in cases of washed blood stains, or in cases in which it is necessary to test a liquid for blood. The spectroscopic test requires a considerable volume of blood, and the only practical instrument for use in medicolegal examinations is the spectroscopic eyepiece, which can be set into the tube of a microscope. This instrument is sometimes called the microspectroscope. All of the tests and methods mentioned above enable us to state only whether or not

blood of some kind is present. They give us no information, however, as to the kind of blood. In order to determine the kind of blood, we must resort to a microscopic examination of the blood status, so that we may see the form and the size of the blood cells. To distinguish between human blood and the blood of other mammals the only method used until recently has been by measuring the diameter of the red blood cells by using a micrometer eyepiece. The agglutination test has been recently proposed. The principle upon which this test depends lies in the fact that, if a clear human blood serum is treated with a dilute solution of animal blood, no precipitate or cloudiness occurs, but the mixture remains perfectly clear. Any of the domestic animals may be humanized, but a rabbit is usually selected. The blood of this animal is humanized by injecting into the peritoneal cavity or blood vessels about 10 cc. of human blood or human blood serum, 5 or 6 times, at intervals. If a little of the clear blood serum of the humanized animal be treated with a solution of human blood, a precipitate will be formed. It is found that this test is just as applicable to a dried stain as it is to fresh blood. It is necessary to make a solution of the dried blood in sterilized normal salt solution. [J. M. S.]

2.—Goodale describes a method for the correction of the old lateral displacements of the nasal bone. [J. M. S.]

3.—Stone publishes a series of pictures of frozen sections of 2 cases of cleft palate in children. Both children died within the first few days of life. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 16, 1901.

1. The Value of Throat Cultures in Diphtheria.

M. H. FUSSELL.

2. Total Retroflexion of the Iris. ALVIN A. HUBBELL.

3. Tarsadenitis Meibomica. M. F. WEYMANN.

4. Suggestions for Lessening the Frequency of Relapses after Treatment of Morphinism. A. J. PRESSEY.

5. Injuries Feigned and Real, with their Differentiation and Medicolegal Aspect. LAMBERT OTT.

6. Samuel Fuller—Pilgrim, Doctor and Deacon.

I. N. DANFORTH.

7. Enforcement of Medical Laws Dependent on an Organized Profession. T. J. HAPPEL.

8. Difficulties met with in Enforcing State Medical Laws. BEVERLY D. HARISON.

9. Medical Practice Acts in the United States and Canada.

1. See Philadelphia Medical Journal, June 15, 1901, page 1126. [F. J. K.]

2. See Philadelphia Medical Journal, June 15, 1901, page 1139. [F. J. K.]

3. See Philadelphia Medical Journal, June 15, 1901, page 1139. [F. J. K.]

4. See Philadelphia Medical Journal, June 15, 1901, page 1143. [F. J. K.]

5.—Lambert Ott discusses feigned and real injuries from a medicolegal standpoint. He divides injuries generally into those presenting visible signs and symptoms and those with invisible symptoms and considers the various means of differentiating between real and feigned pain. Mannkopf's sign, which consists in observing the pulse before, after and during pressure upon an area alleged to be painful, Ott does not consider of much value, depending more upon the changes which result from long continued pain in the part. He shows the effect of suggestion by either lawyer or doctor in the production of traumatic neuroses. It is suggested that patients be examined repeatedly or at least more than once, before the expert gives testimony regarding the condition present, and that careful notes should be kept of the condition from the time of the accident. Ott recommends that in the settlement of damage suits the liability of the defendant should be decided by a lay jury and that the question of the degree and nature of the injury and its probably permanent influence on the future life of the injured should be submitted to a body of physicians who shall also decide upon the amount to be paid the plaintiff. [J. H. G.]

6.—Danforth gives an account of the life of Samuel

Fuller, Pilgrim, Doctor and Deacon, who was amongst the 11st of the Mayflower passengers and who was the earliest practitioner of medicine in Massachusetts. This article gives a most interesting account of the life of Dr. Fuller. [F. J. K.]

7.—Happel writes on the enforcement of medical laws dependent on an organized profession. He states that there are men who know practically nothing about the laws in certain States which regulate the practice of medicine, and some of the best men of the profession are of the opinion that medical legislation should be opposed, believing that every man should be allowed to be a practitioner of medicine regardless of qualifications. Other medical men hold the view that the possession of a diploma from a medical college in so-called good standing, is proof that the holder is qualified for his work. The author remarks that they are some of the obstacles that interfere with the enforcement of medical laws. He further states that it is self-evident that medical laws can only be enforced through and by the concerted effort of the medical profession. The establishment of well organized county medical societies he regards as one of the best ways in which to accomplish this object. Not only should medical men attend to the duties of their profession, but they should also be model citizens and take an active part in the every day affairs of life and should be the leading citizens of their respective communities. The author also mentions that "the step taken by the American Medical Association in adopting the report of the Reorganization Committee and accepting the new Constitution and By-Laws by that committee will prove to be of incalculable advantage to the medical profession of this country, if the State societies reorganize in accordance with the suggestion of this report." Happel believes that in order to be a member of the State society in good standing, a physician should be a member of a well organized county society. Enforcement of medical laws will become easy when the profession is well organized. [F. J. K.]

8.—Harrison discusses the difficulties encountered in enforcing State medical laws. He writes that it is the duty of the prosecuting or district attorney to enforce State laws including medical laws. But while many of them endeavor conscientiously to enforce what they consider necessary laws, still when it comes to enforcing laws which in their judgment are unimportant and unpopular, they refuse or neglect to employ the necessary legal machinery at their disposal. Much good could be done toward remedying the difficulties met with at the present time in enforcing medical and other important acts by frequent and rigid inspection of the prosecuting or district attorney's department by the attorney general's department. The ignorance of the physicians and citizens generally relative to the duties of the prosecuting or district attorney are also responsible for the non-enforcement of some laws. The article is concluded with a résumé of the laws regulating the practice of medicine in the various States and Territories of the United States. [F. J. K.]

AMERICAN MEDICINE.

November 16, 1901.

1. Infection in a General Surgical Sense.

D. N. EISENDRATH.

2. The Bacteriology of Otitis Media, etc. (Concluded.)

JOHN FUNKE.

3. The Vexed Questions of Vaccination, etc.

CHARLES GOOD.

4. Granular Lips. J. C. HUIZINGA.

5. A Case of Lupus Vulgaris. P. R. EGAN.

6. When should the Oculist be Consulted?

FRED. B. LEWIS.

1.—D. N. Eisendrath discusses infection in a general surgical sense. He states that the most frequent forms of surgical infection in man are produced by the pyogenic organisms. He discusses the types of suppuration to which the groups give rise. The surgical anatomy, in so far that it influences the spread of a suppurative process, is described.

His chief object in the presentation of the paper is to emphasize the necessity of the treatment, and a more thorough treatment of infection as soon as it is recognized. He states that ample incisions and counterincisions to lay bare every portion of the infected area, and to relieve the collateral edema. 2. General anesthesia and a bloodless method of operating are advised whenever possible. 3. The disinfection of an infected wound with strong antiseptics is of little avail, and may do great harm. 4. We should place most dependence upon free drainage and moist dressings, with the use of mild antiseptics. No powder should be used until granulation is well established. 5. Absolute rest and elevation of the infected area is demanded. 6. After treatment by secondary suture and early active and passive motion; and 7, general treatment by strychnin, whiskey and attention to the excretory organs should be employed.

[T. L. C.]

2.—John Funke concludes his exhaustive paper on the bacteriology of otitis media. This summary records the laboratory study of 76 cases. There is no specific organism of otitis media, and the disease is not invariably monomicrobic. The author believes that in a definite otitis due to influenza, the bacillus of this disease becomes quickly associated with, or replaced by other organisms. The bacillus of diphtheria is more commonly present in otorrhea than is generally believed. It may be the initial infecting agent or secondary infection. The importance of its relation and frequent association with the pseudodiphtheriae bacillus is a factor not yet fully determined. The streptococcal infections are more grave and persist longer than the pure pneumococcal infections, and both are usually supplanted by staphylococci sooner or later. The chronic suppurative otitis media is always a sequence of the acute, and like the acute possesses no specific organism, and is practically always polymicrobic. The author concedes that anaerobic organisms play an important part in the causation of chronic suppurative otitis media, but have not established their almost constant presence as maintained by Rist. He explains the fetor met in certain cases reported in this communication by assuming the presence of bacillus pyogenes foetidus without anaerobic organisms. The existence of primary tuberculous otitis is generally conceded, but all observers are of one mind as to the almost utter impossibility of routine demonstration of the bacillus in the discharge. The writer advises the examination of tissue obtained by the curette in suspected cases for the demonstration of the tubercle bacillus. [T. L. C.]

3.—Charles Good presents a paper devoted to the vexed question of vaccination, and the best method of securing immunity from smallpox. The writer has taken the pains to reply to a paper dealing with the so-called failure of glycerinated lymph, and he believes that in view of the differences of opinion that prevailed among medical men, and because of the want of knowledge on certain points, it would be well if Congress would appoint a commission to take evidence and deliberate upon this subject. He believes that the following questions might suggest themselves: 1. Does one attack of smallpox give absolute immunity? If not, for what time is immunity accorded? 2. How soon after an attack of smallpox can vaccine vesicles be produced by careful vaccination with a good virus? 3. Should a person be considered not immune if, having had an efficient vaccination some few years before, a revaccination produces vaccinal possibilities? 4. The importance of carrying out control tests with one species of virus from four to six weeks after the original vaccine had apparently taken. 4. What kind of lymph is it most safe to rely upon, and what is the most approved technique? [T. L. C.]

5.—P. R. Egan reports a case of lupus vulgaris. A photograph of the case is presented, showing its ravages during 15 years. The cartilages of the nose had been completely destroyed. From the nose the disease had extended to the upper and lower lips as far out as the left angle of the mouth, and then over the face and down to the lower border

of the inferior maxilla. From the angle of the jaw it rose upward to the outer corner of the right eye and just the least trifle above the eyebrow at that point. From the nose one point extended to the left cheek but practically the disease was confined to the right side of the face. The treatment included the removal of the crusts by forceps and bathing. Sulphur and glycerin were rubbed up to the consistency of a cream and applied to the abraded parts. This was also painted over the exterior of the nostril and back part of the pharynx, after the turbinated bones, which were loose, had been removed. Tonics were given internally, and all preparations of opium were immediately discontinued. After a week there was no more pain nor evidence of extension of the disease, and in three months the health was restored. The writer states that the drug used by him in this case does nothing more than excite a mild degree of local inflammation, but he believes it is quite as effective as more irritant remedies. It neither increased scarring nor destruction of tissue, and must have been curative by means of the local inflammation it produced. [T. L. C.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

October, 1901.

1. On the Clinical Aspects of the Plague. L. BARKER.
2. The Pathology of the Bubonic Plague. S. FLEXNER.
3. The Bacteriology of the Bubonic Plague. F. NOVY.
4. A Case of Malarial Nephritis With Massing of Parasites in the Kidney. J. EWING.
5. Influenza as a Casual Factor in Acute Mastoiditis, and the Early Treatment. J. M'CAW.
6. A Method for the Differential Modification of the Proteids in Percentage Milk Mixtures. T. WESTCOTT.

1.—Barker gives some notes on the clinical aspect of the plague as seen during the recent epidemic in San Francisco. In six cases the disease was observed by the Commission. The epidemics progressed very slightly, and he ascribes this to the fact that there appears to have been no general infection of the rats. In fact dead rats and living rats caught in the sewers of the Chinese quarter showed no evidence of infection. The epidemic lasted about a year, and altogether 31 deaths were reported. It was difficult to determine the total number of cases, because so many of the patients were concealed by their friends. The type of disease was bubonic, and in the majority of cases the inguinal glands enlarged rather than the axillary or cervical glands. He reports two cases of this condition, one of which is remarkable on account of the excessive hemorrhagic diathesis that accompanied the infection. He also reports a case in which the primary buboes were found among the cervical glands; a case of plague septicaemia; and he mentions a case of plague pneumonia. Regarding the existence of pestis minor in San Francisco many local physicians stated that they had observed glandular swellings among the Chinese that resembled the glandular swellings of the plague, and that this mild form had existed for many years. The Commission apparently did not do any bacteriological work for the purpose of elucidating this subject. Diagnosis is perhaps the most important thing in meeting an epidemic of this disease, and it should be made certainly in the first case observed. If a case is seen alive, the best method is to extract some of the substance of an enlarged gland with a hypodermic syringe, and to make cultures and inoculations from it. In a dead case the morbid anatomy is usually quite characteristic, but cultures and inoculations from the tissues should also be made. Barker does not believe that the serum reaction is of any value, because it does not appear early enough to enable us to diagnose cases during the acute stage. Certain forms are more difficult to diagnose; the cutaneous form of plague can readily be confused with anthrax infection, and the septicemic form can only be recognized during life by cultures from the blood. The treatment consists in the administration of the Yersin-Roux serum if the disease has

developed and Haffkine's inoculation as a prophylactic. [J. S.]

2.—Flexner, under considerable difficulties, has made post-mortem examinations upon six cases of bubonic plague. The chief results were enlargement of the glands; considerable enlargement of the spleen; edema surrounding the glandular structures; and in one case marked enlargement of the tonsils. Films were made from the involved tissues, and the characteristic bacilli usually obtained. Inoculations in all cases were positive. Microscopically the glands of the second order showed partial involvement of the lymph sinuses, no necrosis; a certain amount of fibrin scattered throughout the glandular tissue; and evidence of leukocytosis in the blood vessels. The plague bacillus was usually found in the lymph spaces. The glands of the first order differ chiefly in the fact that there is often considerable necrosis, and that the histological changes are more pronounced. In the diseased tonsil the changes resembled those in the glands of the first order, but in addition there were numerous cells resembling Unna's plasma cells. The hemo-lymph glands were enlarged apparently due to distension of the blood vessels. There was considerable necrosis of the nuclei and the bacilli were found in considerable numbers. The spleen was enlarged; the tissue was proliferated, and there was a considerable number of cells resembling Unna's plasma cells. The blood vessels showed sometimes hyaline degeneration of the wall, and sometimes proliferation of the cells beneath the intima. Experimental inoculations produced the following results. The animals usually died in from two to eight days. Sometimes, especially in the more rapid cases, the changes resembled those of bacteremia and in other cases there was focal disease of the internal organs. The local lesions were necrosis, pus formation, and edema. The spleen and liver were enlarged, and when death had been delayed, the latter organ showed focal necrosis. The lungs sometimes contained small nodules. Hemorrhages were usually found in the serous membranes. Histologically, focal necroses were found scattered throughout all the tissues; the lymph glands showed changes somewhat resembling those in human beings, and in the spleen there was proliferation of the pulp and occasionally nodules. In the liver focal necroses also occurred, giving rise to various types of necrotic change. The lungs also contained nodules which were frequently filled with bacilli. The adrenal glands showed extensive hemorrhage. Two rats were examined, one found dead and the other dying in captivity, and both were negative. [J. S.]

3.—Novy describes the bacteriological features of the plague, and calls attention to certain important points in the culture of this organism. All the media must be slightly alkaline; large amounts of material must be used for making growths or inoculations; the most satisfactory staining features are best obtained if the specimen is heated very carefully. The virulence of the cultures changes very rapidly, and often inoculation experiments are negative. He reports a very interesting case of accidental laboratory infection that occurred in Michigan. A man had been employed for some time in preparing Haffkine's vaccine, and in some way introduced the organism into his mouth. The symptoms commenced with intense headache, fever and vomiting, and then severe headache. On account of the work with which he was occupied, it was decided to give him an injection of anti-pest serum. The same day he coughed up a small quantity of blood-stained sputum which contained plague bacilli. He was therefore isolated, and the anti-pest serum given intravenously on account of the obvious severity of the infection. In 24 hours after the diagnosis had been suspected he received 120 ccm. of serum, one half of which was given intravenously. A few hours after the last injection the temperature dropped to 100°, and on the third day had reached normal. He made a complete recovery although weakness of the heart persisted for more than two months after the onset of the disease. [J. S.]

4.—Ewing reports the following case. A girl of 17 had

been ill for some time; finally she had chills and fever, and was brought to the hospital, when it was noticed that the area of splenic dullness was enlarged; there was slight edema of the legs, and 2% of albumin in the urine. The temperature remained high; the diazo reaction was marked, and tentative diagnosis of typhoid fever was made, although it does not appear that the Widal reaction was tested. At the autopsy the spleen was enlarged; the kidneys were much enlarged, and the cortex was pale and the medulla dark. A diagnosis was therefore made of acute hemorrhagic nephritis. The kidneys were examined microscopically and huge numbers of pigmented malarial parasites found in the renal tubules, and in a superficial infarct in the cortex of the kidney numerous parasites were also found. The other organs unfortunately were thrown away. On account of the absence of congestion in the other organs Ewing believes that the parasites chiefly involve the kidney, and therefore that the case is one of true malarial nephritis. The degeneration in the cells of the tubules is rather peculiar. It is possible that in such a case the diagnosis might be made by the discovery in the urine of red cells containing parasites. The changes found in the kidneys in malignant cases of malaria are an acute degeneration of toxic origin; acute degeneration with focal necrosis; numerous hemorrhages, the exudation of blood serum and blood pigment; the massing of parasites in the renal capillaries; multiple hemorrhages and exudations of blood serum into the tubules. [J. S.]

5.—McCaw calls attention to the fact that in acute disease of the middle ear due to the influenza bacillus the characteristics are those of severe inflammation in tissues of low vitality. Incision usually fails to relieve the symptoms, and as a general rule the mastoid is very rarely involved. He believes influenza responsible for more cases of acute infection than scarlatina, measles, or diphtheria. The treatment must of course be varied with the case. He has attained his best results by rest in bed, catharsis, leeching, and hot douching of the canal every two hours. When suppuration is present, he incises the drum membrane early, using the hot douche every two hours, and if in the course of 36 to 48 hours the symptoms have not ameliorated, he operates. In doubtful cases an exploratory operation may be first employed. [J. S.]

6.—Westcott calls attention to the difficulty of modifying cows' milk so that it becomes suitable for young children, on account of the fact that it contains more caseinogen and less lactalbumen than human milk. Therefore all modifications of milk which consider only the total proteids are more or less inefficient. He therefore suggests the employment of whey as an additional element in the modification of milk, because it contains about 1% of proteids other than caseinogen. He suggests a formula to be used in the modification of milk, which is too complicated for a brief abstract, but which enables the physician to determine the exact amount of whey, cream, milk, water and normal sugar to be introduced into any mixture for the purpose of securing exactly the proportion that he may desire. A number of illustrative examples are added. It has been found that in young infants the proportion of proteids that they will digest is frequently insufficient to nourish them. Westcott therefore advises that in these cases the preparation be partially peptonized, as it is found that by this method they can assimilate larger quantities of proteids. The mixtures are best prepared in the laboratory, but can be very satisfactorily prepared at home with two quart jars of milk per day. One of these jars is used for the purpose of obtaining cream and subsequently whey, the former being obtained by allowing the jar to stand in ice or in ice and salt for several hours, and the latter, by adding to the skim milk essence of pepsin or rennet. The milk is then brought to 100° F. until coagulated and then placed in the refrigerators for some hours. The whey is then extracted by drainage, heated to 150° and mixed in the proportion that has been determined by the formula.

He warns practitioners that all the difficulties of infant feeding will not be overcome by the employment of modified milk. [J. S.]

UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN.

October, 1901.

1. Early Infantile Inguinal Hernia of the Vermiform Appendix. GEORGE A. PIERSON.
2. The Conservation or Preservation of the Ovaries and Functionating Uterine Tissue in the Operation of Hystero-Myomectomy. HENRY D. BEYEA.
3. A Review of Some Recent Literature on the Etiology of Carcinoma. ALOYSIUS O. J. KELLY.
4. Appendicitis in Children of Two Years and Under. J. P. CROZER GRIFFITH.
5. A Series of Twelve Articles on Medical Men Prominent in the Civil and Military Affairs of Revolutionary Times. FRANCIS R. PACKARD.

1.—George A. Piersol discusses early infantile inguinal hernia of the vermiform appendix. About one hundred and twenty-five herniae of the vermiform appendix have been recorded since Morgagni noted this condition. Piersol describes a case recently examined. A colored infant about three months old presented the following conditions: The cecum, of the typical form, occupied a position considerably lower than usual in the right iliac fossa. It narrowed to an apex continued into the appendix. The latter, somewhat stretched, descended to the groin and disappeared in a peritoneal sac leading into the scrotum. On opening the sac the appendix presented the peculiarities of position and course which are illustrated in the paper by drawing. About 40 mm. from its commencement the tube formed a conspicuous S-like flexure, following the slightly curved terminal portion. The entire length of the appendix was 84 mm., or about two and one-half times longer than at birth. The hernial sac, the dilated and thickened upper portion of the processus vaginalis, loosely enclosed the appendix and extended a little more than half way to the bottom of the scrotum. Its lower end lay in intimate relation with the sac of the tunica vaginalis investing the testicle, which, with the epididymis occupied an anomalous position, the lower pole being displaced upwards and mesially, so that the long axis of the testicle was horizontal, and the globus major lay laterally and below. The investment of the testicle by the tunica vaginalis was somewhat less complete than usual, or as it was on the opposite side, the displaced inferior pole of the organ being closely bound to the sac by an uncommonly conspicuous scrotal ligament—the remains of the gubernaculum. The conditions presented by this specimen suggest two points: (1) the probable cause of the attachment to the appendix to and its presence within the hernial sac, and (2) the cause of the secondary upward displacement of the appendix and testicle. The descent of the testicle is described by Piersol, as well as the cause of the condition presented in this case. The unusual size of the appendix and its circumscribed attachment to the wall of the sac, as well as the marked thickening of the latter, will warrant the conclusion that the adhesion of the appendix has been in this case the result of an early inflammatory process, and not of persistent fetal attachments. [T. L. C.]

2.—Henry D. Beyea contributes a paper on the conservation or preservation of the ovaries and functionating uterine tissue in the operation of hystero-myomectomy. The two operative methods which are now advised and practiced for the removal of myomata of the uterus through an abdominal incision are hystero-myomectomy and myomectomy. The selection of either the one or the other of these operations is dependent upon the extent of pathological destruction of the uterus by the tumor and the presence or absence of the tubes and ovaries. Myomectomy is applicable only to isolated pedunculated tumors, and some isolated sessile, interstitial or broad ligament growths so disposed, that they can be readily excised or shelled out of their bed without undue injury or loss of uterine tissue. The tubes and ovaries must be normal. All myomata not coming within this class are removed by hystero-myomectomy,—in which operation the uterine body to the internal os, or with a portion of the cervix, and both tubes and ovaries are excised. Beyea states that about a year ago it occurred to him that there must exist

a class of myomata of the uterus in which the actively conservative operation of myomectomy could not be performed, the destruction of tissue by the tumor was too great, and the actively radical operation of hysteromyomectomy, as it is now performed, removed functioning uterine tissue and normal tubes and ovaries. The first of that class to which he refers is that which destroys the upper three-fourths, two-thirds or less of the uterine body and the tubes and ovaries to either side are normal. The method of operation which suggested itself to him was to leave both tubes and ovaries intact, both ovaries or one ovary, depending upon the pathological condition of these tissues, and to amputate the uterus at the highest possible point, so that a portion of the uterine body lined with corporeal endometrium, even though it be small in amount, would be left in the stump. A case is reported in which this operation was practiced, and was eminently successful, the patient menstruating regularly every twenty-eight days since the operation was performed. Beyea's search of the literature fails to find the report of a similar conservative operation. Three cases were found operated upon by Zweifel, in which more or less menstruation occurred after myomectomy. These cases, says Beyea, are probably to be accounted for that accidentally a portion of functioning uterine tissue was left in the uterine stump. Beyea discusses the value to a woman of ovulation and menstruation in the absence of all possibility of conception, and the problem as to the frequency of which pathological changes may develop in such ovaries left in position. He also takes up the question, if secondary atrophic changes take place in the ovaries, when a portion of the functioning uterine tissue is left in the stump, resulting in the menopause, and making the conservative treatment of no avail, as well as the question as to whether such ovaries will produce molar menstruation, dysmenorrhea, necessitating a second operation. In conclusion Beyea states that he believes this operation can be associated with no greater danger to life than the usual hysteromyomectomy, and that there seems to be no cause for complicating sequelae, because its object is the preservation of normal tissue, organs and functions, and through these good health. These are important factors as well as the point that it should be limited to women under 40 years of age, and to the special class of myoma described. [T. L. C.]

3.—A. O. J. Kelly presents a review on some recent literature on the **etiology of carcinoma**. This paper deals at length with several questions of interest. First—the increasing prevalence of carcinoma, as well as the geologic, hydrographic, mineral, vegetable and animal factors, in so far as they may have a bearing upon the etiology. The local distribution of cancer and cancer houses are mentioned, and finally, a critical summary is given of the recent literature upon the etiology of carcinoma. A valuable bibliography accompanies the article. [T. L. C.]

4.—J. P. C. Griffith reports a case of **appendicitis occurring in an infant of three months**. The child suffered at first with diarrhea, with mucus in the stools. The day after this condition developed, fecal movements ceased, although some blood is said to have been passed on the same evening. Vomiting began at the same time. Nothing at all had passed from the bowels for three days previous to the admission to the hospital. The symptoms on admission were those that suggested an intestinal obstruction, and with this condition in view, large enemata were ordered, but only a small quantity of mucus, with reddish-stained fecal matter, was obtained. The day after this the child vomited a slight amount of greenish material, and died a short time afterwards. The temperature while in the hospital ranged from 102° to 105.5°, generally being over 103°. The autopsy performed by Dr. Alfred Hand, Jr., revealed the cause of death in this case to have been appendicitis, and the notes of the autopsy are given. Griffith states that he has seen two cases of children four and four and a half years, respectively, and recently a child of three years, suffering from the same condition. The relative frequency of appendicitis at different ages in children is shown by a résumé of the literature which accompanies the article. Of nine of the fifteen cases given, the appendix was found to be perforated; in four cases the appendix had descended into the scrotum; nine cases were operated upon with seven re-

coveries, and in two cases the disease had been diagnosed as Intussusception. [T. L. C.]

5.—Dr. Francis R. Packard, continuing his series of articles on medical men, prominent in the Civil and Military affairs of Revolutionary times, gives a sketch of **Dr. Edward Hand**, Surgeon and Major-General, and **Dr. William Irvine**, Surgeon and Brigadier-General. [T. L. C.]

VRATCH.

August 4, 1901. (Vol. XXII, No. 31.)

1. **Pentose in the Animal organism and the Origin of Pentosuria.** N. P. KRAFKOFF.

1.—Kraffkoff found that if a piece of rabbit's muscle be boiled with hydrochloric acid in the presence of a small amount of phloroglucin, a characteristic **pentose reaction at once appears**. This suggested to him the idea of looking for pentose in the muscles and organs of animals, with the view of establishing the distribution and fate of that carbohydrate in the animal economy. He isolated the pentose by the following method: Pieces of meat were minced in an ordinary meat grinder and freed from the soluble carbohydrates, such as glycogen, glucose, etc., by soaking in cold water and then boiling several times until the washings no longer gave the reactions of glycogen or glucose. It was then boiled in a porcelain dish on the naked flame with 1-2% hydrochloric acid for ½ hour. When cooled, the liquid was filtered and the **pentose separated in the form of osazone**. This was accomplished by first neutralizing the liquid and then acidifying with a little acetic acid; the resulting sediment was then filtered off and phenylhydrazin dissolved in acetic acid added to the filtrate. The liquid was heated in a water-bath for one hour. Upon cooling, a heavy yellow precipitate of osazone formed. This was purified by repeated crystallization, washed with water, alcohol and ether and dried in the dessicator. The elementary composition of this substance was found allied to that of pentose, and the author, therefore, considers the two practically identical. Pentose thus isolated or merely detected by qualitative tests was found in the **muscles, heart, liver, intestines, kidneys, brain, bones, crystalline lens and pancreas**. The muscles were found to contain proportionately more pentose than any other structure. It is thus evident that the organism is richly supplied with pentose, and the conclusion is justifiable that **pentosuria bears the same relation to metabolism as does glycosuria**. The opinion is expressed that, with our increasing knowledge of the newer animal carbohydrates, other forms of glycosuria will eventually be discovered. Taking into consideration the close chemical relationship between glycuronic acid and pentose, it is reasonable to suppose that **both are produced by the tissues, especially the muscles**. From the fact that the appearance of glycuronic acid may be due to various poisons, the author concludes that pentosuria may be of similar origin. The poisons may be of vegetable or microbial origin, or may be formed in the body itself (leukomaines). For this reason pentosuria is generally observed in morphine habitués or persons suffering from chronic poisoning, under which conditions glycuronic acid is also found. Considering pentosuria as a form of glycosuria, the author attributes certain cases of glycosuria to the influence of poisons or toxins. [A. R.]

August 11, 1901. (Vol. XXII, No. 32.)

1. **Inflammation of the Spine and Large Joints, Accompanied by Ankylosis (spondylose rhizomelique).** L. M. PUSSEP.
 2. **The Application of the Mathematical Theory of Probabilities to the Question of the Infectiousness of Eclampsia.** G. V. KOLOSOFF.
 3. **The Serotoxins and Their Application to Distinguish Human Blood from that of Other Animals.** V. I. NEDRIAGALLOFF.
 4. **Report of the Siberian Eye Commission Sent by the Committee Connected with the Siberian Railway.** P. V. PUTIATIKERSHBAUMER.
- 1.—Will be abstracted when concluded.
3.—Nedriagalloff gives a brief résumé of the work done by others and himself on **hemolysis**. He considers the

hemolysin identical with the cytotoxins of Metchnikoff and therefore proposes the term *serotoxin*, instead of "coagulin" of Uhlenhuth or the "antiserum" of Stern. He concludes with the following statements: (1) By the aid of serotoxins human blood can be distinguished from that of animals or birds; (2) the serotoxins make it possible to discover the slightest traces of the corresponding blood; (3) the albumin of the albuminous urine in man is identical with that of the blood; (4) the study is undoubtedly of scientific as well as practical importance. [A. R.]

4.—Puttlitz-Kerschbaumer reports the work done by the commission sent into the region of the Trans-Siberian Railway, with a view of rendering aid to those suffering from eye-diseases. Data and tables are given which are of interest only to Russians. The following statistics, however, are of general interest. Of the 21,762 cases treated 16.1% were due to diseases of the mucous membranes and the eyelids, 38.4% to trachoma and its complications, 15.2% to disease of the cornea, and the others were distributed among the various affections of the visual organs. As causes of incurable blindness trachoma and its complications figured in 15.6% of the cases (1137), glaucoma in 14.5%, gonorrhea of the new-born in 3.3%, gonorrhea of adults in 0.1%, injuries and unsuccessful operations in 4.3%, sympathetic affections in 1.8%, diseases of the vascular system in 2.8%, diseases of the retina in 3%, diseases of the lachrymal apparatus in 0.6%, abnormal development in 0.6%, smallpox in 18.5%, other acute general diseases in 3.1%, syphilis in 4.3%, other chronic general diseases in 3.6%, diseases of the brain, cord and optic nerve in 12.5%, unknown causes in 11.3%. [A. R.]

August 18, 1901. (Vol. XXII, No. 33).

1. The Limitation of Röntgenoscopy in the Diagnosis and Treatment of Fractures. G. I. TURNER.
2. Inflammation of the Spine and Large Joints, Accompanied by Ankylosis (spondylose rhizomelique). L. M. PUSSEP.
3. The Treatment of Lupus with Blue Electric Light. A. V. MININ.
4. The Medical Report of the St. Petersburg City Maternity, for 1900. E. L. PUSHKINA.

1.—Turner describes two cases of fractures, showing the material aid to be derived from the Roentgen rays in judging of the condition and progress of a given case. However, experience is necessary to avoid erroneous conclusions. With regard to the final results of the treatment the evidences furnished by the skiagraph should be considered with care and circumspection. [A. R.]

2.—Pussep, from a perusal of the literature and a study of a case under his care, reaches the following conclusions: (1) There are two clinical forms of immobility of the spine: (1) the form described by Bechtereff or Kyphosehredo traumatica, and (2) the form of Struempell-Marie, accompanied by inflammation and ankylosis of the vertebra and large joints, spondylose rhizomelique or the spondylitis deformans of the older writers. (2) The case reported belongs to the second form with the rare peculiarity of a downward extension of the process. (3) The origin of spondylose rhizomelique is up to the present not established, but in all probability is of an infectious nature. (4) Spondylose rhizomelique fully resembles the form of disease which was described by the older writers under spondylitis deformans. [A. R.]

3.—Minin claims that better results in the treatment of lupus can be obtained with blue light from a 50 candle power lamp than by the use of the costly and cumbersome apparatus of Finsen. The following rules should be observed: (a) the lamp should be held in such a position that the rays of light fall at a right angle; (b) the distance should be about 16 inches; (c) the illumination should be performed daily for 10 to 15 minutes or every other day for 25 to 30 minutes; (d) if considerable itching occurs, the patient should be given a rest for two days; (e) in some cases warm compresses of 1% solution of boric acid diluted with an equal quantity of alcohol may be applied over night and borated vaselin during the day; (f) the skin should be washed with pure alcohol, but if the latter causes pain it should be diluted with boric acid solution (1%). It is well to remember that tubercular syph-

lides also yield to this treatment. The following very interesting case is reported: A man, 38 years old, developed some 3½ years back a redness of the end of the nose and a few pimples on the upper lip, which soon transformed into small tubercles. The condition was at first diagnosed as acne or syphilis, it was then treated as syphilis and finally diagnosed as lupus. Israel of Berlin employed Koch's tuberculin at first as a means of diagnosis, and when a positive reaction was obtained, as treatment. This, however, proved a failure. Unfavorable results were also obtained with hot air. Lassar employed resorcin in combination with the hot air treatment and succeeded in making the condition worse. Finsen employed electric light and sun light with some slight improvement following the 230 applications. When the patient came to the author, his upper lip presented the form of a large, smooth, solid, red mass, drawn up close to the ulcerated end of the nose, which was drawn towards the left. The lower lip was thickened and drawn down, thus exposing a set of almost black teeth implanted in ulcerated gums. The left cheek was infiltrated, the mouth and throat ulcerated, rendering the opening of the mouth and deglutition extremely difficult. Two weeks treatment with blue electric light in twelve sittings brought a remarkable change in the condition of the patient. After the second sitting deglutition became free and painless and the ulcers commenced to cicatrize. After the fourth sitting the lower lip became normal, and the upper after the eleventh. While the patient is not entirely well, yet the improvement was so marked and rapid as to justify the author in reporting this case. [A. R.]

4.—Will be abstracted when concluded.

REVUE DE MEDECINE.

July, 1901. (21me. Année, No. 7.)

1. Acroparesthesia, Tetany, Gouty Swelling. E. BRISSAUD and P. LONDE.
2. Study of Primary Carcinoma of the Bile Passages, Hepatic Duct, Cystic Duct, Common Bile Duct. DEVIC and L. GALLAVARDIN.
3. Experimental Studies on Intrapleural Pressure in Pneumothorax. L. BARD.
4. Clinical Study of Some Infectious Diseases Seen at the Isolation Hospital of the *Porte d'Aubervilliers* during 1900. H. ROGER.
5. Anguish as a Nervous Disease. P. HARTENBERG.
6. Note on the Determination of the Different Principal Sugars which May Exist in Diabetic Urine. R. LEPINE and BOULUD.

1. Brissaud and Londe report the case of a man, aged 47, who was suffering from an edematous swelling of the fingers of both hands. The swelling was accompanied by loss of power and was the sequel of an attack of pain with contracture which occurred about one week before the patient was first seen. The attack commenced as a sensation of needle punctures in all the fingers except one and this sensation became increasingly painful. The area concerned in the disease pulsed, the skin was reddened and the hand was held in a position of tetany. Later, the contractures became generalized and the patient began to sweat. After lasting for a certain time, the contractures diminished, but a second paroxysm began before the first one was completely terminated; this was followed by a third and this last attack was terminated by a profuse sweat. During the third attack, the patient was nearly suffocated from spasm of the larynx. Within about 3 weeks, the patient's hands became useless. He was gouty and neuropathic, but without renal disease and with but slight arteriosclerosis, although at one time there was a transitory albuminuria. The affection from which he suffered was characterized by a syndrome more or less periodic which presented the following features: paresthesia, pain and contractures, loss of power, vasomotor difficulties with vasodilation, vascular erethism and edema. The attacks resembling acroparesthesia, tetany and erythromelalgia, but were quite distinct from Raynaud's disease. The authors consider the disease a synthesis of the conditions named. The disease was considered to have a gouty origin on account of the white line seen between the ends of the

phalanges in a skiagraph of the hands and the appearance of Heberden's nodosities. In the treatment of the condition the alkalies, colchicum, applications of moist heat and washes of chloral and potassium bromide were employed. [J. M. S.]

2.—Will be abstracted when finished.

3.—Bard's paper on the intrapleural pressure in pneumothorax, which began in June is concluded in this number. From his study the author draws the following conclusions: (1) On account of the anatomical structure of the lung, the various kinds and the most extensive wounds of its parenchyma are only permeable to gas and liquids in the bronchopleural sense. Severe and extensive lesions of the organ or absolute obstacles to the retraction of the tissues such as are seen in partial pneumothorax, allow the passage of gas or fluid in the pleurotracheal sense only. (2) In generalized pneumothorax, when the fistula is not obliterated, the pressure of the gas is positive in both stages of respiration, when the breathing is quiet. This positive pressure results from the spontaneous tendency to equilibrium between the intrabronchial and intrapleural gas by the regular play of respiration without cough playing any part in its production. The so-called valvular pneumothorax is the normal form of generalized pneumothorax, open internally. Cough and muscular exertion act upon intrapleural pressure more energetically than upon intrabronchial pressure; so that they serve to compress the lung, to produce atelectasis and to compress the mediastinum, but they do not cause the air to enter the pleura through the wound in the lung. The degree of positive intrapleural pressure is a little raised and remains nearly constant in the same patient, presenting respiratory oscillations of some centimetres around a mean of 6 or 8 cm. of water. (3) The degree of this pressure is, if not equal to the pulmonary elasticity, at least in relation with it and determined by it. This elasticity, which in combination with the action of the thoracic walls, creates in the pleural cavity a negative pressure when the lung is intact, produces, on the other hand, in pneumothorax with a persistent pulmonary wound a positive pressure by the fact of its direct transmission across the fistula. (5) The positive intrapleural pressure in pneumothorax is a phenomenon of adaption and of pathological compensation, which serves to obliterate a fistula. This positive pressure ought not to be destroyed when it has been established and, in the stage of initial suffocation, means should be adopted to hasten its appearance. (5) The mensuration of the pressure of the intrapleural gas is an essential element in the diagnosis of the varieties of pneumothorax, principally of the appreciation of the existence, the persistence or the obliteration of a pulmonary fistula. The mean pressure does not furnish exact information for this diagnosis, on the contrary, it is necessary to study the extreme pressure: pressure is positive during both stages of respiration in generalized pneumothorax with persistent fistula; it is positive during expiration and negative during inspiration in partial pneumothorax with open fistula; it is negative during both stages of respiration in generalized pneumothorax when there is no fistula or after the obliteration of a fistula. [J. M. S.]

4.—Roger continues his observations concerning infectious diseases at the isolation hospital of the *Porte d'Auberbilliers*. In one case of diphtheria death was due to associated acute tuberculosis. There were 57 cases of mumps. In nearly half the adult male patients suffering from this disease there was metastasis to the testicle. There were 29 cases of gastroenteritis, which the author classifies with the infectious diseases. [J. M. S.]

5.—Will be abstracted when finished.

6.—In addition to glucose, maltose and the pentoses are found in diabetic urine. In estimating the total quantity of sugar in a diabetic urine errors will occur if only one method is employed. In order to overcome such a difficulty Lépine and Boudin advise the clinician to employ the polarimeter, Fehling's solution and the fermentation test to each specimen. [J. M. S.]

August, 1901. ((21 mo. Année, No. 10).)

1. Adiposis Dolorosa, Syndrome of Dercum.

CIL. FERE.

2. A Case of Peripheral Neuritis of Malarial Origin.

BUSQUET.

3. Study of Primary Carcinoma of the Bile Passages, Hepatic Duct, Cystic Duct, Common Bile Duct.

DEVIC and L. GALLAVARDIN.

4. Anguish as a Nervous Disease.

P. HARTENBERG.

1.—In painful adiposis the fat forms masses that are generally symmetrical and which are found on the trunk and on the limbs, leaving the head, the hands and the feet uninvolved. The fatty masses often present an unequal consistency. The disease occurs in 2 forms; the diffuse and the disseminated. Féré reports the histories of 4 patients, one of whom was a male. [J. M. S.]

2.—Busquet reports the case of a soldier, aged 24 years, who complained of loss of power in his arms and legs. The patient had been invalided to France from Madagascar on account of dysentery and a bilious attack. He had had malaria at the age of 15 years, which persisted for 8 months. During the passage from Madagascar to France the patient complained of pains in hands and feet with loss of power. This was followed by violent headache, vomiting, swelling of the arms and legs, increase of pain and more complete loss of power. On admission to the hospital the extensor muscles were atrophied, there were areas of hyperesthesia and complete anesthesia on both the upper and the lower extremities. There was no change in the perception of heat or of pain, and there were no trophic troubles, except abundant sweating on the palms of the hands and the palmar surfaces of the fingers. In the absence of all history pointing to saturnism, syphilis and alcoholism, and remembering that the symptoms appeared soon after the cure of a pernicious attack, the author makes the diagnosis of peripheral neuritis of malarial origin. Under treatment the patient made great improvement. [J. M. S.]

3.—Will be abstracted when finished.

4.—Hartenberg's paper began in the June number, was continued in July, and is concluded in the current number. Anguish as a nervous disease is characterized by 5 symptoms: General irritability, anxious expectation, crises of acute anguish, equivalents of the crises of anguish or rudimentary crises of anguish and phobias and obsessions. General irritability in a patient suffering from this disease is often manifested by auditory hyperesthesia, which is explained by the natural relations that exist between auditory impressions and the emotion of fright. Further, this auditory hyperesthesia is a frequent cause of insomnia. Anxious expectation is the essential symptom of this neurosis. Under the head of rudimentary crises of anguish are included. (1) cardiac crises, such as palpitation, arrhythmia and tachycardia; (2) respiratory crises, such as nervous dyspnea and asthmatic attacks; (3) disorders of the digestive apparatus, such as sudden excessive hunger, insatiable appetite, often associated with vertigo, paroxysmal thirst and periodic diarrhea; (4) attacks of vertigo, (5) paresthesias, (6) nocturnal terrors and agonizing dreams, (7) muscular tremors, (8) profuse sweats, (9) vascular and congestive phenomena, and (10) tenesmus and urgent call to urinate. The nervous system reacts in anguish as a nervous disease against an internal excitant, just as it reacts in fear against an external excitant. This internal excitant is often of a sexual nature, and the disease is frequent in those who present sexual irregularities. The disease, which is due to the exhaustion of the sympathetic system, is distinct from neurasthenia, which, in turn, is due to the exhaustion of the cerebrospinal system. The disease should be treated by hygiene, rest, isolation and local applications. [J. M. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

July 23, 1901. (No. 30.)

1. Quinic Acid and Gout. DE LA CAMP.
2. The Digestion of Carbohydrates in the Stomach by Saliva. HENSAY.
3. Operations Upon the Abdomen Without Narcosis. A. SCHMITT.
4. Contribution to the Palliative Treatment of Inoperable Carcinoma of the Uterus. F. TORGGLE.
5. The Origin and Treatment of Phlegmonous Inflammation of the Pharynx. L. GRUENWALD.
6. A Plaster Bandage for Small Dressings as a Substitute for Gauze and Linen Bandages. K. GERSON.
7. The Certificate of the Medical Faculty of Munich for the 25th of November, 1900, upon the Illuminating Installation in the Institutes for Raising and Instructing Children. SEGGELEVERSBUCH.

1. De la Camp has made some very careful experiments with quinic acid, particularly with quinic tropin, a synthetic combination of china acid and uratropin. The first of a series of experiments was made upon a young girl suffering from chlorosis. It was found that the administration of quinic tropin produced moderate increase in the amount of uric acid excreted (the greatest quantity being upon the day on which the drug was first administered), and a very great increase in the amount of hippuric acid. The second and third cases suffered from arthritic gout, and the effect upon the amount of uric acid was very irregular. In the first case the daily amount excreted diminished in spite of the administration or withdrawal of quinic tropin, and in the second it varied considerably. In the third case the amount of hippuric acid was greatly increased; in the second case technical difficulties interfered with its estimation. A brief examination of a case of myelogenic leukemia was also made, and it was found that in this the amount of hippuric acid excreted was enormously increased as a result of the administration of quinic tropin. The drug appears to be harmless even in doses as large as 20 to 30 grams per day. Probably the best dose is about 5 or 6 grams daily. It appears to be clinically the best remedy against gout. In conclusion de la Camp states that in his opinion quinic acid does not influence the excretion of uric acid in any particular way. It invariably causes an excessive production of hippuric acid, but as the relation of neither of these substances to gout is understood, it is perfectly justifiable to depend upon clinical experience. It deserves a further trial in cases of uric acid concretions. [J. S.]

2.—Hensay has performed a series of experiments upon young women consisting of the administration early in the morning, after prolonged fasting, of an agreeable mush, containing chiefly carbohydrates. Then, after a definite time, the stomach contents are withdrawn, assimilated with HCl, carefully filtered, and the whole tested for sugar according to the iodometric method of Lehmann. The results are expressed in a table which shows a very considerable amount of the starch had already been converted into soluble form, proving that the chemical function of the saliva is not unessential, but, on the contrary, of the greatest importance. An attempt to determine how much of this sugar was absorbed by the stomach wall was rather fruitless because the method recommended for this experiment was not entirely trustworthy. The method consists in the administration of definite quantities of fat and sugar, the withdrawal of the contents and the estimation of the relative proportions of these two. As fat is not absorbed, the proportion of sugar should be diminished, but as a matter of fact the contrary is the case. [J. S.]

3.—Schmitt employs a 1% solution of cocaine for the production of local anesthesia in abdominal operations. He rarely administers as much as one grain. Usually $\frac{1}{2}$ a grain suffices for the most extensive operation. Among the operations that he has performed by this method are: Gastroenterostomy, exploratory incision, incarcerated hernia, perityphilitic abscess, stones in the bladder, etc. In one case (carcinoma of the esophagus) the patient died shortly after the operation, chiefly as a result of previous exhaustion. In another case of umbilical hernia in which 40 ccm. of the intestine were found to be gangrenous and required resection, the patient died three days later. The objections to local anesthesia are the impossibility of securing complete relaxation of the abdominal muscles and the absence of

anesthesia of the peritoneum. This latter structure appears to perceive cuts very slightly, but is exquisitely tender to any form of tearing, such as breaking of adhesions, or the placing, and especially the removal, of gauze packings. The intestine and stomach are entirely insensitive. Intestinal section appears to be moderately painful; incision into the bladder on the other hand, does not hurt the patient at all. The advantages are of course the greatly reduced danger of shock, and especially of the respiratory complications produced by ether. As, however, in cases of gastroenterostomy by local anesthesia developed pulmonary inflammation after the operation, its advantages are more theoretical than real. One of these two patients died 9 days after the operation, of bilateral pneumonia. It appears then, that the technique of local anesthesia for abdominal operations is still in a very incomplete state. [J. S.]

4.—Torggler calls attention to the following method of treating inoperable carcinoma of the uterus. Thorough and repeated applications of strong solution of peroxide of hydrogen are applied to the surface until it has become perfectly clean and granulations appear. Then a palliative operation may be performed, consisting of curettage or perhaps application of the cautery. Finally the tumor mass is kept clean, dry and odorless by the application of tampons soaked in formalin. [J. S.]

5.—Grünwald reports some interesting cases. The first, a girl of 20, developed severe pain in the left pharyngeal region. Two defective teeth were extracted, and although no pus came from the alveolar process, there was a very fetid odor, and a sound could be inserted through the posterior alveolar process into a large cavity around the left tonsil. Incision was made and a large quantity of fetid pus evacuated. In another case, a man of 30 had an acute suppurative tonsillitis which was discharged, and then subsequently a chronic abscess of the tonsil. This was cured with the greatest difficulty. In the third case, a phlegmonous inflammation in the region of the larynx, which was incised, a considerable amount of pus was evacuated. The same night, however, the patient had acute heart failure and stenosis of the larynx requiring tracheotomy. He had always indulged excessively in alcohol. [J. S.]

5.—Gerson suggests that, as the ordinary surgeon's plaster is apt to lose its adhesiveness from frequent removals from the skin in dressing wounds, it is desirable to make an attachment to the skin permanently in the centre, after which the two ends are brought together over the dressing. By this method the end over the dressing can be freed, the dressing made, and then the ends replaced. In some cases it is necessary to use 2 bandages, one attached to either side of the wound. The advantages over the ordinary gauze and linen bandages are that it takes less time to change the dressings, they are more secure and more comfortable. [J. S.]

7.—The conclusions of the commission for the examination of the lighting methods in the various institutions of Munich, are as follows: The Welsbach light for indirect illumination is probably the most satisfactory where gas is already employed, on account of its cheapness. The electric arc light comes next for the purpose of indirect illumination. The expense of installation is not greater than that of the Welsbach, and the light closely resembles that of the sun. It requires, however, rooms with very high ceilings (more than 5 metres). The Welsbach may be used for direct illumination in small rooms, or rooms that are only used in part, or only occupied by a small number of scholars. The electric incandescent light may also be used for direct illumination, but is inferior to the Welsbach because it eradicates more heat, does not resemble daylight so well, and is more expensive. It does not, however, increase the temperature of the room, does not cause any deterioration of the atmosphere, and is very easily managed. [J. S.]

July 30, 1901. (No. 31.)

1. Tortuosity and Dilatation of the Retinal Vessels. C. FUERSTNER.
2. Vaginal Puncture and Incision. K. FRANZ.
3. Specific Changes in the Blood After Injection of Urine. A. SCHATTENFROH.
4. Isoagglutinin and Isolysin in Human Blood Serum. M. ASCOLI.
5. Further Communications Concerning Pankreoin. LOEB.
6. Infiltration of Urine in Obstetrics. F. HORN.

7. A Case of Poisoning with Chromic Acid.
H. BAEYER.
8. Cotton Yelint as a Substitute for the Ordinary Eye-
Brush. O. NEUSTADTTEL.
9. Subjective Changes in Exudative Pericarditis.
P. PREGOWSKI.
10. Oleum Cinerum in the Treatment of Syphilis.
MAUL.
11. Remarks upon the "Treatment of Ulcers of the Leg."
by Dr. Walbaum. O. SCHULZE.
12. The Hygiene of Antique, Papal and Modern Rome.
GALLI.

1.—Fürstner reports two cases of tortuosity of the vessels of the retina. The first, a woman of 37, showed extraordinary dilatation and tortuosity of all the vessels in the eye grounds. There were varicose veins in the legs, enlargement of the heart, with modification of its sounds and murmurs, and some symptoms of cerebral lesions. At the autopsy a general, diffuse arteritis was found involving the blood vessels of the eye. In the second case, a man of 56 was brought to the clinic apparently in the midst of an epileptic attack. The same condition was found in both eyes, as was found in the previous case. The patient gradually recovered. There were some symptoms of cerebral injury, but he did not complain of any impairment of vision. In neither case could the condition be ascribed merely to arterial sclerosis. After a brief and careful discussion of the literature, in which he calls attention to the diversity of opinion, particularly in regard to the fact whether this condition may be congenital or acquired, Fürstner reaches the conclusion that in his first case it is certain that the changes increase slowly. In cases in which the condition is unilateral there is more reason to assume a congenital origin, but the subject requires more careful observation.

[J. S.]

2.—Franz, after quoting a few opinions of distinguished gynecologists, some of whom appear to consider vaginal puncture as a most reprehensible procedure, and others to recommend it warmly, gives an analysis of 81 cases in which he personally employed it. These were as follows: Tubal gestation, 20; tubo-ovarian tumor, 16; exudative pelvic peritonitis, 16; abscess in Douglas's pouch, 5; pyosalpinx, 5; retro-uterine tumors of uncertain diagnosis, 4; parametritis, 3; hematoma of the lateral ligaments, 2; parovarian tumors, 2. Intraligamentary tumors of uncertain diagnosis, 1. The results of the puncture were that in 56 of the cases the diagnosis was confirmed. In 5 cases a doubtful diagnosis became certain. In 10 cases the original incorrect diagnosis was corrected. In 6 cases the results were doubtful, and in 4 the puncture was useless. The immediate results of the puncture were that in 5 cases there was slight temporary elevation of temperature, in one case with chill, and one case of intraligamentous cyst with clear contents was evidently infected and became purulent, the patient was, however, cured by incision. In one case the patient, with bilateral disease of the adnexa, developed peritonitis after the puncture and died. It is doubtful whether the infection occurred during the operation. In 35 of these incision was subsequently performed. Twenty were completely cured; 11 improved; 2 were unimproved, and 2 died. Of the deaths one was due to hemorrhage and one to pyemia. Some of the cases that were unimproved were subsequently relieved by laparotomy. The most favorable cases are those of uncomplicated abscess in Douglas's pouch. The least favorable are hematoceles, and incision is only justified when the sac has undergone suppuration. The technique he gives as follows: A needle, 15 to 20 cm. in length, should be employed and carefully sterilized, the vagina cleansed as thoroughly as possible, and then under the guidance of the two fingers, the needle thrust into the densest part of the tumor through the posterior wall of the vagina. Occasionally some form of suction syringe may be required to withdraw the fluid, but this is rarely necessary. When incision is required it may be made immediately after the puncture while the needle is *in situ*, a small incision being made in the mucous membrane of the vagina, and then a pair of forceps thrust in, opened, and withdrawn. The tumor is then evacuated, a drain inserted, which should be kept clear and maintained in position until healing is so far advanced that there is no danger of the formation of a new abscess. [J. S.]

3.—Schattenfroh has discovered that the blood of the animals into which the urine of men and goats has been injected subcutaneously, acquires the property of coagulat-

ing the red blood cells of the animals from whom the urine was derived. On the other hand, the blood of a rabbit into whom urine from a horse had been injected did not acquire any agglutinating power. If, however, the rabbit was treated with injections of the serum of goats, its blood developed a considerable quantity of complements and precipitine, although the hemolytic quality disappeared entirely. The interest in these studies is the possibility of their employment for medico-legal purposes. [J. S.]

4.—Ascoli has studied the isoagglutinative and isolytic qualities of the human blood serum from 17 healthy and 97 diseased persons. The method employed is as follows. The blood is obtained, placed in a test tube (well sterilized) and allowed to coagulate. The blood used for testing was taken from the lobe of the ear, placed in 85% sodium chloride, defibrinated, and the corpuscles then mixed (in the proportion of 1 to 40) with sodium chloride solution. An oese of serum and one of the suspension of blood corpuscles more or less diluted, were then mixed upon the cover ground glass, placed over a hollow ground glass slide, and then examined at varying intervals. In the 17 healthy cases it was found that the blood serum was capable of agglutinating the blood corpuscles from the same individuals, or from healthy individuals. Its quality was rather feeble, however, and usually disappeared when the dilution exceeded 1 to 20. In the cases suffering from various diseases the following results were obtained: Isoagglutinin and isolysin were either absent or not increased in 5 cases of chlorosis. In 2 of anchylostomiasis; in one of liver abscess, and in 2 of acute articular rheumatism. In 3 cases of exudative pleurisy; in various cases of bronchial catarrh, and acute chronic gastric catarrh. In 3 cases of lead poisoning. In 1 case of acute and 2 of chronic nephritis. They were increased in 2 cases of gastric carcinoma; in 1 of probable Addison's disease; in 1 of pneumococcus infection, and in cases of pneumonia, typhoid fever and tuberculosis, particularly in the latter condition the blood serum was capable of agglutinating the blood corpuscles of other individuals in a high state of dilution. In pneumonia the changes were variable. When urobilin was present in the urine the isolytic qualities were often active. In one case they were absent during the fever, but developed after the crisis. In another case the isolysin gradually decreased from week to week. Ascoli was also able to determine that the isolysin has 2 complements, one destroyed by heating to 56°, and the other not. In a few cases of malaria the ferments were found to be active. The fluid of transudates and exudates apparently has the same qualities as the blood serum. The source of these ferments is difficult to determine. They may be due either to the direct action of bacteria or the product of degeneration of tissue. Experiments made upon rabbits by injecting into them their own defibrinated blood mixed with an equal volume of distilled water showed that the ferments had become greatly increased in activity, proving that the resorption of their own blood by animals has distinct effects. [J. S.]

5.—Loeb having found that a mixture of pepsin and hydrochloric acid is not sufficient in cases of achylia gastrica, to produce such a degree of digestion in the stomach as to render the chyme readily acted upon by intestinal juices, has employed pankreon, a preparation from the pancreas, that continues to act in an acid medium for 5 hours. This is particularly applicable in cases in which the acidity of the gastric contents is greatly reduced. The dose is about 7.5 grains 3 times a day. With this preparation he has treated 13 cases, of which 4 were associated with diarrhea, 3 of these being chronic alcoholics. In 7 cases there was constipation, the others were normal in this respect. The results showed: In 9 cases marked improvement; in 2 moderate improvement; and in 2 no improvement. Of the cases with diarrhea 2 were markedly improved; 1 not improved (this patient also suffered from chronic enteritis), and 1 improved but withdrew from treatment. Objective changes in the cases that showed marked improvement were only observed twice; in both of these the character of the gastric juice was improved. In the others no chemical changes could be determined. Subjective improvement was nearly always pronounced.

[J. S.]

6.—Horn reports the case of a woman who, at the birth of her fourth child, which required the application of the forceps, apparently suffered from a slight contusion of the bladder, the urine being mixed with blood. On the third

day, however, the pulse became very weak, the urine was mixed with lochia, and there were evidences of severe general sepsis. The patient died on the 6th day. At the autopsy a communication was found between the bladder and the uterus, and infiltration of the peritoneal cavity with urine. In this case free incision and lavage of the peritoneum might have been of use, had the condition been recognized at once. It is probable that the prolonged position of the head in the cervical canal caused a pressure necrosis of the wall of the bladder and uterus. The opening was, however, probably partially closed by contraction of the uterine wall causing congestion of the urine to the infiltration of the surrounding tissues. [L. S.]

7.—Baeyer reports an interesting case. A man carrying mineral water into a drug store, was offered a drink of schnaps by the servant. This he accepted, but unfortunately the woman selected the wrong bottle, and he drank some battery fluid. Almost immediately he had severe pain with repeated vomiting, and died in 7 days with symptoms of cardiac paralysis. At the autopsy there was found a severe necrotic inflammation of the esophagus, mouth and stomach, and hemorrhage erosion of the duodenum. There was also an acute parenchymatous nephritis. As the fluid contained bichromate of potassium, sulphuric acid, and sulphide of mercury, the question arose as to which was the active toxic agent. Bichromate of potassium was of course converted into chromic acid in the solution. The symptoms resembled those of chromic acid or mercurial poisoning more closely than those of sulphuric acid, and it is probable that the man drank too small a quantity of the latter to be poisoned by it. In regard to the treatment of his condition, Baeyer suggests that instead of alkalis, eggs, etc., the patient be given sodium sulphide, which converts the poisonous chromic acid into chromic sulphide, a substance at least 100 times less poisonous. [J. S.]

8.—Neustätter believes that in many cases it is desirable to apply solutions to the conjunctiva directly instead of dropping them in. For this purpose he recommends a small piece of absorbent cotton twisted into a point, as much better in every respect than the ordinary hair brush. If required it can be twisted around a match-stick in order to make it more easily handled. [J. S.]

9.—Pregowski observed the following objective symptoms in himself during an attack of pericarditis with exudate. When, whilst in bed, he turned on the right side he had a sensation as if there were some heavy objects in the mediastinum that pressed downward toward the right side. This disappeared with the absorption of the exudate, and he supposes it was due to the weight of the latter.

[J. S.]

10.—Maul makes a very rigorous reply to Sternberg in regard to his strictures upon oleum cinereum as a substance for hypodermic injection in syphilis. In a number of injections he had no complaints from his patients except that the subsequent pain was exceptionally bad, and he found that this was due to the fact that he had not sterilized his preparation. If this is prepared according to Neisser's formula, and then sterilized, no pain is produced. [L. S.]

11.—Schulze considers that under favorable circumstances spirits of camphor is the best dressing for leg ulcers. However, it must be changed frequently by the physician himself, and the patient should remain in bed. These conditions are rarely fulfilled by the poorer classes.

[J. S.]

12.—Galli insists that in ancient Rome the hygienic conditions were very favorable. This was due to the extensive sanitary constructions that had been undertaken by the government, in the form of aqueducts, baths and sewers. During the government of the Popes in the Middle Ages the conditions were somewhat changed. Epidemics, disease, etc., were regarded not as the result of human carelessness, but of neglect of some of the divine precepts, and therefore an effort was made to combat them by erecting churches and by performing similar pious works. The Popes allowed all the sanitary structures to go to ruin, with the exception of a few aqueducts absolutely necessary to supply the city with water, and the condition of the inhabitants, that is, of the poorer classes, was miserable in the extreme, all attempts at cleanliness being practically abandoned. The Popes almost entirely neglected the Campagna, but the best proof of their pernicious influence upon the city was the rapid diminution in the mortality with the institution of the civil government. [J. S.]

August 6, 1901.

1. The Crystalline Product of Immunization. Second Communication. H. BUCHNER and L. GERET.
2. Contribution to the Knowledge of the Injury of the Blood Vessels at the Root of the Mesentery. WILMS.
3. The Duplicity of Malignant Protopathic Tumors. R. GRUENFELD.
4. Treatment of Sarcoma by the Röntgen Ray. C. BECK.
5. Contribution to the Knowledge of the Evacuation of the Biliary Channel, According to Itose's Method. KRUG.
6. Treatment of Wounds. F. HAENEL.
7. The Employment of the Gastric Sound in Ulcer of the Stomach. W. FLADE.
8. Contribution to the Treatment of Motor Aphasia After Cerebral Disturbances. VIDAL.
9. Two Cases of Carbolic Acid Gangrene. FISCHER.

1.—Buchner and Geret continue their interesting communication upon the nature of globulite. It will be remembered that in a previous abstract we stated that their conclusions were that this was a form of calcium sulphate, and they have since been occupied in an endeavor to determine in what manner this is formed. In a series of experiments they show that this globulite can be produced by making a contact test between a solution of ox serum, to which a small amount of sodium sulphate has been added, and a peptone solution containing baryta. From this they conclude that normal serum contains an amount of sulphuric acid or sulphate insufficient to produce the reaction. As the result of a series of experiments they reach the conclusion that the increased quantity of sulphate in the serum of animals treated with the injection of blood of other animals is due to the activity of the leukocytes which absorb an excrete sulphuric acid. This seems to be confirmed by the discovery of these crystals in the leukocytic thrombi that occur in tubes filled with peptone baryta solution and introduced beneath the skin. The leukocytes, according to the authors, have the capacity of selecting certain nitrogenous substances from the materials with which they are brought in contact, in the course of which activity sulphuric acid may or may not be excreted. It is probable that they may also be regarded as the producers of the immunization substances. [J. S.]

2.—Wilms reports an interesting case of a man who thrust a sharp chisel 4 or 5 inches into his abdominal cavity. There were evidences of collapse and severe hemorrhage into the peritoneal cavity. An operation was immediately performed, the liver was found perforated, and the wounds were sutured. In addition there was hemorrhage into the lower part of the abdomen, which was found to come from a wound in the lobe of the mesentery that had apparently involved about 13 blood vessels. These were caught in forceps, but it was impossible to pass ligatures around them; the forceps were therefore left in situ, and removed three days later. There was no further hemorrhage and the patient ultimately made an excellent recovery. Wilms has performed a series of experiments in order to determine whether ligation of the superior mesenteric vein will produce gangrene of the intestines. He concludes that in rabbits it is invariably fatal; in dogs, not unless the vein is ligated below the pancreas; in human beings it is probable that the results are the same as in dogs. It is a much more serious matter to strip the peritoneum from the intestine. [J. S.]

3.—Grünfeld reports an interesting case occurring in a woman of 30, who developed symptoms of gastro-intestinal disorder, and later symptoms of cerebral disturbances. She finally died and at the autopsy a huge colloid carcinoma of the rectum was found infiltrating the peritoneum and giving metastasis to the stomach. Also some extradural tumors in the anterior portion of the central cranial fossa, apparently involving the hypophysis, and consisting

of proliferated endothelium. The case is therefore one of simultaneous existence in one subject of two very different forms of malignant tumor. [J. S.]

4.—Bock reports a very interesting case of lymphangio-sarcoma occurring on the left external malleolus. The tumor was pigmented, and when removed recurred rapidly, and there was evidence of involvement of the glands of the groin. After the third removal the growth still recurred, and the condition of the patient appeared hopeless. Bock therefore attempted to control the growth of the tumor by exposure to the Roentgen ray, according to the method for the cure of lupus. The patient was subjected to a severe exposure commencing at 10 and gradually increasing to 45 minutes. The local recurrence rapidly improved, and also the metastasis in the calf. He believes that in these cases the maximum exposure bearable by the patient should be employed. [J. S.]

5.—Krug reports the case of a woman 67 years old, who had gall stone colic. At the operation a number of stones were removed from the gall bladder; then three by careful manipulation of the cystic duct; two from the common duct, and finally a stone from the papilla. The latter occasioned great difficulty. The patient, however, made a good recovery and was apparently permanently cured. The last stone was only discovered by careful sounding of the common duct. Of course, in many cases this method of removing stones from the biliary substance cannot be employed, but in suitable cases it enables the operator to avoid what is probably the most serious operation in surgery; that is, incision of the common duct. [J. S.]

6.—Hacnel describes his method of treating wounds. He considers it impossible to render hands absolutely germ-free, and also that as a result the hands are the chief agents of infection. Permeable sterilized gloves are valuable only when the operator does not moisten the hands. Impermeable gloves are, of course, much more efficient. He regards silk as the best material for ligatures. The best material for bandages is gauze. The most important feature of all dressings is to keep the wound thoroughly dry. For this purpose he believes gauze saturated with some powder, either antiseptic or sterile, is better than gauze not so treated. Free exit for the secretion must, of course, be provided. In cases where disinfection is required iodoform is probably the most efficient substance. The occurrence of erysipelas is one of the best indications of inefficiency of technique. [J. S.]

7.—Flade believes that in the majority of cases of peptic ulcer of the stomach there is increase in the proportion of acid, and that this hyperacidity is of differential diagnostic significance for the exclusion of carcinoma and degeneration of the mucosa. His paper is still incomplete. [J. S.]

8.—Vidal believes that certain precautions should be observed in the treatment of aphasia. Usually in these cases the patients have defect of certain vowels or consonants. This can be detected at once. The patient should then be carefully educated, and, during this education in vocalization, should be directed to observe attentively the movements of the teacher's lips. It must be remembered that these patients do not support severe intellectual effort for any length of time, and should therefore be spared as much as possible. Cases with the best prognosis are those of pure motor aphasia. He reports a case occurring in a man of 62, who had moderate aphasia, for example he was unable to say the number "18." He spoke French more fluently than German, but in the course of a few weeks of careful treatment he was able to express himself in conversation with moderate ability, and in the course of a few weeks more it was almost impossible to detect that the lesion had occurred. [J. S.]

9.—Fischer reports two cases in which a mild solution of carbolic acid applied to wounds of the fingers produced dry gangrene of both. He therefore warns against the use of such dressings. [J. S.]

No. 33.

1. Experiences with Malignant Tumors, Especially Carcinoma. LESER.
2. Vioform, a New Substitute for Iodoform. KRECKE.
3. The Anthrax Question. A. SCHATTENFROH and R. GRASSBERGER.
4. Treatment of Intestinal Obstruction with Atropine. Gall Stone, Successfully Treated with Atropine. H. GEBELE.
5. A Case of Occlusion of the Intestine Produced by a F. PRITCHARD.
6. Intestinal Obstruction and Atropine. ARONHEIM.
7. A Case of Transitory Lead Poisoning. F. PINCUS.
8. Artificial Teeth in the Esophagus. BATSCI.
9. Contribution to Syphilitic Sciatica and Its Treatment. A. NIEWERTH.
10. A Claim to the Priority of the Earliest Recognition of the Typhoid Bacilli in the Contents of the Gall Bladder and the Explanation of the Cause and Relief in Typhoid Fever. G. FUETTERER.
11. Application of the Gastric Tube in Ulcer of the Stomach. W. FLADE.
12. The Treatment of Chronic Suppuration of the Middle Ear with Dry Air. LAUTENSCHLAEGGER.
13. Historical Note upon the Treatment of Intestinal Occlusion With Atropine or Belladonna. H. SCHULTZ.

1.—(See Editorial.)

2.—Krecke recommends very highly vioform, a substitute for iodoform. According to his idea it is equal to the latter, or better than it, in all the conditions for which it can be used. Vioform chemically is iodochloroxycholine. It is neutral in reaction, yellow in color, and entirely odorless. It has the advantage of keeping the wound dry. Physiologically it is remarkably chemotactic, for, when injected beneath the skin of animals, it produces an aseptic abscess. It seems to hasten the healing of non-tuberculous wounds more rapidly than does iodoform, and in tuberculous conditions is apparently equal to the latter. It does not appear to be of benefit in wounds that are completely closed by sutures. In one case of tuberculosis of the spinal column into which a suspension of vioform was injected, suppuration occurred and the patient suffered greatly. However, in this case ultimate recovery took place. [J. S.]

3.—Schattenforth and Grassberger made an additional note upon their articles regarding the bacillus of symptomatic anthrax. They believe this microorganism to belong to the group of butyric acid-forming microorganisms, but desire to retract their previous statements that it is invariably non motile, and that it is always a clostridium. The microorganism which they describe occurs in nature under two forms, one non motile and containing spores, and the other motile, non spore-bearing, and supplied with cilia. These two forms differ culturally in their chemical qualities. Injected into animals the clostridium form produces a hemorrhagic edema, with more or less accumulation of gas, while the motile form produces the typical picture of malignant edema. The characteristic toxin of the organism is produced only by the clostridium form. The transition from one form to another can be produced by various cultural methods. [J. S.]

4. Gebele criticises the employment of atropine in the mechanical forms of intestinal obstruction, regarding it as a distinct error of treatment. He admits that it may be of value in simple severe coprostasis. In obturation of the intestine, especially that caused by tumor, it may possibly be of use, but not infrequently delays the operation and renders the chances of the patient less good. He reports the case of a woman, 72 years of age, who developed diffuse pains in the abdomen, and absolute constipation with vomiting of biliary substances. After various measures had been employed unsuccessfully, the patient was given three injections of .001 (1-66 grains) of atropine sulphate. The

immediate results were very satisfactory: The vomiting ceased, the abdomen became less tense, and although no movement occurred, the patient was regarded as saved. Three days later, however, all the symptoms recurred; and an operation was performed at which peritonitis was discovered, evidently due to a gangrenous loop of the small intestine. This had been produced by a fecal stone about the size of a walnut. Death occurred a few hours after the operation. The conditions were apparently one that should have been relieved by atropine, and as it was not, Gebele believes that, where it is necessary to allay the symptoms, morphia should be preferred, and in no case should operative interference be delayed. [J. S.]

5.—Pritchard reports the case of a man 62 years of age, a chronic alcoholic and entirely edentulous. He developed pains in the abdomen, some retention of feces, and in the course of a few days **obstinate constipation** with ballooning of the colon. There was some fecal vomiting, and therefore 1/50 of a grain of atropine sulphate was injected hypodermically, and four hours later 1/100 of a grain. At the same time he was given several ounces of olive oil. The next morning the patient had a copious evacuation of the bowels and was completely cured. The condition appeared to have been produced by hard fecal accumulations. [J. S.]

6.—Aronhelm reports the case of a man 51 years of age who developed severe pains in the abdomen, and exquisite tenderness on the left side at the level of the umbilicus. He had frequent vomiting of bile and obstinate constipation which could not be relieved by enemata. Finally .003 gr. (1/22 grain) of atropine sulphate was injected subcutaneously, producing moderate physiological effects. This however, produced also entire relief of the pain, and in the course of a few hours there was a copious evacuation of the bowels and the patient recovered completely. [J. S.]

7.—Pincus describes the case of a man, 35 years of age, who had worked in a distillery where he was exposed to lead. After moderate symptoms of lead poisoning he suddenly developed **total blindness** which lasted 4 days and then gradually slight returned. As the sight returned, however, there was marked disturbance of association and some hallucinations of sight. It is still uncertain what is the situation of the lesion that produces this form of transient amaurosis. The prognosis is usually good, particularly if the pupillary reflex is present as it was in this case. Treatment consists in that ordinarily employed in cases of lead intoxication. [J. S.]

8.—Batsch reports the case of a man who had swallowed several artificial teeth. It was impossible to discover their position by means of the Röntgen rays, but they could be accurately located by means of the **esophageal sound**, which touched them at a distance of 36 cm. from the teeth. An attempt to remove them by means of forceps failed, and therefore the sound was reintroduced and the teeth forced into the stomach, an operation that caused considerable pain. The patient was then instructed to eat large quantities of coarse vegetables, with the idea of enclosing the teeth and preventing them from injuring the intestine in their further passage downward. After several days they were actually found in a copious evacuation. Batsch considers that it is perfectly justifiable to attempt to remove foreign bodies with the use of the forceps, but that the attempt should not be persisted in for any length of time. In the present instance one of the hooks by which the teeth were attached was missing, and is possibly imbedded in the mucous membrane of the esophagus. He has performed the operation of esophagotomy on the cadaver and found it very easily accomplished. [J. S.]

9.—Niewerth reports the case of a man, 33 years of age, who had become infected with syphilis at the age of 24. Subsequently he had become the father of 2 healthy children. He developed a severe attack of **sciatica**, and upon careful investigation a small syphilitic lesion was found on the left leg. A hypodermic injection of an emulsion of salicylate of mercury and paraffine was made into

the gluteal muscles, producing almost immediate relief of the pain and enabling the patient to sleep. [J. S.]

10.—Futterer calls attention to the fact that in 1888 he reported the results of bacteriological studies upon 3 cases of typhoid fever, in 2 of which pure cultures of the **typhoid bacillus** were obtained from the bile. He also stated at this time that the infection of the bile was due to microorganisms carried from the blood to the liver, and that relapse might readily occur as the result of reinfection of the intestinal tract from the pure cultures of the biles. As this article appeared 6 years before Chlari's, he claims priority for the discovery of the condition. [J. S.]

11.—Flade, in continuation of his article, attempts to answer two questions. First, whether the employment of the **gastric sound** is justifiable if there is suspicion of **ulcer of the stomach**, and particularly whether the increased certainty of diagnosis compensates for any possible danger. It is a matter of fact that the employment of the sound does not lead to any severe hemorrhages as frequently as would be supposed, although a number of cases are reported in the literature. However, there is a second danger, perforation may be caused. Perhaps the least dangerous form is that of chronic ulcer situated upon the posterior wall, but when the seat and nature of the ulcerative processes are known, it is hardly necessary to employ the sound for the purpose of further diagnosis. He therefore believes that the introduction of the stomach tube is not justifiable in cases of gastric ulcer, and he believes that the same holds true of artificial inflation of the stomach, either with air or carbonic acid. The second question is whether the stomach tube can be useful in the treatment of gastric ulcer. It is possible to imagine that it could be useful either for the purpose of removing decomposed food, or the products of catarrhal inflammation of the mucous membranes, or for the purpose of applying various drugs to the gastric mucous membrane. For the first purpose there seems to be no doubt that the copious ingestion of warm water, producing thereby vomiting, is much safer and easier. Regarding the second, Flade does not believe that catarrhal conditions are frequently associated with gastric ulcers. He therefore does not believe in the use of the sound for either of the purposes mentioned, in fact he considers that it should never be used where there is any suspicion of gastric ulcer. [J. S.]

12.—Lautenschläger accuses Hecht of having overlooked his article on the use of **hot dry air in the treatment of middle ear disease**. He also warns readers from believing that Hecht's article represents the present status of this form of treatment. [J. S.]

13.—Schultz has collected various notes from the literature regarding the employment of **belladonna in cases of intestinal obstruction**. He calls attention particularly to the work of Rademacher which apparently was due to the suggestions of Fuzet and Dubouget, both of whom use it particularly in incarcerated hernias. It has also been used by various other physicians at different times, such as Harrius, Becker, Schwabe, Mitscherlich, Larne and others, and apparently it was known to homeopaths. [J. S.]

(No. 34).

1. Two Cases of Stab Wound of the Diaphragm Cured by Sutures—Trans-diaphragmatic Sutures of the Liver and Kidneys. C. SCHLATTER.
2. Typical Albumosuria in Genuine Osteomalacia. G. JOCHMANN and O. SCHUMM.
3. The Place of Lysine Formation. M. ASCOLI.
4. A Case of Extreme Right-Sided Position of the Heart in Consequence of Contraction of the Right Lung. H. LOISSE.
5. Pressure Thrombus of the Left Innominate Vein in Pericarditis, with Remarks Upon Unilateral Hydrothorax. P. ZILLSCHWITZ.
6. A Form of Tracheal Hemoptysis. G. AVELLIS.
7. Reply to the Article of Dr. Maul: "Oleum Cinereum in the Treatment of Syphilis." STERN.

8. Investigations Upon the Value of Varicose Inhalations.

A. WASSMUTH.

9. The Sanitary Condition of the Large Cities of Europe in Ancient and Modern Times.

O. SCHWARTZ.

1.—Schlatter reports two interesting cases of **diaphragmatic stab wounds** occurring at the same time in two young men who were attacked by a party of Italians. The first was stabbed in the right side, immediately sank to the ground, was carried to a house and a few stitches made in the skin. When admitted to the hospital the following day he was found to be extremely anemic, the pulse small, and the respiration rapid. The knife had separated the 9th rib, penetrated the diaphragm, injured the liver at two places and entered the substance of the right kidney for a distance of more than 8 cm. In order to obtain clear working space, Schlatter resected the 9th rib for a considerable distance, and enlarged the diaphragmatic wound. He was thus able to unite the edges of the wounds in the liver and kidney. The opening in the diaphragm was then closed by silk sutures, the parietal pleura likewise sutured, and the skin wound completely closed. Previous to closing the wound a considerable amount of clotted blood was removed from the peritoneal and pleural cavities. The case pursued an uninterrupted convalescence, the dyspnea diminished steadily, and finally the patient recovered so completely that he was able to take long mountain tours. The second case was less seriously injured, the knife penetrating between the 7th and 8th ribs and involving the subjacent diaphragm. The liver, fortunately, was not injured. The 8th rib was resected, the diaphragmatic injury repaired, and the wound closed as before without drainage. The patient rapidly recovered. Schlatter discusses the indications in the first case for thorough exploration. He was particularly impressed by the extreme anemic appearance of the patient, although there was no very great accumulation of blood in the pleural cavity. He believes, in the treatment of these cases, that it is exceedingly important to enlarge the external wound in order to enable the operator to make a thorough examination of all the organs that may have been involved.

[J. S.]

2.—Joehmann and Schumm report the case of a woman, 37 years of age, who suddenly developed severe pains in the spinal column. When admitted to the hospital tenderness was found over the lumbar vertebrae, and signs of severe nephritis. In the course of 6 months an extreme deformity of the skeleton had occurred, kyphosis of the dorsal and lumbar vertebrae, prominence of the sternum, spontaneous fractures of the necks of the femurs, and in addition hemorrhages into both eyes. A diagnosis of **osteomalacia** was made and confirmed by the autopsy and the microscopical examination of the bones. During the last weeks of her life the patient secreted a turbid acid urine, which, after filtration, gave a clear brownish-yellow liquid containing 3% of albuminous bodies. These were subjected to a great variety of tests, during which it was found that, after carefully removing all true albumen, a substance was removed that gave the biuret reaction. This led to the suspicion of the presence of **Bence-Jones bodies**, and a large quantity of urine was accordingly tested very carefully for their presence. They were found, and the authors therefore regard their case as the 8th in which a true albumosuria was present and as the first case in which it has been recognized in genuine osteomalacia. The other cases were 4 of softening of the bone produced by multiple myelogenous sarcomatosis, and 3 of osteomalacia which were not confirmed by autopsy. [J. S.]

3.—Ascoli discusses the formation of lysine, especially in reference to the tissues from which it is derived. Starting with the assumption that the very small quantity of anti-lysine existing in the blood of rabbits can be greatly increased by the gradual introduction of the blood serum of dogs, he asked himself whether the same results might not be obtained by the injection of leukocytes derived from dogs' blood. If so, then it would be reasonable to assume that the antilytic bodies are derived from the leukocytes. In order to determine this point he produced an exudate in the pleural and peritoneal cavities of dogs by injecting zelluronat, from which the leukocytes are precipitated by centrifugation, and repeatedly washing in 0.85% of chloride solution. Microscopically these were found to consist almost exclusively of polymorphonuclear leukocytes.

Injection of this produced a marked increase in the antilytic activity of the rabbits' blood. Moreover, the injection of lymph expressed from the tissues of dogs killed by hemorrhage produced similar results. As it is known that lysine is composed of two substances: the intermediate or sensibilizing substance and the complement (alexin), the question arose which of these two substances was acted upon by the antilytic material derived from the leukocytes? Experiments made by adding the leukocytes to warmed as well as natural blood seemed to indicate that the substances derived from the leukocytes counteracted the substances derived from the complementary body, that is, were anticomplementary. It was, however, impossible to determine with certainty that substances counteracting the effect of the sensibilizing or intermediate bodies were present. [J. S.]

4.—Lohse reports the case of a man, 28 years of age, who suffered from cough, expectoration, loss of energy, and diminution of weight. A diagnosis was made of tuberculosis of the right lower lobe. In the year 1893 he was carefully examined and no anomaly of the heart discovered. In 1900 the right side of the chest was markedly retracted, and moved very slightly during respiration. There was no area of cardiac dullness on the left side, and on the right side a distinct area of dullness ran somewhat parallel to the 4th rib. The heart sounds were heard only on the right side. Examination with the Röntgen rays was somewhat unsatisfactory. A diagnosis was therefore made of fibroid retraction of the right lung with **dislocation of the heart**. This dislocation apparently involved 2 things. First, the rotation of the heart around its fixed apex toward the right, and secondly, the movement of the central tendon of the diaphragm in the same direction, causing total dislocation of the heart. Congenital dextrocardia was easily excluded, partly by the physical signs, partly by the very thorough physical examination made in 1893. There was no distinct disturbance of circulation. There was, however, a slight inequality in the radial pulse, the left being the smaller. [J. S.]

5.—Zezschwitz reports a case of a man, 34 years of age, who at the age of 12 had received a severe injury in the precordium. From this he had apparently completely recovered. Six months before observation he had had an inflammation of the pericardium. When examined his expression was anxious; there was orthopnea; distinct cyanosis; the area of cardiac dullness was greatly increased, and there was also a huge exudate in the left pleura. Fever was not present. The exudate in the left pleural cavity was aspirated twice, producing very marked improvement in the subjective symptoms and increase in the loudness of the heart sounds. The fluid was cloudy, yellowish-red, and contained numerous leukocytes. During the course of the case the patient developed an extraordinary dilatation of the veins of the left arm, shoulder, and neck. He was transferred to the hospital, where a thrombosis of the external jugular vein was determined. A diagnosis was made of mediastinal tumor, exudative pleurisy and pericarditis, and **thrombosis of the left innominate and its constituent veins**. The patient died, and at the autopsy a huge pericardial exudate was discovered. The pleural cavity contained 5 litres of turbid liquid; the pericardial cavity contained a large quantity of blood. The heart was small and the left innominate and the other veins were completely occluded by thrombosis. A diagnosis was therefore made of acute hemorrhagic fibrinous pericarditis, compression thrombosis of the innominate vein, and left hydrothorax. The latter appeared to be due to the thrombosis. He also reports the autopsy notes of a second case in which a left-sided pleural effusion was present, associated with hemorrhagic pericarditis and aneurysmal sac of the arch of the aorta. In this case, although there was no thrombosis of the left innominate vein, a certain amount of endophlebitis was discovered. In the final discussion of the cases, Zezschwitz is inclined to believe that isolated left-sided hydrothorax must be exceedingly rare, and prefers to hold to the accuracy of the clinical diagnosis of a pleural exudate. [J. S.]

6.—Avelis reports a case of **hemoptysis** occurring in a man who for years had suffered from chronic passive congestion of the blood vessels. The source of the blood in the first attack could not be determined. In the second, some varicose veins were found in the mucous membrane of the larynx, from which the flow had evidently been de-

rived. A diagnosis was therefore made of tracheal hemorrhage. [J. S.]

7.—Stern replies to Dr. Maul that he was not the first to suggest the composition of *Oleum Cinererum*, but that it had already been used by a number of distinguished physicians, who are convinced of its extreme value on account of the fine suspension in which the mercury is held. [J.S.]

8.—Wassmuth, in reply to Emmerich's article, contends that his method of inhalation is efficient. That by testing a number of crystals deposited upon a given area, it has shown to be at least twice as effective as Clar's apparatus, and that he considers it a great defect of Hülling's apparatus that it requires a complete saturation of the room with moisture. [J. S.]

9.—Schwartz, in reply to Galli, urges that the present sanitary condition of Italy leaves much to be desired, and that the Popes destroyed neither the sanitary nor the architectural monuments of the ancients. He discusses the advantages of goats' milk for children, but regrets that the price is at present too high. [J. S.]

No. 35.

1. The Etiology of Erysipelas and Its Relation to Pyogenic Infection. JORDAN.
2. Malignant Tumors of the Tonsils. HEINLETH.
3. Ligatures of the Blood Vessels of the Spleen in Animals. BALACESCU.
4. A Laxative Synthetic Product (Purgatin).
H. VIETH.
5. Auscultatory Percussion. J. HOFMANN.
6. Two Cases of Latent Thrombosis of the Sigmoid Sinus After Suppuration of the Middle Ear.
HOELSCHER.
7. Complication of Parturition Resulting from Dropsy of the Fetus. E. KREISCH.
8. A Case of Duodenal Ulcer Rupturing into the Retro-peritoneal Space. R. WAGNER.

1.—Jordan discusses the specific relation of the streptococcus to erysipelas. He summarizes the literature for and against a specific form of the streptococcus for this disease, and shows that it certainly does not exist, but that the streptococcus pyogenes is capable of producing either suppuration or erysipelas according to the site of inoculation, and according to the degree of its virulence. He then discusses the question as to whether the staphylococcus pyogenes aureus is the only cause of osteomyelitis, and he proves that it is not. Some years ago he reported two cases in which erysipelas was apparently caused by the staphylococcus aureus, and he reviews the literature of this subject and shows that a sufficient number of other cases has been reported by this time to prove his contention that erysipelas is not a specific disease etiologically. In fact a typical erysipelas can be produced in the rabbit's ear by inoculation with staphylococcus pneumococci, or colon bacilli. However, it is produced, as a rule, in human beings by the streptococcus, and it is uncertain whether anything else excepting the staphylococcus in a few rare instances, is capable of producing it. The disease bears a close analogy to osteomyelitis because both can be produced by several organisms; both may be serous inflammations leading to suppuration, or suppuration leading to serous involvement; both show very varied degrees of intensity, and in both pyemia and sepsis may be produced by the specific cause of the disease. [J. S.]

2.—Heinleth has collected records of 153 cases of malignant disease of the tonsils—92 various forms of carcinoma, and 61 various forms of sarcoma. The disease is usually characterized by the very slight initial change, rapid spreading to the surrounding parts, and therefore the diminished possibility of cure. Among the diseases with which they may be confused are parasitic ulcers produced by *oidium albicans* or the *leptothrix*, which are usually more superficial and often multiple; tuberculous infection; secondary forms of syphilis which are usually very superficial; chronic inflammatory hyperplasia, and various forms of suppuration of the tonsils, gumma, actinomycosis, etc. The differential diagnosis between carcinoma and sarcoma is difficult, but may sometimes be

made by means of the following table which was first devised by Honsel:

Quality.	Carcinoma.	Sarcoma.
External appearance.	Tuberculous.	Tuberculous tumor.
Tendency to spread.	Considerable.	Slight.
Dissemination in the body.	Absent.	Moderate.
General subjective symptoms.	Pain on swallowing.	Difficulty in swallowing and dyspnea.

3.—Balacescu reports the experiments which he made under the direction of Professor Jonnesco, upon the spleens of dogs. In 58 cases total ligation of the tissue coming from the hilum of the spleen was practiced. Twelve of these 58 dogs remained alive, the rest died at varying periods up to 8 days. The autopsies showed that the spleen passed through a variety of stages. First swelling, then rapid necrosis of its elements, and occasionally the formation of gas gangrene. Invariably a sero-hemorrhagic fluid was found in the peritoneal cavity which was occasionally mixed with the products of the necrosis of the spleen that had escaped through its walls. The necrosis appeared to increase with the duration of the animal's life after the operation. Bacteriological investigations of the spleen showed the presence, in a few cases, of the colon bacillus and the streptococcus. These increased rapidly in number with the duration of the life of the animal, and it is therefore certain that they invaded the spleen after the ligation had been applied. Death is not due merely to the peritonitis, but probably also to the absorption of the poisonous products of the necrosis formed in the spleen. In the animals that survived, the spleen had apparently undergone a complete atrophy, being reduced to a small, hard, white nut. In 4 dogs the blood vessels alone were ligated, and the rest of the tissues left intact. Hard white masses were found in the splenic tissue at various periods after the operation, but the spleen did not undergo much reduction in size, although a perisplenitis apparently occurred. In a third operation an artificial adhesion was produced between the spleen and the abdominal wall, and then the blood vessels ligated. A moderate amount of cirrhosis occurred in the spleen, but it did not undergo extensive atrophy. He concludes, therefore, that ligation of the root of the spleen causes gangrene of the organ, that ligation of the arteries and veins of the spleen does not interfere with the organ, because the collateral circulation is capable of nourishing it; ligation only of the arteries produces a moderate atrophy which may be increased by subsequent ligation of the efferent vessels. When an adhesion is formed between the spleen and the abdominal wall the vessels that pass through it are capable of nourishing the spleen to some extent, although atrophy occurs. Finally micro-organisms from the intestines only enter the spleen after ligation of its vessels. [J. S.]

4.—Vieth discusses the physiological action upon the bowel of a large number of synthetic chemical substances, particularly the various modifications of anthrachinon. These were all tried on cats, and their activity, or lack of it, carefully determined. After a great variety of experiments it was found that anthrapurpurindiacetate, which is commercially known as purgatin, is an efficient laxative. It occurs as a yellow powder formed of minute crystals, with a melting point of 175°. It is not soluble in water; with great difficulty in alcohol; but dissolves easily in boiling glacial acetic acid and in xylol. A solution of sodium hydrate becomes red as soon as some of this material is added to it. The active dose for human beings is .5 grms. (7.5 grs.) It produces a slight reddish discoloration of the urine, does not cause abdominal pain or tenesmus, and the effect is prompt, the evacuation occurring about 12 hours after taking the medicine. As the powder is entirely tasteless and produces no disagreeable effects, it is particularly valuable in neurasthenic cases. There appears to be considerable difference in individual susceptibility to the drug, many cases requiring doses of as much as 2 grms. before the effect is produced. [J. S.]

5.—Hofmann has devised a small apparatus which consists essentially of a pleximeter, one end of which is attached to a long handle, and on this long handle a small hammer is fastened, so that it can be lifted and allowed to fall upon the pleximeter with the movement of one finger. The object is to permit this instrument to

be used in connection with the Blanchi phonendoscope, for the purpose of outlining organs, etc., by means of auscultatory percussion. As the sound transmitted by the ordinary hammer and pleximeter is very disagreeable, Hofmann covers his instrument with a layer of soft rubber. A small scale is attached to the handle, by means of which the height to which the hammer is raised before being allowed to fall can readily be determined, enabling the observer to measure rather roughly the force employed. By means of this instrument it is quite possible to outline the various lobes of the lungs. [J. S.]

6.—Holscher reports two cases of middle ear disease, in both of which thrombosis of the sigmoid sinus was discovered at operation, although it had not been suspected, nor had it given rise to any symptoms. In the first case, a boy of 16, there was evidently empyema of the mastoid process which necessitated the operation, and in the second case the same condition complicated by a subperiosteal abscess was present. Both recovered without bad symptoms, and the cases show that the sequelae of acute inflammation of the middle ear may be benign, as well as those following chronic inflammation. [J. S.]

7.—Kreisch reports the case of a woman, a 4 para, who for a month previous to the birth of her child had suffered from severe pains in the abdomen. The child presented by the feet and was extracted as far as the knees. The attending physician then found himself unable to complete the birth, and Kreisch was called in consultation. Careful examination showed that the abdomen of the child was enormously distended, and a puncture withdrew nearly a litre of fluid. Extraction was then accomplished to the navel, when obstruction was again detected and found to be due to an enormous distention of the thorax. A considerable quantity of clear fluid was again withdrawn through the trocar, and the dead child delivered. The placenta was very large and showed fibroid and cystic change. The mother recovered. An autopsy was not permitted, but the changes in the child, which included edema of the skin, indicated the existence of nephritis. [J. S.]

8.—Wagner reports a case of a man 45 years of age who had pains in the region of the liver. Subsequently he had a swelling in the right lumbar region, which after partially disappearing, reappeared, was opened and a considerable quantity of brown fetid liquid was evacuated. From time to time fresh quantities of yellowish-brown liquid were discharged. The spinal column was not tender; the urine was normal; there were no symptoms of disease of the right hip joint; and an elastic sound could be passed through the opening as far as the right kidney. There was no free hydrochloric acid in the stomach. The patient refused operation, and at the subsequent autopsy a small round opening was found in the descending portion of the duodenum which had perforated into the retroperitoneal space, and connected with the abscess. [J. S.]

(No. 36).

1. The Surgical Treatment of Strictures of the Lacrimal Duct. PASSOW.

2. Acid Intoxication in Diabetes Mellitus.

O. BUSSE.

3. Experimental Investigations Upon the Disinfection of the Hands. The 7th Paper.

TH. PAUL and O. SARWAY.

4. Separation of the Median Nerve. Cure.

M. WYSS.

5. Two Cases of Hemiatrophy of the Face, and Their Cosmetic Treatment. A. LUXENBERGER.

6. Contribution to the Treatment of Traumatic Tetanus.

A. DEHLER.

7. Surprises in Herniotomy. E. MEUSEL.

8. Malignant Tumors of the Tonsils. Conclusion.

HELMUTH.

1.—Passow describes a method of relieving strictures of the nasal tear duct without producing an unsightly external scar. He performs this from the nose; first removing the anterior extremity of the inferior turbinate bone, then waiting some time until the reaction is complete, then removing a portion of the crest of the turbinate, and of the lacrimal bone, until the canal is entirely exposed. This is determined by the fact that the sound which has been placed in it becomes readily moveable. The canal is

then split as far as is necessary, the sound forced through into the nose, and the operation completed. He reports three cases, in which the symptoms of obstruction of the duct had been present for varying periods of from 4 to 15 years, that were entirely relieved by this operation. The only precautions to be observed are that the area be thoroughly illuminated and that the blood be continually mopped away by an assistant. The symptoms are not always immediately relieved, because the aspiratory function of the duct may be temporarily destroyed. [J. S.]

2.—Busse reports 3 cases of diabetes mellitus, which he believes furnish, to a certain extent, a contribution to our knowledge of the action of the acid poisoning that occurs in connection with this disease, and is presumably the cause of the diabetic coma. These cases occurred in a woman of 36, a man of 52, and a man of 54. All of them died as a result of diabetic coma, and in all there was found diffuse parenchymatous degeneration of the liver, kidney and heart. These changes he regards as toxic and probably due to the formation of beta oxybutyric acid. He suggests that the comatose symptoms are probably due to the action of this acid upon medulla oblongata, and regrets that this structure was not carefully examined in his own case. [J. S.]

3.—Paul and Sarway give a careful historical analysis of the methods of cleansing the hands before an operation, taking up in particular the series of operations suggested by Fürbringer, which consist of first cleansing the nails; second, brushing the hands and nails for one minute with soap and water; third, immersing the hands and nails for one minute in alcohol, and then without drying them—fourth, immersing them in an antiseptic liquid. Subsequent experiments have shown that this method, although efficient, does not give the absolute security that is necessary in surgical operations. This method was subsequently employed by Reiche, who ascribed to the alcohol the most efficient antiseptic action. The paper is still incomplete. [J. S.]

4.—Wyss reports an interesting case of a physician who, in falling, thrust a piece of iron into the ball of his thumb. He felt a curious burning pain, and realized that the fingers had become anesthetic. Subsequent investigation showed that the median nerve had been separated. The wound was carefully dressed, and in the course of time sensation returned to the anesthetic parts. As a result of careful studies made during the entire course of the case, Wyss reaches the following conclusions: The section of a nerve with a sharp instrument does not produce severe pain. Neuralgic pains appear in from 2 to 5 days. During healing the pains are always most severe at the point reached by the growing axis cylinders. The sensation resembles that of tickling. From time to time lancinating pains occur. In the areas of skin that have recovered sensibility, touch is painful, although not intensely so. Warm objects produce more pain than cold objects. There is reason to believe that the proximal axis cylinders pass to areas of the skin that they did not previously innervate, either by uniting with the distal axis cylinders, or by growing; they may even extend into the areas that were not previously anesthetic. In the present case they occurred in the area supplied by the radial nerve, but not in that supplied by the ulnar. There is always difficulty in distinguishing between true trophic disturbances and injuries caused by the lack of sensation. The divided axis cylinders usually grow at the rate of 2 mil. per day. They do not grow sterily, but intermittently, and each increase in length is associated with the sensation of pain.

[J. S.]

5.—Luxenberger has had the opportunity of observing 2 cases of hemiatrophy of the face. The first, a girl of 19, had suffered occasionally from severe headaches on both sides of the head, and sometimes from pains in the throat. At the age of 17 the difference in the 2 sides of the face was sufficiently marked to attract attention. There was atrophy of the soft parts and of the bones, and, as a result, considerable deformity. The second patient, also a girl of 19, had suffered severely with tooth-ache. At the age of 17 the symptoms of facial asymmetry became pronounced. The tissues were apparently normal, with the exception of wasting. In this case the extraction of some carious teeth and galvanization of the atrophic areas had no effect, and, other forms of treatment appearing useless, Luxenberger decided to employ Gersuny's method of paraf-

fine injections beneath the skin, in the hopes of removing the more serious features of deformity. His method was to insert the hypodermic needle, then suction was made in order to be certain that it had not entered a blood vessel, and few drops of a solution of nlrvanin were injected in order to produce anesthesia. The melted paraffine was injected in quantities of .25 to .5 of a ccm., and a sufficient number of injections made to produce the requisite appearance of fullness. As soon as the paraffine was injected, and while it was hardening in the tissue, it must be moulded into shape. In these cases no signs of local reaction or injury appeared. There is some reason to believe that in the course of time the paraffine may undergo a certain amount of shrinking and hardening. The other dangers are very slight, with the exception, perhaps, of embolism as a result of careless injection. [J. S.]

6.—Dehler reports a case of traumatic tetanus occurring in a woman of 48. Twelve days after the wound there were symptoms of pain on chewing and swallowing, and two days later she applied to the hospital. The wound was opened and a splinter extracted, together with a small quantity of pus. Tizzoni's antitoxin was administered on 3 successive days, the dose being 2.5 grms. of the substance dissolved in 25 ccm. of water. Chloral was also given. On the 18th day of the disease, 4 days after the institution of treatment, the muscles began to relax slightly and the patient then proceeded to a very satisfactory recovery. [J. S.]

7.—Meusel reports some interesting cases. The first case, a man of 42, was first seen with a condition that was diagnosed as incarcerated hernia. There were symptoms of complete intestinal obstruction, and fecal vomiting. At the operation coils of intestine were found, which were readily replaced, and finally a small coil compressed by a carcinoma of the mesentery. It was necessary to resect a portion of the small intestine, 19 cm. in length. The patient recovered completely, with the exception of a slight tendency to the recurrence of the hernia upon coughing. The second case, a boy of 4 years, had had an inguinal hernia for 3 years. A radical operation was attempted, the mass of intestines in the hernia exposed, when it was found that they were firmly matted together, and covered with grayish-white tubercles. These were also found upon the other intestinal surfaces. A diagnosis of general tuberculosis of the peritoneum was made, a fecal fistula was formed, and the patient left with an unfavorable prognosis. Later the fecal fistula proving irksome, an operation was performed for its occlusion, when it was discovered that the peritonitis had been completely cured. The mass of intestines was resected, involving 14 cm. of the small intestine, and 3 of the cecum. The patient made an uninterrupted recovery. [J. S.]

8.—Heinleth reports the case of a man 59 years of age, who discovered some enlargement of the cervical lymph glands. Shortly after this he noticed a tumor in the mouth, and when examined a mass was discovered extending from the right wall of the pharynx. A diagnosis was made of sarcoma, with metastasis to the lymph glands. It was determined to perform an extra-buccal operation for the removal of the tumor, and this was accordingly done two years after the first symptoms. The details of the operation cannot well be given in an abstract. It required considerable plastic work before the openings were covered. Within three weeks recurrence had appeared around the edges of the wound. These were removed by means of the galvano-cautery ligatures. The wound finally healed satisfactorily, and the patient has hitherto (2 years later) showed no signs of recurrence. Heinleth appends a very careful description of the histological appearance of the tumor. [J. S.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 61, No. 1).

1. The Injuries Inflicted by Modern Fire-arms. SCHJERNING.
2. Bacteriological Examination of the Urine in Suprapubic Cystotomy. KUKULA.
3. Early Operation in Acute Appendicitis. SPRENGEL.
4. The Question of Cerebral Pressure. TILLMAN.
5. Brain Surgery. KROENLEIN.

6. Herniae of Meckel's Diverticulum.

GUSTAF EKEHORN.

7. The Lymphatics of the Chest in Relation to the Spread of Mammary Cancer. LUDWIG OELSNER.
8. The Origin of Traumatic Herniae. BELFINGER.
9. Pure Carbolic Acid in Septic Wounds and Suppurative Processes. VON BRUNS and HONSELL.
10. The Rational Use of Mixed Narcosis. H. BRAUN.
11. Further Communications Upon Spinal Anesthesia. AUGUST BIER.
12. The Treatment of Stenosis of the Trachea by Tracheal Intubation. E. TSCHUDY.

1.—Schjerning believes that military surgery has recently been advanced by war, the increased technique of fire-arms, and the progressive development of surgical knowledge. Much damage was done lately by the artillery, both by bombs and shrapnel. Shrapnel shots produce all kinds of wounds, several bullets from one shrapnel entering the same individual in different directions, often carrying bits of clothing with them. Their effect is serious and infection easily follows. Bombs injure by their broken shells, which are driven with great explosive force. Snock always follows bomb wounds, which are atypical in all cases. Schjerning believes that the shrapnel will be the only artillery shot of the future. Statistics of infantry shot have multiplied recently. While the new rifles permit accurate shooting from a great distance, and one bullet may injure as many as three men, yet they are better than the kind formerly employed. The relative number of the injured has also increased. The canal is generally clean and recovery is more frequent, as are injuries to the skull. Good surgical results follow abdominal injuries. Schjerning says it is not the rifles that are more humane, but the field surgery. It seems that injuries to the blood vessels are more severe when the combatants are near one another. Deaths have decreased in the recent campaigns, from the efficiency of the field surgeon, and not from the fire-arms used. This is in a great measure due to von Bergmann's teaching. Schjerning believes that the Germans can look forward to war, without fear and with trust in their surgeons. [M. O.]

2.—Out of 63 patients, Kukula found the urine of nine only sterile, seven of whom had stone in the bladder, and two, enlarged prostate. In 54 cases, staphylococci, colon bacilli, proteus, etc., were found alone or together. Colon bacilli were present in 39 of the cases. Next in frequency as a cause of cystitis, Kukula places the staphylococcus aureus. But the worst cases of cystitis are due to mixed infection. Kukula succeeded, in a few cases, in causing cystitis in dogs by injecting these micro-organisms. Kukula reports 23 cases of suprapubic cystotomy performed after bacteriological examination of the urine. In nine of these, with stone in the bladder and sterile urine, the bladder wall was sutured completely in two rows, one above the other. In six cases of vesical calculus, complicated with cystitis, caused by but a single infecting micro-organism, the bladder was also completely sutured. It had to be opened in every case, on account of suppuration. In the remaining eight cases, cystitis and vesical calculi occurred with mixed infection. Various operations were performed in these cases. Out of 48 operations of suprapubic cystotomy for stone in the bladder in the Mayall clinic, seven died of complications which had existed before operation. Secondary infection of the bladder sutures occurs from the external wound, not from sterile urine. Therefore Kukula advises closing the external wound, in children especially. When the sutures in the bladder wall had to be opened, the resulting destruction of tissue depended upon the virulence of the bacteria and the resistance of the tissues. Therefore, Kukula believes that, when but one bacterial species exists in the urine, suture of the bladder wall is not yet to be considered advisable, even with cystopexis. He thinks that in such cases the double operation by the method of Vidal de Cassis, followed by cystopexis by the Rasumowsky method is the safest plan of treatment. This is especially true when mixed infection exists, as was successfully shown in three of his cases. From a number of experiments upon dogs, Kukula's opinion that severe, membranous cystitis was due to mixed infection, was confirmed. The technique of the operations is described. Kukula pleads for the regular bacteriological examination of the urine in all cases of stone in the bladder, cystitis, etc. [M. O.]

3.—Sprengel reports four cases of appendicitis in which

operation was performed in the first 48 hours of the illness. From these results Sprengel decided, in the future to operate early. For three of his cases were very severe, and recovered after early operation. A review of the literature upon acute appendicitis follows. Nowhere in Germany have the results of early operation approached the success obtained in America. Sprengel makes his incision along the outer border of the rectus muscle. He believes that when the surgeon realizes the exact anatomical condition in each case of acute appendicitis, the result will be an increase in the number of early operations.

[M. O.]

4.—Tilmann reports two cases of traumatism of the head. From 10 to 15 minutes after accidents headache appeared, followed by unconsciousness later. Brain injury or concussion were excluded. Tilmann diagnosed intradural hemorrhage in each case. The striking thing in both cases was that the coma became marked when the patients sat up, while it decreased when they assumed a horizontal position. Tilmann experimented upon the brains of a series of large dogs, injecting fluids of different specific gravity. But no definite conclusions could be drawn. It is plain, however, in man, that while small hemorrhages cause symptoms by direct pressure upon the brain, the severity of the symptoms shows not the size, but the position of the hemorrhage. When the hemorrhage occurs at the base of the brain, there are no symptoms. In hematoma of the middle meningeal artery, depression, or impression of the skull, the pressure symptoms are local. Though unable to find any cases like those which he reports, Tilmann believes that it is possible for a change in the position of the head to change the pressure of an intradural hemorrhage, so that a free sensorium in the horizontal position can become unconsciousness when the patient sits up. [M. O.]

5.—Kroenlein reported a case of tubercle of the left hemisphere, extirpated six years ago, with a second operation to ascertain the brain condition two years afterward. Connective tissue had filled up the cavity formerly occupied by the tubercle. The patient is living and well. He also reported a case in which sarcoma of the motor region of the brain was diagnosed and operated, yet not found. Death occurred a year and a half later, and the autopsy showed the sarcoma just where Kroenlein had searched for it. He explains his failure to find the tumor by supposing it to have been very small and subcortical in position.

[M. O.]

6.—Ekehorn reviews the history of Meckel's diverticulum. Herniae of Meckel's diverticulum have never been diagnosed before operation. He has collected 22 cases, the histories of which follow in detail. In 15, the herniae were incarcerated, one of them observed by Ekehorn himself. Fifteen occurred in men, 13 were inguinal, and the majority occurred on the right side. All 7 cases of femoral hernia were incarcerated, while only 8 of the inguinal hernia were incarcerated. Of the 15 incarcerated herniae, 10 were pure diverticular herniae; four were cured by operation, four healed with fistulae, and two died with peritonitis. Of the 7 herniae which were not incarcerated, four were cured by operation, the other three only being found at autopsy. Ekehorn concludes that, with incarceration of a pure hernia, both symptoms and prognosis are favorable. All such cases are now operated upon. [M. O.]

7.—Oelsner has made a number of injections of Gerota fluid into the lymphatics of the skin, mammary gland, pectoralis major, and subcutaneous fat. After detailing his results, he states that the external oblique muscle, on the side of the nipple toward the umbilicus, forms a submammary ligament, preventing any connection between the mammary gland and the lymphatics in that direction, that the lymph glands, beside functioning as filter and creator of lymphocytes, act also as a pump to keep the lymph stream moving; and that other lymph glands exist, which have never been described, on the dorsal surface of the scapula near its inferior angle, and in the fifth intercostal space in the midaxillary and midclavicular lines. Oelsner concludes that the mammary gland sends two, rarely three, large lymphatic vessels to the anterior thoracic glands upon and under the edge of the pectoralis major in the second or third interspace, and through these to the subpectoral and subclavian, but not to the supraclavicular

glands at birth; that those lymphatics which perforate the pectoralis major and intercostal muscles carry off lymph normally, just as do the axillary vessels, that lymphatics originating in the pectoralis major were not, with certainty, found; and that no lymphatic vessels were discovered in the subcutaneous fat. From this it is plain that, no matter how radical the operation, some cancer tissue is bound to remain. Yet the results will differ according to the susceptibility of the individual. The most radical operation will include extirpation of the subclavicular glands, which are the last to be affected.

[M. O.]

8.—Billinger discusses the origin of traumatic herniae. By traumatic hernia he means a hernia which follows at once or within a few days after some forcible accident; further, there must have been no latent hernia or empty hernial sac previously. He reviews the subject, experimentally and clinically, and reports a case of traumatic hernia through the perforated abdominal muscles, which was cured by operation. After quoting a few cases from the literature, Billinger reports two more cases of his own, with traumatic hernia in the linea alba. He concludes that, though seldom, traumatic hernia does occur. It is found by autopsy at once after the accident. While it is generally not seen where ordinary hernia develops, traumatic hernia may be inguinal, femoral, or umbilical. It is caused by direct force at the point where the hernia appears. [M. O.]

9.—von Bruns reports the results of Honsell's experiments upon dogs and men. He found that concentrated carbolic acid was much less apt to produce poisonous symptoms than diluted carbolic acid; and that most bacteria were killed by it inside of a minute. Not only is it indicated in hydrocele, but he has employed it in 80 cases of septic processes, wounds, abscesses, mastitis, suppurating joints, etc. One application of pure carbolic acid exerts a favorable influence upon a septic process. The effect of pure carbolic acid is not weakened by the secretions from the wound. [M. O.]

10.—Braun has experimented with mixtures of ether and chloroform of different strengths. At low temperatures the ether only evaporated, while at high temperatures both the ether and the chloroform evaporated equally. Physiologically the effect of the ether-chloroform mixture, well diluted with air, is the same as that of chloroform with air. Out of 400 administrations of the mixtures, nothing serious occurred. Experience taught Braun that ether narcosis was often made easier by adding little or more chloroform. This led him to construct an apparatus which is fully described in detail, with diagrammatical illustrations. By means of this apparatus the amount of both the ether and the chloroform used can be regulated. His apparatus is not too complicated to be generally useful. [M. O.]

11.—Bler reviews the work upon spinal anesthesia done since his paper was published. One thousand two hundred operations have been performed by this method of anesthesia. He has made a series of experiments with tropacocain, nirvanin, holocain, eucain, etc., in concentrated and diluted doses. From this he noted that when diluted with much water the effects were visible higher up the spinal cord; that very small doses cause sufficient analgesia to permit all sensations except that of pain; that the sequelae are not due to the size of the dose injected, but to the level in the cord to which the fluid rises; and that dangerous accidents have not been observed. Patients must remain in bed on their backs for some days after spinal injections. Lumbar puncture should be performed upon the convex, not the concave, side of the vertebrae, while the patient lies on his side. The technique should be perfect. Finally Bler admits the priority of Corning's work in this direction. [M. O.]

12.—Tschudy reports a case of tracheal stenosis from the pressure of an enlarged thyroid gland. This patient had existed for twenty years, in a woman of 30. It was mainly on the right side, almost as large as a human head. In circumference it measured 53 cm. During operation for removal of the tumor, the patient stopped breathing. A catheter was at once introduced, down to the bifurcation of the trachea. With artificial respiration, breathing began through the tube in about 10 minutes. The operation

lasted two hours, and the patient recovered. Tschudy reports this result to show that tracheal intubation is to be preferred to tracheotomy when such accidents occur.

[M. O.]

1901. (Volume 64, No. 2).

13. Total Resection of the Upper Jaw with Inhalation Anesthesia. KROENLEIN.
14. The Operative Treatment of Cancer of the Uterus. JORDAN.
15. Paravaginal Hysterectomy for Uterine Cancer. KARL SCHUCHARDT.
16. 875 Cases of Vaginal Cellotomy. A. DUEHRSSSEN.
17. The Technique of Nerve and Tendon Sutures. GEORG LOTHEISSEN.
18. Poisoning from the Absorption of Bile in the Peritoneum. E. EHRLHARDT.
19. The Danger of Using Illuminating Gas for Heating Purposes. WALTHER STEMPEL.
20. Pneumonia Following Laparotomy. HENLE.
21. Stitch Abscesses. C. S. HAEGLER.
22. The Extirpation of the Pancreas for Cancer. FELIX FRANKE.
23. The Mechanism of Acute Dilatation of the Stomach. GEORG KELLING.
24. The Question of Gastrostomy. BORCHARD.
25. A Case of Fetal Inclusion in the Mesocolon. AHRENS.
26. The Etiology and Treatment of Congenital Flat-foot. FELIX FRANKE.
27. Paired Projectiles. KROENLEIN.
28. Report of Another Thousand Goiter Excisions. THEODOR KOCHER.
29. The Progress in Renal Surgery. LEOPOLD CASPER.
30. The Operative Treatment of Mediastinal Abscess. VON HACKER.

13.—Kroenlein, who reviews the subject of total resection of the upper jaw for tumors, calls attention to the different mortality statistics of the various operators. The main cause for the unusual mortality he believes to be the narcosis, as more than half of the cases develop affections of the respiratory tract. The result appears to be the same, whether ether or chloroform is used. Some surgeons operate with the head elevated, others with the head depressed. But Kroenlein advises stopping the anesthetic while performing total resection of the upper jaw. He reports 35 cases of total resection of the upper jaw performed by him in the past twenty years without anesthesia. He uses ether up to the first skin incision, giving a little morphin before operation. The patient sits up straight, his head bent forward. Of the 35 cases, but one died, with septic meningitis, on the sixth day. His patients ranged from 18 to 73 years of age. [M. O.]

14.—After a thorough review of the operative treatments of uterine cancer, Jordan concludes that for carcinoma uteri, limited to the uterus, vaginal hysterectomy is the treatment; and that abdominal hysterectomy, on account of its dangers, should only be performed where vaginal hysterectomy is absolutely impossible. Jordan prefers the operation by Schuchardt's paravaginal method. He considers this especially favorable in early diagnosed cases of cancer of the uterus. The literature of the subject is fully cited. [M. O.]

15.—Schuchardt describes in detail the technique of paravaginal hysterectomy, first performed by him for uterine cancer in 1893. Illustrations accompany the article, explaining the operation. In six years he has operated upon 90 cases, 11 of whom died. 83 of these were uncomplicated, 8 of whom died, a mortality of 9.6% only. The wound heals in from one to two weeks, leaving a tiny scar. Of 42 cases operated upon over two years ago, 15 are absolutely cured (35.7%); of 25 cases operated upon over five years ago, 10 are absolutely cured (40%). Compared with other operations, Schuchardt's results seem marvelous. He did not, however, operate upon any far advanced cases, or upon those with many metastases, cachexia, etc. He believes that better results are to be expected by his operation of paravaginal hysterectomy than were formerly obtained. [M. O.]

16.—Duehrssen reports the results of 875 operations of vaginal cellotomy. His mortality in the first 500 cases was 3%; in the next 200, 2% only. The possibility of any disturbance during child-birth later is prevented by suturing

his incision to the peritoneum covering the bladder. 37 children have been borne by women, who have been operated upon by Duehrssen, without any trouble. In 700 of the cases, retroflexion or retroversion occurred, generally with various diseases of the adnexa, or chronic pelvic peritonitis; in 300 cases one or both tubes were removed, (28 being cases of tubal pregnancy); in 70 cases ovarian tumors were extirpated. Salpingostomy was done in 200 cases. 57 myomectomies were performed, with 6 deaths. During 1900 he performed 133 conservative vaginal to only 26 conservative ventral cellotomies, and 51 ventral total hysterectomies. Only 21 times out of the 875 cases was he forced to do abdominal cellotomy or vaginal hysterectomy, after anterior colpopelviotomy. Besides, Duehrssen concludes from his experience, that anterior colpopelviotomy is to be preferred to posterior colpopelviotomy. [M. O.]

17.—Lotheissen, after reviewing the work done in suturing tendons and nerves, describes a gelatin tube which he has had prepared for use in such cases. This is hardened in a 2% formalin solution, and sterilized by dry heat. The tubes are kept in 96% alcohol. Experiments upon animals show that the tubes are absorbed in from one to two months, depending upon the length of time they are left in the formalin. They are useful in the direct suture of torn nerves and tendons. He has used them in seven cases thus far, with excellent results. High temperature will increase the rapidity of their absorption. For suturing tendons Lotheissen advocates a tube which has been hardened in formalin 48 hours; for suturing nerves, one which has been hardened 72 hours; and for nerve defects, one which has been in the formalin solution for six to seven days.

[M. O.]

18.—Ehrhardt made a series of experiments upon cats and dogs, to determine whether the flow of bile into the peritoneum produced poisoning. Jaundice followed in every case. When a bile duct fistula was left, symptoms occurred which resembled icterus gravis, with death in from two to six days. Jaundice was widespread, and the peritoneal fluid was sterile. No peritonitis occurred. The bile was absorbed by the peritoneum. Even the thoracic duct was filled with bile. In a few cases infection or cholemia produced death. Some reported cases in human beings confirm Ehrhardt's experiments. He concludes that the absorption of a large quantity of bile from the peritoneum produces poisoning and death. The treatment of these cases, with rupture of the bile ducts or serious congestions of the liver, should be by laparotomy, to prevent, by removal, the absorption of the bile by the peritoneum.

[M. O.]

19.—Stempel first reviews the subject of hemoglobinuria in full, giving the etiology, classification, treatment, etc. He then relates his own experience. A healthy man of 36, he had constructed in his operating room a gas stove, which heated the room by keeping water, circulating in the pipes, hot. This, when lighted, created an unpleasant odor. It was kept burning almost constantly. Stempel grew pale, and ill, and he noted that his nurse became ill after all long operations. Those who came to see him operate, left with severe headaches. One day, after an operation, he had a chill which lasted several hours. Albuminuria first appeared, then hemoglobinuria, with marked oliguria. His temperature remained high for four days. In the three weeks the albumen and hemoglobin had disappeared from the urine. Five weeks after the beginning of the attack he left for Italy to recuperate. Two weeks after his return, after another operation, he had a second attack of hemoglobinuria. Not until two months later was he again back at work. The only known cause of these attacks was the intoxication produced by the illuminating gas. Mice exposed to the apparatus died very quickly. Since the chemical products of illuminating gas are not as yet well studied, the specific cause of the intoxication and hemoglobinuria remains unknown. But Stempel insists that gas should not be burned in any operating room.

[M. O.]

20.—Henle states that pneumonia commonly follows the operation of laparotomy. Out of 1787 operations, pneumonia occurred in 143 patients, 65 died. The great majority of these pneumonias are lobular in character. As a rule pneumonia develops in the three days after operation. The morbidity increased with the age of the patient, as did the mortality. The greatest number of laparotomies was performed upon patients between 40 and 50 years of age. Pneumonia occurred most often with jejunectomy, incar-

cerated umbilical hernia, and resection of the stomach. It occurs a little less frequently when infiltration anesthesia is used than with general anesthesia. Allowing the body to become cold during the operation formerly predisposed to pneumonia, as did cold irritation of the abdominal cavity. The disturbance to respiration from opening the abdomen predisposes of pneumonia, in men especially. Hematogenous infection may cause pneumonia, and aspiration pneumonia may easily develop. Septic pneumonia is especially fatal. From his observations, it is most important to prevent the patient catching cold after operation. Ventilation should be good, and care should be taken to prevent all of the above mentioned deleterious influences from acting. Then pneumonia will become less frequent after laparotomy. [M. O.]

21.—Stitch abscesses develop at once after operation, or months later. In the former the thread was infected from the wound, in the latter it became infected in the wound. These have been known to develop five years after operation. From sections made by him, Haegler demonstrated myriads of bacteria in the thread itself. But generally some slight traumatism causes the stitch abscess, even though the thread was filled with microbes for years. While experiments showed that bacteria increased in silk thread, both that sterilized by steam and by corrosive sublimate, it was seen that they did not multiply in cat-gut. Silk-worm-gut is the material found most free from bacteria. Yet all suture material may be infected, and thus stitch abscesses will remain a common occurrence in surgery. Haegler adds a few technical details for the preparation of such material. [M. O.]

22.—Cancer is the only tumor found in the pancreas primarily. It is generally situated at the head of the pancreas. The operations already performed are quoted by Franke; then he advises total extirpation of the pancreas early, before any other organs are also affected. He has operated upon four cases of pancreatic cancer, and reports the case-histories in detail. Total extirpation was followed by recovery without permanent glycosuria. Death followed later in every case, but was not the immediate result of removal of the pancreas. In the first case the cause of death was hemorrhage; in the second, infection; in the third, gastric metastases; and in the fourth heart failure. Though all died, no permanent glycosuria or steatorrhea was observed after extirpation of the pancreas. Glycosuria did occur in one case, lasting only two weeks. The symptoms of pancreatic cancer are pain in the epigastrium, gastro-intestinal symptoms, emaciation, weakness, and then the tumor, jaundice, enlarged liver, spleen, edema, etc., follow. Exploratory laparotomy is advised to secure an early diagnosis. [M. O.]

23.—Kelling reports a case of acute dilatation of the stomach in a girl of 16, who wore a plaster jacket for scoliosis. Acute dilatation of the stomach occurred suddenly with the symptoms of collapse, three days before Kelling saw her. Her heart kept her up, though she lost 19 pounds. The gastric muscles were so badly paralyzed that even after two weeks of lavage, remains of food were found in the fluid returning. Immediate lavage, repeated at intervals, normal salt enemata, and a well regulated diet cured the condition. Her stomach from the scoliosis, was probably vertical in position. When overfilled, it compressed the duodenum as it could expand in no other direction. Then dilatation followed. Three similar cases have been reported. Kelling experimented upon 16 cadavers, from which he concludes that a fold in the intestine is not always found, but when found, it is generally situated in the duodenum. Infectious diseases, traumatism of the central nervous system, gastroparesis, pyloric stenosis, gall stone operation, bandages, etc., predispose to acute dilatation. When the duodenum or jejunum is closed by compression, and the stomach cannot be relieved by vomiting, from stenosis of the cardiac orifice, dilatation must occur. If after lavage for 12 hours, no bile is seen in the fluid returning, laparotomy should be performed. Should there be compression of the mesenteric arteries with the small intestine in the pelvis, the pelvis should be tamponed. [M. O.]

24.—Borchard considers gastrostomy with Schleich's local anesthesia absolutely without danger. He has performed 11 gastrostomies in the past four years, and has always secured a fistula which closed wholly. In most cases the power of swallowing returned almost at once, even in patients with impermeable stricture of the esophagus.

Only two of his 11 cases died, though some of the other strictures were carcinomatous. The one danger to be feared is acute dilatation of the stomach. A number of his cases are reported in detail. [M. O.]

25.—Ahrens reports a unique case of fetal inclusion in a girl of 17. She had always had a prominent abdomen. A cystic tumor was found in the left hypochondrium, reaching almost to the pelvis. Albumin and pus were seen in the urine. Laparotomy revealed a cyst containing four liters of hemorrhagic fluid, in the mesentery of the ascending colon. This was wholly removed, and she recovered rapidly. Examination of the cyst showed it to be both gastric and intestinal in parts, with peptic ulcers and hemorrhages. This probably began to grow in the fifth month of fetal life, and was then included in the mesocolon, retroperitoneally. Its origin was from the left upper abdominal colon of the fetus. [M. O.]

26.—Franke reports a case of right pes equinovarus and left flat-foot, in a girl of 4. On the right side he performed forcible reduction, with lengthening of the tendo Achillis by Bayer's method. When he attempted to shorten the tendons of the tibialis posticus and tibialis anticus, he found them adherent to their coverings. Franke detached the insertions of the tibialis anticus and sutured them into the tibialis posticus tendon. This was left in plaster over two weeks without success. Then he made another incision and sutured the tibialis anticus tendon to the first phalanx of the middle toe. The child can now walk well with or without shoes. Flat-foot is rare compared with club-foot. The cause of this flat-foot was the abnormal insertion of the tibialis anticus tendon, due to an anomaly of development. Shortening of the tendons is impossible when inflammation has existed with the formation of adhesions. The operation was only done as a last resort, not to effect a cure, but to improve the deformity. [M. O.]

27.—Kroenlein describes three pairs of bullets, probably due to one bullet hitting the other where it had already lodged, the two becoming welded together. Photographs of the three paired projectiles are given. [M. O.]

28.—Kocher generally excises that half of the goiter in which pressure seems the greater. Enucleation is only done when the goiter recurs. Of these 1000 cases excised, 929 were benign, with four deaths only. In 24 cases exophthalmic goiter existed, operated upon with two deaths; in 20 cases, strumitis, with two deaths; and in 27 cases, malignant struma, with six deaths. Hemorrhage and infection are no longer to be feared. Antiseptics were not used, simply normal salt solution. When the goiter is large, thyroid prophylactic treatment should be given before operation. Cocain anesthesia alone is used. In some cases the goiter lies mainly in the thorax. This variety of goiter causes dyspnea, emphysema, bronchitis, tracheal stenosis, heart symptoms, etc., depending upon whether the goiter is wholly or partially in the thorax. Kocher divides these symptoms into the cardiac, pulmonary, and mediastinal groups. The intrathoracic goiter may simulate exophthalmic goiter. This deeply seated goiter may be movable or immovable. There is dulness over the manubrium sterni, and the condition is revealed by Röntgen photographs. Here there is danger of hemorrhage during operation. Kocher operated on 22 such cases in his last 1000 goiter excisions and not one of them died. Experimentally, phosphorus seems to decrease the iodine in the thyroid gland. Kocher uses it in most cases, after excision of one half, in chronic iodism, hyperplastic, vascular and exophthalmic goiter. [M. O.]

29.—Treated editorially Philadelphia Medical Journal, August 31, 1901, page 326.

30.—Von Hacker states that operation is often too long delayed in case of periesophageal and mediastinal abscesses. He reports in full two cases operated upon by him. In one, a woman of 62, death followed in spite of neck incisions with drainage of the mediastinum. Emphysema of the skin of the neck occurred. In the other, a woman of 37, the same treatment, undertaken earlier, resulted in recovery, with a small fistula in the neck remaining. In this case perforation of the esophagus occurred. The endoscope was used to determine whether the esophageal perforation was to the right or left, in order to decide upon which side to operate. Röntgen photographs also helped in deciding upon right-sided operation. von Hacker believes that only when no improvement follows drainage through a neck incision, a counter-incision

should be made in the back. Other cases in the literature are quoted. Finally von Hacker describes in detail the technique both of collar and dorsal medlastinotomy. The Röntgen photographs follow. [M. O.]

1901. (Volume 64, No. 3.)

21. The Technique of Uranoplasty.

A. VON EISELSBERG.

22. Statistics upon Cancer of the Breast. N. GULEKE.

23. Renal Surgery in the Nineteenth Century.

E. KUESTER.

24. The Diagnosis and Treatment of Kidney Diseases.

HERMANN KUEMMEL.

25. The Pathology and Treatment of Concealed Spina Bifida. M. KATZENSTEIN.

26. Successful Extirpation of a large Hemangioma of the Liver. P. LANGER.

27. The Treatment of the Wound after Operation for Local Tuberculosis. ALEXANDER FRAENKEL.

28. A New Anesthetic, Oxygen-Chloroform.

HEINZ WOHLGEMUTH.

29. Kroenlein's Gunshot Injuries of the Skull. REGER.

30. The Separation of Ankylosed Patella. F. KRAMER.

31. The Treatment of Acute Perityphilitis. ROTTER.

32. Resection of the Cervical Sympathetic in Epilepsy.

HEINRICH BRAUN.

33. Magnesium in Suturing Blood Vessels.

ERWIN PAYR.

34. The Destruction by Hot Water of the Remains of a Tumor in the Wound. O. EHRHARDT.

35. Experiments with Mercuric Sulphate-Ethylendiamin as a Disinfectant for the Skin of the Hands and Body.

M. BLUMBERG.

31.—After reviewing the various modifications of the technique of *uranoplasty*, von Eiselsberg describes his plan of operation, the von Langenbeck-Billroth method, using Billroth's anesthetic mixture in the Junker apparatus. The head, held securely by an assistant, hangs down, the neck being hyperextended. He uses Dieffenbach's needle-holder, with silver wire sutures. Iodoform gauze is left in the wound. Five extraordinary operations are then described in full, with numerous photographs. In a child of 4 he performed *uranoplasty* by employing a pedicled flap of skin from the forearm to close a bilateral cleft palate. In two cases of anterior *uranocolobosis*, he closed both clefts by using the mucous covering of the intermaxillary process. In three cases of unilateral cleft palate, he employed flaps from the vomer. In a case of anterior *uranocolobosis* in a girl of 19, he implanted a little finger, which at the same time raised a deep sunken nose. He appends the description of a case of *rhinoplasty* in a girl of 17, in whom a flap from the upper arm, with a bit of a boiled tibia, replaced a nose almost wholly wanting. Röntgen photographs show the bits of the tibia in good position in the nose. The results in all cases were excellent. [M. O.]

32.—Cancer of the breast has been more successfully studied during the past 25 years than cancer in any other part of the body. The prognosis is now much less unfavorable than it formerly was. Guleke has collected the histories of 982 patients with cancer of the breast, upon 835 of whom von Bergmann performed 943 operations. Cancer of the breast is most common between 40 and 60 years of age, the average among his cases being 49 years. Out of 552 women affected, 550 have borne children, 29% of them having at some time had mastitis. In 16% of the cases cancer had already occurred in the family. In half of the patients one breast, in the other half the other breast was affected. Both breasts were diseased in only 6 cases. Cancer is mainly found in the upper outer quadrant of the breast, the majority of the tumors being *scirrhous*. Guleke found the skin adherent on an average of about the twelfth month; the axillary glands infiltrated about the eleventh month; the pectoral muscle adherent about the thirteenth month; and ulceration of the skin about the sixteenth month. About seven months after the axillary infiltration the supraclavicular glands enlarged. Metastases were found most commonly in the liver, the other breast, lungs, pleura, stomach, etc. The prognosis depends upon the condition of the tumor and the method of treatment. The breast with all infiltrated glands was removed in 833 patients, 26 of whom died. While a woman with untreated cancer of the breast may live about twenty months after the tumor appears, accord-

ing to the von Bergmann statistics, she should live thirty months or more with the modern operation. In 236 cases there was recurrence. Out of 282 cases which have been carefully followed since operation, 110 have had no recurrence, a permanent recovery of 28.75%. Guleke advises removing the sternal portion of the pectoral muscle in some cases only, not as a routine practice in every case. [M. O.]

33.—Kuester gives a concise and thorough review of the progress made in renal surgery in the nineteenth century. Pain, swelling, and the changes in the urine may show the character of the kidney affection. Cystoscopy and catheterization of the ureters were employed to aid in forming the diagnosis. And lately, cryoscopy, the phloridzin method, and the examination of the kidney freely laid open by operation, have come into use, assuring a certain diagnosis. Naturally, following the introduction of these methods, the treatment has also changed. Nephropexy is done for floating kidney; suppuration of the kidney, primary or secondary, must be evacuated early; while tuberculous kidneys should be partially extirpated. Röntgen photographs confirm the diagnosis of renal calculus. For most nephrectomies, Kuester prefers the lumbar incision. [M. O.]

34.—Kuemmell believes that cryoscopy of the blood and urine, after simultaneous catheterization of both ureters, with the examination of the urine, makes certain the diagnosis of the condition of each kidney. Normal human urine freezes at close to 0.56° C. below distilled water. When under 0.58° C., both kidneys fail to functionate properly, and renal insufficiency exists. No operation should be performed until the freezing-point of the blood reaches 0.56° C. Kuemmell describes the technique of cryoscopy in detail. Besides cryoscopy, cystoscopy is employed and the uric acid is estimated. The phloridzin test is also used. When a large tumor exists in the kidney or any other abdominal organ, the freezing-point of the blood may be lowered, though the kidney remain sufficient. When the freezing-point of the urine from one kidney is under 0.9, that kidney is probably insufficient. Kuemmell gives a number of tables showing the results of cryoscopy in different diseases, renal conditions for which nephrectomy was done, chronic nephritis, tumors, calculus, etc. He lays great stress upon cryoscopy in the diagnosis of renal affections. [M. O.]

35.—Katzenstein reports two cases of concealed spina bifida recently observed by him. One was in a girl of three, with lordosis, right-sided flat-foot, paralysis, and atrophy of the right leg. In the other case, a boy of 17, there were ulcers of the left foot and buttocks, incontinence of urine and feces, left dorsal scoliosis, long hair over the spina bifida, and the left leg much shorter than the right. In this case, the third case of concealed spina bifida successfully operated upon, the tissue connecting the skin and the spinal column was removed. Katzenstein describes the condition as a slit in one or more vertebrae, the skin over it being normal, not prominent. It follows either deficient separation of the medullary canal from the ectoderm, or a meningocele. Its characteristics are a connection between the skin and the spinal column, an opening in the vertebral canal, and a muscle tumor about the vertebral canal. The spinal column may be normal or it may show changes due to the opening itself, to traction, or to pressure. These may cause secondary disturbances *in utero*, in childhood, or at puberty. When uncomplicated, the prognosis of concealed spina bifida is excellent. After trophic disturbances appear, there is danger of sepsis. When secondary changes have occurred *in utero*, nothing can be done; when in childhood, the posterior uniting membrane should be divided. When at puberty, the tissue between the spinal column and the skin must be extirpated. [M. O.]

36.—Langer reports the successful extirpation of a large hemangioma of the liver in a woman of 37, who had noticed a growing tumor during two years, on the right side, above the umbilicus. The tumor (21 by 21 by 11 cm.) was removed with much hemorrhage. Since the operation she has born another child, which she is now nursing. She seems quite well. The angioma contained 1½ liters of blood, and weighed, empty, 2½ kg. It arose from the under surface of the left lobe of the liver. The literature of the subject is fully reviewed. An attempt to determine the diagnosis by inflating the intestines was useless, the inflated intestines surrounding the tumor in such fashion

that its connection with the liver was not suspected. The diagnosis was first floating kidney, then, from the fluctuation, mesenteric cyst. Its communication with the liver being only noted upon operation. Diagrams show the histology of the tumor, a true cavernous hemangioma.

[M. O.]

37.—After operation upon local tuberculosis of the bones, joints, cold abscesses, etc., care must be taken to prevent secondary infection. Iodoform, which was supposed to exert a specific action upon tuberculous tissue, has been shown, by the experiments of Fraenkel, to do nothing of the sort. It causes chemotaxis, vascularization, and proliferation, separating off the tuberculous process, that it may later be absorbed. Other sterile powders will have the same effect as iodoform, without causing the inflammation which accompanies the iodoform injections. This was especially the case with animal charcoal, which Fraenkel employed in his experiments. He used this later, in glycerin emulsion, with great success upon human beings. There is no possibility of injury from animal charcoal.

[M. O.]

38.—After reviewing anesthetics, their advantages and disadvantages, Wohlgemuth describes in full the apparatus which he has constructed for the administration of chloroform with oxygen. Photographs show its details. He reports its use in 182 cases, a table giving the important points in each case. Patients never fight against it, nor do they complain of suffocating. There was not one case of cyanosis, disturbed respiration or pulse. Only five cases showed excitement and only 20% vomited, they having had no preparation for operation. The exact number of drops of chloroform used is noted by this apparatus, as is the percentage of the oxygen in the mixture. The chloroform is inhaled as a vapor. The literature of the subject is cited. [M. O.]

39.—Röger reviews the seven cases of injuries to the skull from gunshot wounds which Kroenlein reported at the German Surgical Congress held two years ago. In two of these cases recovery rapidly followed, the intracranial pressure diminishing upon deep inspiration. Röger agrees with Kroenlein in his conclusions, believing that the effect of hydraulic pressure showed in all these cases of gunshot injuries of the skull. [M. O.]

40.—Occasionally after inflammation or injury of the knee-joint, the patella may become adherent to the femur. There is no ankylosis of the rest of the knee-joint. The attachment may be fibrous or bony, but it is difficult, even when aided by Röntgen photographs, to tell which change has taken place. Cramer has operated upon 7 of his 10 cases of ankylosed patella, with successful recovery in six of them. In one case, the history of which follows in detail, one patella showed bony, the other fibrous connection. Both were easily and well movable after operation. On the fibrous side, as in five other cases, simple resection of the patella was done, followed by rest for one or two weeks. Then the ankylosis was forcibly broken, and mechanical movements, massage, baths, etc., were kept up for months. In only one case was it necessary to interpose part of the vastus internus muscle between the femur and the patella, to prevent ankylosis reforming. The other case-histories are given, and many opinions cited. [M. O.]

41.—Out of 150 cases of circumscribed perityphlitis, operated upon between attacks by Rotter, there has been but one death. In diffuse perityphlitis, Rotter waits until the third day; then, if fever, pain, etc., persist, he operates. Of 100 cases of diffuse perityphlitis, abscesses occurred in Douglas's pouch in 70 cases. Rotter opened 61 of these abscesses through the rectum in the male, or the vagina in the female, 10 of these patients dying. Of the other nine, evacuated through the abdominal wall, six deaths resulted. Rotter believes that irrigation of the abdominal cavity during the operation for perityphlitis generally spreads the infection throughout the peritoneum. It is hardly ever advisable. He concludes that the mortality is much less following evacuation of the abscess in Douglas's pouch through the vagina or rectum than through the anterior abdominal wall. [M. O.]

42.—After a complete review of the resections of the cervical sympathetic for epilepsy, Braun reports nine such operations performed by him. In all but one case, the operation was performed upon both sides of the neck. The upper ganglion, the middle ganglion, and the nerve as high as the inferior thyroid artery were removed. The

technique of the operation is described in full, with photographs of the nerves and ganglions extirpated. One man died of pneumonia two days after his second operation; another died during an epileptic attack, after the operation wound had healed. Three patients have had many light epileptic attacks since operation. Three of the remaining four patients, all of whom were also insane, seem to have had less frequent attacks, and to be less clouded mentally than they were before operation. Though the operation is not dangerous, there are not yet enough observations reported to show favorable results from it.

[M. O.]

43.—Payr describes a case in which he sutured a large vein, after extirpating a carcinoma of the left groin, in a man of 67, 4.5 cm. of the femoral vein were resected, the ends being joined by the use of a circular magnesium plate. The next few days showed that the circulation of that leg was perfectly maintained. On the third day after operation the patient died of broncho-pneumonia. The autopsy showed the absence of any blood about the site of the operation, and the presence of circulating venous blood in the vein above and below the point of operation. Only a slight trace of thrombosis could be found upon the intima of the vein. Upon one side the intima of the joined ends had already grown together. Histologically, the intima was thickened, the media contained many round cells, and the adventitia showed an increase in all kinds of cells. The absorption of the magnesium plate probably follows from the necessity of the tissues to draw water from all sources, absorbable magnesium oxide resulting. The technique of the operation, photographs of instruments and of the conditions found at the autopsy, are all described in detail.

[M. O.]

44.—Ehrhardt performed a series of experiments upon dogs, operating aseptically, and then treating the wounds with boiling water. This was sponged out in a minute, and the wounds healed rapidly. Caustics, on the contrary, caused the formation of a thicker membrane, which prevented further penetration of the liquid. In operations in which it is feared that a tumor may become implanted from the tissue remaining after extirpation, the use of boiling water, in contact with the wound for one-half to one moment, seems to destroy all bits of the tumor tissue left. Ehrhardt uses about 25 c.c. in each case. Recurrence is thus prevented. [M. O.]

45.—Blumberg describes his experiments upon animals to show the value of mercuric sulphate-ethylendiamin as a disinfectant for the skin. He concludes that it is not inferior to corrosive sublimate in power; that it never irritates the skin, even in strong solution; that it can therefore be used in more concentrated form than corrosive sublimate; that its effect goes much deeper than corrosive sublimate; and that it will soon be prepared in tablet form, the tablets dissolving at once, not causing the waste of time necessitated by waiting for corrosive sublimate tablets to dissolve. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

July 25, 1901.

1. The External Examination of the Rectum and Its Therapeutic Use. WILHELM EBSTEIN.
2. The Nature of Schuller's Cancer Parasites. HEINDRICH VOLCKER.
3. Pumice-alcohol Soap in Solid Form as a Disinfectant for the Hands and Skin. SIGMUND PFORINGER.
4. Further Communications Concerning the Practical Use of my Forensic Method of Demonstrating the Presence of Human and Animal Blood. FRIEDRICH HUTH.
5. A Typhoid-like Disease Produced by a Previously Undescribed Bacillus. KURTH.
6. An Apparatus for Pasteurizing Milk at Home. (Conclusion.) A. HIPPIUS.
7. Multiple Hemorrhages in the Skin and Conjunctiva. HIPPE.

1.—Ebstein has for years observed that one can feel the rectum when it is filled with feces in the fold between the buttocks on the left side. The patient is best examined when lying on the left side. It was also observed that stroking this sausage-like tumor produced by the full rectum caused the expulsion of feces, and the tumor then disappeared. Ebstein has, therefore, used, and now recommends for the treatment of constipation postero-anterior massage of this

region. This can at first be carried out by the physician, and afterward left to the patient. Electricity may well be applied along this groove also. The results are said to be very good, and one can thus avoid any intra-rectal irritating applications, such as glycerine suppositories. Ebstein also states that this is a satisfactory method of overcoming rectal impaction of feces, and it is much more esthetic than the usual method. [D. L. E.]

2.—Voleker contributes a very sarcastic article on Schuler's cancer parasites, concerning which the latter author has written a book of considerable size. Voleker could not find the parasites at all until he used a bergamot oil which had been for a long time in a bottle with the cork stopped. He then found large numbers, and upon examining the oil found that it contained quantities of Schuller's so-called parasites. Since Schuller always cleared in oil, it is almost certain that his parasites were really cork cells, for it is known that aromatic oils dissolve cork to a certain extent, and Voleker readily demonstrated this action himself. [D. L. E.]

3.—The soap is best produced by using a vegetable-fat soap; 60 to 90 gm. of this is cut fine and dissolved on a water bath in 300 ccm, 96% or 97% alcohol, using a condensation cooler. 700 ccm, alcohol should then be added, bringing the amount to 1000 ccm., and 300 gm. of finely pulverized pumice stone (previously sterilized) is added gradually, the mixture being thoroughly shaken constantly and allowed to cool, only slowly. This soap should then be kept in air-tight receptacles. Bacteriological investigations of the effect of its use showed that it gives satisfactory results, and it does not irritate the hands as much as the use of the brush and active chemical disinfectants, and Pforinger recommends it for use in armies, in country practice and under other circumstances when elaborate aseptic procedures are impossible. [D. L. E.]

4.—Uhlenhuth reports a series of instances in which he made a diagnosis of the presence or absence of human blood in specimens sent him by request by the city medical officers, the latter knowing in each instance whether the specimen was human or not. His diagnosis seems to have been correct. Also in a series of cases he was able to diagnose horse's blood, pig's blood and other forms of animal blood. He finds that the blood of closely related species reacts with the same serum in some instances; for example, pig's blood antiserum reacts with boar's serum (weakly) and horse blood antiserum with ass blood (very weakly); but these exceptions are not sufficient to interfere with the forensic value of the test. A more important matter is the fact that active sera cannot always be produced, and the serum should invariably be carefully tested before it is used. This point makes it desirable that the production of any such serum when it is to be used for medico-legal purposes at any rate, should be restricted to a well managed, properly authorized institute in order that errors may be avoided, and the usefulness of the test not impaired. [D. L. E.]

6.—The result of the chemical study of milk before and after Pasteurization in Hippius' apparatus was to show that the specific gravity, reaction and amount of fat, casein and sugar showed practically no change. If the Pasteurization is carried on for hours (eight to twelve) the same changes as those seen after sterilizing appear; i. e., the specific gravity becomes reduced, as does the amount of organically combined phosphorus and of fat, sugar and casein. Under these circumstances the acidity increases also, while after sterilizing it decreases. The action of the milk curdling ferment was at first delayed by Pasteurizing after six hours, increasing in rapidity beyond the normal, the increase corresponding to the increase in acidity. The coagulum after Pasteurizing formed in a jelly-like mass; after sterilizing it was in the form of loose clumps. Pasteurized milk did not color lead-paper; sterilized milk colored lead-paper brown. The effect on the number of bacteria in normal milk, on milk infected with various bacterial cultures, and on milk to which cow-dung was added was then studied. Normal milk showed as high as 89,000 bacteria to the ccm. before Pasteurizing, while the same specimen showed 2280 after fifteen minutes Pasteurizing at 65°C. and none after two hours. In the raw milk to which cow dung was added innumerable bacteria were found; after two hours Pasteurization only 288 to 576. Tubercle bacilli withstood Pasteurization for five minutes, but were killed after fifteen minutes. Streptococci were killed after thirty minutes; diphtheria bacilli after fifteen

minutes. Hence two hours Pasteurization may be considered wholly satisfactory, and the result is still better if subsequent fractional Pasteurization is carried out in the thermophore. This does not alter the taste or the value of the milk in any way. [D. L. E.]

7.—Hoppe records the case of a man of 35, who had an acute attack of indigestion after eating mushrooms, and made violent efforts to rid his stomach of the offending material by vomiting. He had a free secretion of tears, and afterwards an unpleasant feeling of tension in the eye-balls, which seemed to be pressing against the lids. Nasal breathing was difficult, mucus from the nose was blood-tinged, and when the man inspected his countenance in the mirror he was horrified to find that his face was swollen and of bluish color. Hoppe found innumerable small hemorrhages scattered over the whole of the upper half of the face and over the forehead, the eye-lids were much swollen and presented everywhere subcutaneous hemorrhages. The palpebral conjunctivae were covered with hemorrhages, the ocular conjunctivae were free. There was no disturbance of sight. The case ended in practically complete recovery within a few days. Nine similar cases of hemorrhage from the skin of the face and conjunctivae are reported from the literature. Hoppe goes into an extensive theoretical discussion of the cause, deciding that it is due to sudden increase of the blood pressure in the thorax, and consequently above the thorax, by any occurrence, such as vomiting, abdominal injury and the like, which increases abdominal tension greatly or has a very decided reflex action on the other vessels. The reason that the hemorrhages then occur in certain regions, and not in others (it is, for instance, extremely rare within the cranium if there is no arterio-sclerosis) is that the hemorrhage, in Hoppe's belief, actually results from the wave-like impulse given by renewed efforts at vomiting, for instance, to the blood contained in the vessels, the pressure in the thorax, the above being already very high. This wave is broken by the cranial bones, and hence is not carried into the cranial vessels. [D. L. E.]

August 1, 1901.

1. A Clinical and Anatomical Contribution on Acromegaly. A. FRAENKEL, E. STADELMANN and C. BENDA.
2. On Certain Cardiac Disturbances Which Are Not Caused by Organic Disease. TH. RUMPF.
3. On a Typhoid-like Disease Produced by a Previously Undescribed Bacillus (*Bacillus Bromensis Febris Gastricae*). Kurth.
4. Contribution Concerning Post-typhoidal Bone Suppuration. ERNST UNGER.

..1.—To be continued.

..2.—Rumpf directs attention to his previous description of cardiac disturbances which are due to excessive mobility of the heart, and, as he believes, as further convincing evidence that these disturbances are actually due to the cause he mentions, he reports an interesting case. A man of 30, who weighed 239 pounds, had, during treatment for obesity, rapidly reduced his weight to 153 pounds. He afterward complained of dyspnea and oppression when he lay on either side. The abdominal wall was greatly relaxed, and dropped to one side if he assumed a lateral posture, and it was noted that while under ordinary circumstances the cardiac signs were about normal, if he lay first on the left side and then on the right, the apex beat moved to the midaxillary line and then went over to the left border of the sternum, and the cardiac dulness showed a corresponding change of position. He was fattened again, and when he had reached about 200 pounds in weight he reported that his cardiac symptoms had disappeared, and an examination showed that the heart no longer moved with excessive frequency. He had at this time, however, a mild diabetes. Rumpf considers that the cardiac symptoms which often appear with dyspeptic disturbances are the result, in many instances, at least, of mechanical displacement of the heart by the distended stomach, though they are at times undoubtedly reflex. He also refers to cardiac disturbances after eating special forms of foods and to those (usually irregular action, etc.) which follow upon nervous excitement, such as the necessity for making a public speech, etc. The absence of distinctly abnormal physical signs, excepting the excessive

mobility, justifies one in a tentative statement that the symptoms are due to the excessive mobility, and not to organic disease, though one must always have in mind the possibility of beginning intestinal nephritis or early general arterio-sclerosis. [D. L. E.]

3.—In 1900 there was an epidemic of typhoid fever in Bremen, and in the course of this epidemic a number of cases became notable because the typhoid Widal reaction was constantly negative, though they presented the other usual characteristics of typhoid fever of mild form. These cases were, in part at any rate, apparently due to a bacillus not previously described. In five cases a very close, almost certain, etiological relationship between the bacillus and the disease was established, in one of these cases by both the serum reaction and the isolation of the bacillus, in three cases of a strong serum reaction, and in the fifth case by the isolation of the bacillus from the urine three weeks after the fever had disappeared. In the last case the serum reaction was negative, at the time when the bacillus was isolated, but the bacillus was present in large numbers (240,000 to the ccm.) in the urine, and its relation to the disease seemed very probable. The bacillus resembled the typhoid bacillus and Gaertner's bacillus enteritidis, but showed distinctive differences from both of these. It was actively pathogenic in pure culture. The cases ran a mild course, and all ended in recovery. Hence the anatomical changes are unknown. [D. L. E.]

4.—The case was that of a young merchant, who had typhoid fever in August-October, 1900. In February, 1901, he noticed a swelling below the right olecranon, and another swelling was found near the head of the right radius. An incision into the larger swelling showed suppuration, with bone caries, and the typhoid bacillus was identified in the pus. The interesting points in the case were the situation of the suppuration, which was an unusual one; the fact that, as is often the case, there were two points of involvement, though the smaller underwent spontaneous resolution, and the fact that at the time of the suppurative process the man showed no Widal reaction. (A similar observation was made by Conrad, abstracted from *Deutsche medizinische Wochenschrift* last year). [D. L. E.]

August 8, 1901.

1. The Present Position of the Question of Immunity. F. ROEMER.
2. On the Influence of Alcohol on the Excretion of Uric Acid. RUDOLPH ROSEMAN.
3. Concerning the Differential Diagnosis of Appendicitis and Typhoid Fever. RICHARD MUEHSAM.
4. A Clinical and Anatomical Contribution to Our Knowledge of Acromegaly. A. FRAENKEL, E. STADELMANN and C. BENDA.
5. The Limits of the Ability to Elevate the Arm and the Physiological and Clinical Importance of the Same. STEINHAUSEN.

1.—Römer in this portion of his paper merely reviews some of the earlier and more modern theories concerning the nature of immunity and the manner in which it is produced. (To be concluded.) [D. L. E.]

2.—Rosemann reports some work done by Haeser. The subject was kept on about the same diet throughout three periods of ten days each; in the first period normal conditions were present, in the second 1 to 2 litres of water were drunk each day, in order to determine the influence of diuresis alone, and in the third period 75 ccm. of 96% alcohol were given daily in 1500 ccm. water. This quantity of alcohol was sufficient (with this subject, who was entirely unaccustomed to the use of alcohol) to produce a more or less constant condition of mild intoxication during the first few days, and throughout the entire period the physiological effects of the alcohol were distinctly felt. In the normal period the subject excreted 0.8288 gm. of uric acid, in the water period 0.5879 gm. and in the alcohol period 0.7611 gm. Hence the alcohol did not cause any increase beyond the normal amount. After reviewing the work of others on the same question, Rosemann states that we can say definitely that alcohol may have no influence upon the uric acid excretion, or it may cause the excretion to increase or decrease slightly—in other words, no characteristic effect can be observed. It might be thought that alcohol exerted an evanescent influence which would not be evident in the twenty-four hours' urine. The values for uric acid, which are found at different times of the day, are very variable unless the subject abstains from

food; in the latter case the excretion is high and somewhat variable in the morning and low, but nearly regular in the afternoon. Another subject was investigated while abstaining from food, alcohol being given at 1 P. M. and 5 P. M. (each time 50 cc.), and 150 ccm. water being taken every two hours to prevent retention of metabolic end products. No influence was observed from the first dose. After the second dose signs of acute alcoholism and a condition approaching collapse appeared, and the urine excreted during the two hours following this dose contained absolutely no uric acid! (i. e., there was no silver precipitate excepting that readily soluble in ammonia). The reaction which this very remarkable observation (which is apparently unique) bore to the ingestion of the alcohol could, of course, not be stated positively. Rosemann concludes that, while alcohol certainly appears harmful to subjects of gout, the study of its influence upon the excretion of uric acid does not explain its unfavorable influence in gout, and this is not to be wondered at, as we do not know that uric acid has anything to do with the causation of gout, and, on the other hand, we may feel assured that there are, at any rate, other factors than uric acid which do bear a close relation to the production of gout. [D. L. E.]

3.—The case reported was an unusually striking instance of a condition which is of itself not very uncommon, i. e., symptoms of appendicitis in the early stage of typhoid fever. The patient, a man of 32, who had previously been well, except for an attack of acute nephritis, in 1894, was taken very suddenly ill with chill, vomiting, constipation, violent pain in the region of the appendix and fever, roseolae, enlargement of the spleen, the Diazo and Widal reactions were all absent, the appearance of the patient was not at all suggestive of typhoid fever, the stools were not characteristic (they were found hard and of brown color), and the symptoms were typical of appendicitis. Examination had also disclosed severe tenderness in the right iliac fossa and localized resistance at McBurney's point. The illness began on May 4; the man was sent to the hospital on May 8, and on the evening of the 8th, since he seemed gravely ill, and gangrene of the appendix was feared, he was operated upon. Old adhesions between the appendix and cecum were found and divided, but there was no sign of recent inflammation of this organ. There was, however, an ulcer about ½ cm. in diameter in the cecum, which had advanced to the serosa, and was near the stage of perforation. This was turned into the lumen of the bowel by stitches and the wound closed. The character of the ulcer, the associated swelling of the mesenteric glands, the subsequent development of splenic enlargement, positive Widal reaction and characteristic Piorkowsky culture, and the course of the disease after the operation made it seem thoroughly well established that the case was one of typhoid fever. The man was never gravely ill after the operation, and stated almost at once after the operation that his pain was greatly relieved. Similar cases from the literature are given in abstract. [D. L. E.]

4.—To be concluded.

5.—Steinhausen has investigated the elevation of the arm, and states that there are a number of serious errors in the usual teaching. He finds that the scapula rotates in all through an angle of about 60°, becoming fixed when the arm has been elevated about 150°. Throughout the whole process of elevation of the arm the angle between the scapula and the arm constantly changes. The abductors act throughout an angle of 120°. The rotators of the scapula have, therefore, a much less important share in the elevation of the arm than is commonly taught, a fact which explains the observation that the arm can often be elevated to a surprising degree in cases of isolated deltoid and serratus paralysis. It is commonly taught that the greatest degree of simple elevation of the arm is to a right angle, and that elevation, without bending the trunk, can be carried to only 120°. Steinhausen finds, on the contrary, that elevation, without movement of the trunk, can in 71% of cases be carried to from 170° to 180°, and 6% of the persons investigated could carry it beyond 180°. He did not find it below 155° in any one. Passive movements could not be carried much beyond the degree of the active, the reason being that the normal muscular rigidity interfered. It is usually taught that paralysis of the brachial plexus, resulting from gymnastic exercises, etc., is due to compression of the plexus between the clavicle and the first rib of the lateral processes of the fifth and sixth cer-

vical vertebrae. Steinhausen thinks that this is impossible, as the clavicle is so acutely bent that there is, in all positions assumed, a space between it and the bones beneath. He attributes such paralysis to an overstretching and consequent laceration of the nerve fibres of the plexus itself and of the finer nerve fibres in the muscles, the cause being that the elevation of the arm is caused by passive force, beyond the physiological limits. [D. L. E.]

ARCHIV FUER EXPERIMENTELLE PATHOLOGIE UND PHARMAKOLOGIE.

(Band 46, Heft 3 und 4.)

1. On the Action of Etheral Oils in Reducing Inflammation. WINTERNITZ.
2. On Reduction of Nitro-Bodies and on Their Action. WALKO.
3. On the Innervation of the Heart. ESSLEMONT.
4. The Behavior of Cacodylic Acid in the Organism. HEFFTER.
5. The Behavior of the Urine After the Use of Sandal Oil. KARO.
6. Concerning the Amount of Iron in Mothers' Milk and Its Importance to the Suckling. JOLLES and FRIEDJUNG.
7. On Synthesis in the Animal Body (Third Report). Further Facts Concerning Citral, Its Oxidation, Products in the Organism, and Certain Cyclic Isomers. HILDEBRANDT.
8. Metabolism in High Altitude. JAQUET and STAEHELIN.
9. Concerning Rododendrol, Rododendrin and Andromedotoxin. ARCHANGELSKY.

1.—Winternitz has investigated the action of turpentine oil upon inflammation by injecting aleuronat into the pleural cavity of rabbits and thereby producing an exudate which consists chiefly of fluid and mononuclear leukocytes, comparing untreated animals with those that have been given oil of turpentine. He found that the exudate was smaller in amount after using turpentine than when the animals were treated, the difference in amount of exudate not depending upon a mere difference in the amount of fluid, but upon a difference in all the elements of the exudate. He believes that this demonstrates that turpentine reduces the intensity of the inflammatory process and that its influence upon many conditions attended with inflammation is due to this direct action upon the inflammatory process itself rather than upon any bacterial infection present or upon the diuresis; he could not find that turpentine had any notable diuretic effect or that the urine of persons who had been taking turpentine controlled the growth of bacteria. He believes that the influence is probably a direct result of the positive chemotactic influence of turpentine—i. e., the leukocytes in an exudate or those that would otherwise collect in the exudate are very strongly attracted by the turpentine circulating in the blood and hence the amount of leukocytic exudate is reduced. Winternitz feels justified in recommending the internal use of ethereal oils (as represented by turpentine) in the treatment of inflammatory processes. In one way this treatment presents an advantage over local blood letting—it does not abstract nutritive material from the organism while blood letting does. [D. L. E.]

2.—Walko finds that picric acid is excreted as such, as picraminic acid and as a red pigment, through the urine; further a portion of the picric acid whether given subcutaneously or intravenously, is excreted through the intestine. The partial reduction of the picric acid to an amido-body must be looked upon as a "vital" process, as outside the body this takes place only at very high temperature, while in the body it occurs with ordinary temperature. The production of the pigment is probably the result of the action of bacteria. The reduction which took place was, however, so small in amount that it does not explain the physiological action of picric acid (as a representative of a class of nitro-substituted phenols). The nitro-substituted phenols have not so active a tendency to form aromatic sulphates

as have phenols themselves. Winternitz found picraminic acid more poisonous than picric acid. He adds some further investigations of the effect of nitro-compounds of the nux vomica alkaloids and makes the interesting report that like the alkyl-derivatives, the nitro-compounds of strychnia, brucin, etc., show the curare-like effect of these alkaloids to such a degree that the convulsive effect is entirely overcome and the action is in general of the curare type. [D. L. E.]

3.—Esslemont notes the now prevailing belief that the nerves of the heart include fibres which decrease the rapidity of the heart's action; others which increase its rapidity; fibres increasing and others diminishing the pulse volume. The results of experiments concerning the last two varieties of fibres have, however, been extremely irregular. Sometimes increase in pulse volume follows stimulation of certain fibres, sometimes decrease resulted from irritation for exactly the same fibres. Esslemont's experiments upon frogs and rabbits led him to the decision that the influence upon the pulse exerted by stimulating the fibres which increase or decrease the force of the heart's action is determined by the tonic condition of the heart at the time, i. e., whether it is over or under a certain optimum. If over this optimum, stimulation of fibres increasing the force of contraction would further shorten and make still more imperfect an already excessive diastole and would reduce the size of the pulse, while under the same circumstances stimulation of the fibres which decrease the force of contraction would to some extent increase the pulse volume. If the heart tone is below the optimum, stimulation of the fibres increasing contractile force will increase the pulse volume. In any case extreme stimulation of either set of fibres will decrease the pulse volume. [D. L. E.]

4.—Heffter describes his special methods for the quantitative estimation of arsenic and cacodylic acid in the urine. He finds that a small portion of the cacodylic acid ingested is found in the urine arsenous or arsenious acid, and he believes that the action of cacodylic acid is set free in the organism. He found that numerous organs, most markedly the liver, the stomach and the intestines contain substances which have exceedingly active reducing properties and which readily reduced cacodylic acid to cacodyl oxide. [D. L. E.]

5.—Karo states that the characteristics of the urine after the use of sandal oil, which distinguish it from urine after using balsam of copaiba, are as follows: copaiba urine gives color reaction after adding mineral acids and rotates the plane of polarized light. Sandal oil urine gives neither of these reactions. Sandal oil contains gummy acids in large amounts and they are precipitated by concentrated HCl. The intensity of the precipitate is proportionate with the amount of sandal oil ingested. The same reaction occurs after using copaiba, but is much less intense. Sandal oil in the urine contrary to copaiba urine has a marked reducing action due to the pressure of glycuronic acid compounds—probably the glycuronic acid compound of the sesquiterpenalcohol of sandal oil. Copaiba urine has no reducing power, and is said to exhibit the reactions peculiar to it for several days after taking copaiba, while sandal oil urine shows its peculiar reactions from only twelve to fifteen hours after taking sandal oil. Hence the latter drug is much more rapidly excreted than copaiba. [D. L. E.]

6.—Jolles and Friedjung find that the milk of normal women contains a small but constant amount of iron, really much more than has previously been generally stated and they believe that contrary to the statements of some of the authors (Bunge and others) this iron must be considered to be of importance to the suckling, and we can not justly maintain that the suckling derives all the iron it needs for tissue, blood building and repair from deposits in its own tissues until it begins to receive other forms of food than milk. Some authors describe a gradual reduction of the amount of iron in mothers' milk during the period of

nursing. Jollès and Friedjung could not confirm such observations. Bad physical surroundings, chronic disease, or relatively advanced age of the nurse seem to reduce the iron of the milk notably and nurses who were apparently healthy but whose children showed marked nutritive disturbance, usually exhibited a decided reduction in the amount of iron in the milk. The authors believe that besides other sources of failure artificial nourishment of infants may have the added error that the child is given too little iron. They discuss the method of estimating the iron of the milk and describe their own method in detail. [D. L. E.]

8.—Jaquet and Stäbelin makes the interesting statement that two apparently contrary changes are seen in the total end-products of metabolism when the subject examined goes from a moderate altitude to a high elevation—the nitrogen excretion and apparently that of the nitrogenous tissue is reduced, while the CO_2 expired and the O_2 inspired increase in amount, and the respiratory quotient rises in value. The change in the CO_2 and oxygen persists for some time after returning to the previous lower level. The very decided differences in the excretion of water during the different periods of study, made the records of body weight valueless, so that no conclusions could be safely drawn as to the effect on the total amount of tissue. The increase in the respiratory quotient could not be referred to the most economical oxidation of the nitrogenous tissues; it was too marked to be subject to such an explanation and was evidently the result of mere active oxidative process. Since the nitrogenous tissues were not involved in this more energetic oxidation, the carbohydrates were necessarily oxidized more rapidly and in greater amount and hence the quotient rose. Considering the high caloric value of the food taken, the authors believe that they may safely state that the lower altitude fat was stored, while in the mountainous region less was stored up and perhaps none was laid by or there was a loss. On the contrary, nitrogenous substances were stored up in the organism at the higher altitude. The contrary influence upon the nitrogenous tissue and the fats is an interesting observation which they do not attempt to explain. It is evident that the effect of mountainous regions upon metabolism is a complex one, especially when considered in connection with the influence of high altitudes upon the blood count. The subject of the experiment was one of the authors. The preliminary and final periods of study were made in Basle, the study of the influence of high altitude was carried out on the Chasseral at an elevation of over 6000 feet. [D. L. E.]

9.—Archangelsky has investigated the leaves of the *Rhododendron Chrysanthemum* and besides the glucoside ercolin, which was previously known, has found that they contain two formerly unknown substances which he calls rhododendrin and rhododendrol. The first is a glucoside which is probably found in other varieties of *Rhododendron*. Rhododendrol belongs to the camphor group and its physiological action is in frogs like that of camphor. Dogs and rabbits showed no effects from doses of 1.5 grains and larger quantities could not be tested from lack of material. Rhododendrol appeared in the urine—apparently in combination with glycuronic acid, in part at least. Rhododendrin showed no physiological effects. The formulae and the elementary analyses of these two substances are given. Andromedotoxin has been found in a number of varieties of *Andromeda* in some azaleas, in the *Rhododendron ponticum*, and in the plant mentioned by Xenophon in his *Anabasis* as "the poisonous honey of Trapezunt." Archangelsky obtained his specimen from *Rhododendron ponticum* and in studying its physiological effects found in agreement with previous authors that it causes vomiting, prostration, fibrillary muscular twitching, convulsive movements and finally complete paralysis. He also adds that in doses of 0.0015 grains (to frogs) it has pronounced effect upon the heart; it causes death by an action similar to that of digitalis, though differing in the fact that the

ventricle instead of stopping in full systole, is found in half systole. The auricles beat for some time after the ventricles have stopped. A similar action upon the heart was seen in mammals also. [D. L. E.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

(Band 43, Hefte 3 and 4.)

1. The Pathogenesis of Chronic Gastric Ulcer.
W. VAN YZEREN.
2. Casuistic Contribution Concerning the Clinical History of Diabetes Mellitus and the Metabolism in This Disease. HUGO LUETJKE.
3. Unusual Presence, Absence and Reappearance of the Patellar Reflex in Spinal Diseases, Particularly in Tabes Dorsalis, Transverse and Syphilitic Myelitis.
G. L. MANLOCK.
4. Investigations of the Action of Berberin.
MAX NOSSE and KURT TAUTZ.
5. The Fermentative Decomposition of the Nucleo Proteids in Metabolism. F. UMBER.
6. Determination of the True Size and Position of the Heart by Means of the Röntgen Rays.
KARFUNKEL.
7. Metabolism in Acromegaly During Treatment with Oxygen, Phosphorus, etc.
W. D. v. MORACZEWSKI.

1.—Van Yzeren reports that he has been able in a series of cases to do what many investigators have vainly sought to accomplish, i. e., he has produced typically situated chronic gastric ulcer in animals, the gross and microscopic appearance of these ulcers being practically identical with those observed in gastric ulcer in human subjects. His method was to cut the vagus below the diaphragm. Only one animal of the 20 operated upon died; the others were killed at various periods after the operation. The one that died suffered from some intercurrent disease not connected with the operation. With the exception of three cases, in two of which the animal was killed within 8 days after the operation, and in the third there was an acute perforating ulcer, there was but one ulcer; in the 3 cases mentioned there were multiple ulcers. 10 of the animals operated upon showed ulcers; six were killed after as long as 40 days after operating and one after 169 days, one even after 289 days! Yet ulcers were present that presented the characteristics of the human ulcer-necrosis first with subsequent inflammation and hyperplasia of the tissue in the neighborhood, and certainly the oldest of these ulcers must be called chronic in point of the time of their duration, and all those that had been present for any considerable length of time were evidently chronic both from gross and microscopic appearances. Van Yzeren believes that spasm of the pylorus and pyloric portion of the stomach is immediately responsible for the production of these ulcers; the effect of vagotomy is to produce spasm of the pars pylorica, and palpation of the abdomen of these animals also gave evidence of spasm in that the pyloric portion of the stomach could be felt as a well defined mass while in animals without ulcer it could not. He believes that spasm of the pars pylorica is probably the cause of ulcer in human beings also, and that it may sometimes be definitely diagnosed by feeling the contracted pyloric portion or by observing the occurrence of intermittent retention of gastric contents. Because of the danger attending all the operations which are now used in treating gastric ulcer and because the results from the best are not very satisfactory, Van Yzeren has devised a new operation which consists in dividing the muscular layer of the entire pyloric portion, pylorus and a small part of the beginning of the duodenum down to the submucosa, leaving the muscularis mucosa intact. 12 rabbits were operated upon in this way after vagotomy. 4 of the animals died of an epidemic which appeared at that time among the rabbits. Of the other 8 one died of peritonitis. Of the remaining 7 one only had gastric ulcer afterward. This seems to Van Yzeren good evidence that the operation has prophylactic worth and he believes that it will have curative value. At any rate it would seem less dangerous than any other operation that has been recommended for this purpose, and seems likely to relieve pyloric spasm. [D. L. E.]

2.—Among the interesting facts in Luthje's communication was the observation that the reaction for diacetic

acid was absent before the man was admitted to the hospital ward. After admission to the ward, coincidentally with a marked reduction in his food, particularly in the protein, the urine exhibited a very marked iron-chloride reaction, which again became greatly lessened in intensity as the meat diet was doubled. Marked diacetic acid reaction was also seen after a severe attack of diarrhea which was accompanied by marked prostration. A curious accident led to an interesting therapeutic observation. The man had become mildly comatose after steadily growing worse, and a 3% sodium bicarbonate solution was ordered. By mistake soda was used instead and he was given 500 c.c. of this strongly alkaline solution by the mouth and the same amount intravenously. His oral mucous membrane was red and swollen next day but the man was free from coma and signs of danger. He died three weeks later in deep coma, however, in spite of the intravenous administration of 500 c.c. of 3% bicarbonate solution. Extended observations of the metabolism of the patient are given. Contrary to the reports of numerous authors, Luthje could not observe any diminution of the sugar excretion or any increase in the nitrogen output during the period of coma. (See also Magnus Levy on the same point, abstracted from *Archiv f. Exper. Pathol. u. Pharmacol.*, April 26 (?), 1901.) The use of the large quantity of alkali during the first attack of coma resulted in a diminution of the NH₄ excretion by about 6 grams. The ammonia excretion in the last few days of life was enormously high, reaching over 11 grams on one day. Casein (nutrose) was used in the diet to see the effect on the sugar excretion—contrary to the statements of authors who base their remarks on test-tube experiments, casein did seem to furnish sugar and to increase the glycosuria distinctly. In discussing Rumpf's remarks (abstracted last year, or year before, from *Deutsch. Med. Woch.* or *Berl. Klin. Woch.*) concerning the possibility of the production of sugar from fat, Luthje sensibly states that we know too little as yet about the maximum amount of sugar that can be produced from protein to make it justifiable to reason concerning the production of sugar from fat on the basis of the nitrogen sugar ratio. Luthje thought it possible that the intestinal glands functionate to some extent in place of the pancreas, and therefore removed the pancreas of a dog with the entire duodenum to see whether the nitrogen-sugar ratio did not rise. 1 to 2.8 (Minkowski's figures) was the highest relative sugar quantity found, but the dog died from gastric hemorrhage 3 days after the operation, and other animals operated upon similarly died almost immediately, so that while the result was negative as far as it went, it does not definitely answer the question in the negative. Food was well absorbed by the patient, and the striking nitrogen retention which occurred with a high caloric ratio was strongly suggestive of the conditions in convalescence from acute disease. Luthje believes that in this instance one could not believe even from a pure chemical standpoint that the acid intoxication which ultimately caused death was due to destruction of body albumins. The man was taking enormous quantities of albumin, and must have had no period of "albumin-hunger" in the whole 24 hours, and he was not losing albumin. The whole cause of the suddenly developing acid intoxication made the impression that a new factor had come into the case and that the acid intoxication was a metabolic disturbance, *sine generis*, not a mere excess in body protein destruction. [D. L. E.]

3.—Mamlock discusses a series of case reports of other authors, and their views and causes to the conclusion that the previous teaching concerning the nature and localization of the patellar reflex is correct, but that we must accept the existence of fibers probably coming from the cerebellum, which maintain the tone. The various unusual conditions of the reflex are the result of alterations of these fibers. There are many instances which seem to indicate absolutely, finally, that the brain has a regulatory influence from the reflex, not solely an inhibitory influence. It is notable that Clarke's columns suffer first in tabes, and that there is a close relation between the fibers of this column and the cerebellum according to recent investigations. In this way one may build a theory which will explain all of the varieties of patellar reflex seen in tabes dorsalis. If the fibers of Clarke's column are much involved, as is usual, the reflex is lost, if the involvement is slight, the reflex may be regained. In transverse myelitis the condition of the reflexes would likewise depend upon the degree of disturbance of the fibers controlling

the tone. That the reflexes are at times preserved in total transverse lesions may be due to the early irritation which precedes complete loss of function, or perhaps it is in some cases the result of trophic changes in the columns of Clarke. Mamlock thinks that the alterations described by some authors in the ganglion cells of the anterior horns in tabes dorsalis may be the result of alterations in fibers controlling the tone—just as similar changes occur with disease of the pyramidal tracts.

[D. L. E.]

4.—Mosse and Tantz investigated the physiological action of berberin because this drug has been recommended and used for the treatment of malaria, though its actual physiological effects are not well known. As to its effect upon bacteria—it restricts their growth, the products of albuminous decomposition are relatively decreased. It has similarly unfavorable effects upon the growth of higher plants, and interferes with their assimilation. In animals it causes emaciation, muscular weakness, reduces all reflexes and causes local lesions in the nerves. It produces acute hemorrhagic nephritis after a short time, and it causes a leukocytosis to develop. No effect upon the spleen could be observed. In frogs the tendency to reduce the reflexes was so strong that the drug controlled the poisonous effects of strychnine, neither after giving berberin nor after injecting Witte's peptone could any change in the activity of the blood in breaking up H₂O₂ be observed in spite of leukocytosis. [D. L. E.]

5.—Umber was led to his investigations by the fact that nothing is known of the course through which the pre-formed carbohydrate complex passes in the digestion of nucleo, proteids or other protein substances. Nucleo-proteid was studied (that of the pancreas) as it seemed hopeless with present methods to investigate albumins. The most directly interesting result of his research is the discovery that pure nucleoproteid is readily digested by a pepsin-HCl mixture. Contrary to the usual statement that pepsin acts but slightly while trypsin acts very energetically, Umber found that pepsin-HCl mixture digested a pure nucleoproteid to the extent that after 5 weeks' action only 0.96 grams of undigested remainder was left from the original 10 grams of nucleoproteid. Trypsin acted much more rapidly, however (the statement that pepsin-HCl mixtures do not digest nucleoproteid has been so generally and entirely accepted that one of A. Schmidt's tests of good pancreatic digestion was the absence of numerous undigested nuclei from the feces). Umber finds that digestion of nucleoproteids takes the following course:

Nucleoproteid.

Nucleoproteid.

Nucleic acid
free albumoses
(primary and
secondary) and
the products of
their further di-
gestion

There is apparently no half-way stage for the nucleic acid-containing substance in which it is still united with partly digested albumin—the splitting off occurs at once and is complete. Hence so-called "nuclein" (in the commoner sense, i. e., a combination of nucleic acid with partly digested albumin) does not exist, and the term nuclein should be confined to those substances in which the nucleic is combined with histon or protanim and not with albumin;—such substances are almost exclusively certain fish spermatozoa. There is no essential difference in the nucleic acid of the various organs of the body. The albumin-complex, after being split off from the nucleic acid complex follows the usual course of digestion of albumins. The albumin of the pancreas nucleoproteid seems therefore to be like the other body albumins in its chemical nature. The main result of the investigation was the discovery that the carbohydrates (pentose)-purin-base complex is split off from the albumin complex at once, and the two follow entirely separate courses in their further decomposition, a fact which Umber hopes to prove to be of decided importance in metabolism.

[D. L. E.]

6.—The measurements for the normal heart which Karfunkel gives as a result of his studies with the X-rays are as follows: Greatest lateral diameter, 11 to 12 cm., in very large men as much as 13 cm. Length, 9 to 12 cm., smaller lateral diameter, 8 to 10 cm. Greatest diagonal distance of the border of the right auricle from the ster-

num, $2\frac{1}{2}$ to at most $1\frac{1}{2}$ cm. The measurements which he obtained with normal and pathological hearts corresponds well with those obtained at post mortem, and he believes that one may determine the true borders of the heart with absolute exactness by means of the X-rays, and the same statement applies to the examination of the great vessel-trunks. [D. L. E.]

7. Moraczewski concludes after a study of the excretion of nitrogen urea, phosphorus, chlorides calcium and magnesium of the urine, as well as after a partial study of other elements of the urine and feces, that there is in acromegaly a tendency to retention of the tissue-building substances, particularly of the calcium and phosphorus, the nitrogen and calcium retention are comparatively readily overcome, and a balance obtained by medication or other treatment, but the retention of calcium and phosphorus is difficult to influence. Thyroid and hypophysis tablets decrease the retention to some extent, but not markedly. A more striking influence was observed after using oxygen inhalations, and the most marked effect was obtained from silver nitrate. [D. L. E.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

Vol. 70. H. 1 u. 2.

1. The Physical Signs and the More Recent Clinical Aids in the Diagnosis of Hernia of the Diaphragm. STRUPPLER.
2. Changes in the Composition of the Blood Produced by Vasomotor Influences, Particularly the Effect of Cold upon the Whole Body. BECKER.
3. To What Degree Can the Intercostal Auscultatory Signs be made Available in Case of Pleuritic Exudate? KETLY and WEISS.
4. Cardilographic Investigations in Cases of Flssure of the Sternum. JAQUET and METZNER.
5. Clinical Contribution to the Study of Normal and Pathologic Forms of Gait. JENDRASSIK.
6. Observations upon the Epidemic of Typhoid Fever in the Fortieth Infantry Regiment, with Special Consideration of the Diagnostic Significance of the Widal Reaction. KRAEMER.
7. Contributions to the Knowledge of the Anatomical Foundation of Muscular Dystrophy. KOLLARITS.
8. Scleroderma According to Personal Observations. NEUMANN.
9. Investigations Upon the Quantity of Fat Contained in the Human Blood. ENGELHARDT.
10. Book Reviews.

1.—Struppler reports the following interesting case. A man of 26, at the age of 20, fell from the roof of a house to the ground, a distance of about 40 yards, fracturing two ribs on the left side and the left fore-arm. Immediately after the injury he had persistent vomiting of everything that entered the stomach. Later, although he had great difficulty in retaining the food, he was able to do a little work, and during this period he observed gurgling as far as the left nipple. Since that time he has been unable to eat very much at a meal and therefore has frequent smaller meals. He complained from time to time of gurgling in the region of the stomach, especially when doing hard work. Repeated paracentesis of the thorax was performed on the left side without result. Physical examination showed that the interesting symptoms were a dull tympanitic note in the lower portion of the left thorax, displacement of the heart to the right, and the physical signs of a cavity partially filled with fluid and extending from the third rib downwards on the left side. The abdomen was negative. The symptoms were accepted as indicating diaphragmatic hernia, although the difficulty of differentiating from a subdiaphragmatic pyopneumothorax was recognized. In order to decide the question, aside from careful study of the physical signs, the stomach was inflated by giving a divided Seidlitz powder, when it was observed that the left side of the thorax even as far up as the third intercostal space became inflated and the patient had dyspnea and a feeling of extreme anxiety. After the patient had fasted for twelve hours, the gurgling and splashing disappeared almost completely. About a litre of water was then injected into the colon, whereupon the gurgling and splashing reappeared in the thorax, but less intensely. Examination with the Röntgen rays showed a clear transparent area in the lower part of the left thorax which was

more distinct after the patient had been inflated with carbon dioxide. An attempt at gastroduaphony was a complete failure, as the illumination did not appear anywhere. This Struppler explains by supposing that the stomach is situated in the centre of the thoracic cavity and is surrounded not only by the mesentery and omentum, but also by intestines. [J. S.]

2.—Becker has made a careful study of the influence of cold upon the blood when applied to the whole body, including a very careful analysis of the literature on this subject. He concludes from the latter that other authors have reached irreconcilable conclusions, some believing that there is contraction of the blood vessels, and diminution of the number of corpuscles, others, that there is contraction of the blood vessels and increase in the number of corpuscles. It is generally accepted, however, these changes do occur, but they disappear very rapidly. In regard to the leukocytes, some authors find that they are moderately increased in proportion to the increase of the red blood cells; others, that there is a considerable increase disproportionate to that of the red cells. His own investigations were upon various patients to whom a cold douche was administered, counting the blood carefully before and immediately after, and also one hour after the douche. The duration of the cold application was about 4 minutes, and the temperature of the water was 16° to 17° R. that is about 70° F. A second series of investigations was made upon patients suffering from typhoid fever who were placed in water of about 30° gradually cooled to 20° , or 100° down to 77° F. for one quarter of an hour. The results are given in tabular form. He finds under normal conditions the number of the red blood cells and the white blood cells is the same in the capillaries and in the veins. The application of cold produces an increase in the number of red and white cells, especially in the latter, when the blood from the capillaries was investigated. On the other hand, when the blood from the veins was counted, the number of white cells was usually diminished. In the course of an hour there was usually a slight diminution in the number of cells, below the normal. He regards the results as due to the withdrawal of water from the blood and the slight congested condition in the capillaries. The increase in the number of leukocytes is probably due to the fact that they emigrate to the periphery of the body as a result of the action of the cold. Under certain pathological conditions the diminution in the moderate degree of stasis may account for some of the results. [J. S.]

4.—Ketly and Weiss have examined a number of cases in order to determine to what extent the vocal phenomena observed in the intercostal spaces are of value in determining the existence and extent of pleural exudates. The details of these cannot be given in the abstract, but the authors draw from them the following interesting conclusions. That the phonation phenomena in the intercostal spaces may be made a trustworthy basis of physical diagnosis. The lower boundary of the exudate can be determined with considerable accuracy although the phenomena may be partially obliterated by the formation of masses of connective tissue or the reflex contraction of the intercostal muscles. If in the centre of an area of dullness, ordinary vocal resonance fails, it is possible, provided there is not a thin layer of aerated pulmonary tissue between the focus and the ear, to conclude that there is a sacculated exudate. Naturally these physical signs may be carefully corrected by consideration of all the others.

5.—Jendrassik has devised a very ingenious method of recording peculiarities in gait by means of instantaneous photographs. The difficulties that have hitherto existed in all attempts of this kind, are, the expense of the apparatus, its complicated nature, and the time required to employ it. In order to overcome this, Jendrassik employs a single camera with a rather long plate placed horizontally. The lense is of such construction that it gives a short, flat image on all parts of the plate. This camera is set up in a room whose walls are black, but which is, however, well illuminated by a window towards the south, or as in his own case, towards the southwest. However, as direct sunlight cannot well be employed, other exposures are equally satisfactory. The camera is directed away from the window and the patient walks in front of it at such a distance that his image is clearly projected upon the ends of the plate, at either end of a 3 metre promenade. As

the patient walks, an instantaneous shutter is opened and closed from 5 to 8 times, producing that number of images upon the plate. They rarely overlap, or if so, only slightly. The advantages of this method are, of course, its cheapness—4 to 6 photographic plates exhibiting every phase of the step—its simplicity, and particularly the ease with which the results are studied. Reproductions of the results upon the plates are remarkably clear and satisfactory. In order to render these results sufficiently graphic, Jendrassik employs the method of making dots upon the shoulder, hip, knee, and ankle, on the side next the camera. He then connects these by lines which are traced upon the chart, showing both the movements of the legs and the oscillations of different parts of the body. He concludes the paper with careful studies of the normal and various pathological forms of gait. The latter he divides into several types, the hypertonic, which is subdivided into the hemiplegic and spastic, the hypotonic, the myelitic or mixed form, the ataxic, the cerebellar, the gait of paralysis agitans, and the hysterical disturbances. All these forms are illustrated. [J. S.]

6.—Krämer reports the results of his studies upon the epidemic of typhoid fever that broke out in the Fortleth Infantry Regiment, stationed at Aachen. Although 142 men were taken sick; 81 with typical typhoid fever; 31 with the so-called febris typhoid sine gastrica, and 30 with rather indefinite symptoms. The cause of the epidemic was traced to a house in the neighborhood of the parade ground from which the milk for the garrison was purchased, and in which a patient suffering with typhoid fever was found. Some objection was raised to this hypothesis on the ground that this patient was himself a part of the epidemic, and the actual cause extended back at least a year. Ninety-two cases were sent to the Maria Hilf Hospital, of which 43 had typical typhoid fever. Among the complications were bed-sores in three cases; orchitis in one case; otitis media and croupous pneumonia each in two cases; and severe involvement of the larynx in 3 cases, necessitating tracheotomy. He has studied also the Widal reaction in many of these cases, particularly by means of the method of Babanke. This consists in the employment of pure blood in solutions of 1 to 20. He finds that it is quite as efficient as any other method of study, and is much more convenient to carry out. The reaction occurred in all cases of typhoid fever with the exception of 4; but in some of the cases it did not occur until the 24th day after defervescence. In the cases in which there was no reason to suspect typhoid fever, it was invariably negative. Krämer, however, believes that a negative Widal reaction should not be regarded as indicating the absence of typhoid fever, although Widal reaction denotes its presence. [J. S.]

7.—Kollarits, after a brief review of the literature of the pathology of muscular dystrophy, reports a case of a boy, 10 years of age, who clinically presented a typical picture of the pseudo-hypertrophic form. The disease had existed for a considerable time, and for at least two years the patient was unable to walk. He was unfortunately drowned whilst bathing, and at the autopsy fatty degeneration of the muscles was discovered. Some of the fibres were atrophic, and some hypertrophic. The nervous system was carefully examined, and the following changes found. Dilatation of the central canal; diminished number of fibres in Lissauer's zone; in the gray matter surrounding the central canal, in the anterior and posterior commissures, and in Clark's column. The ganglion cells of the anterior cornua were intact, excepting that they appeared to be smaller in size. Kollarits concludes that these changes are not secondary to the muscular condition, but represent an impaired development similar to that which had taken place in the muscles. [J. S.]

8.—Neumann reports five cases of scleroderma occurring in elderly persons, the youngest being 41 years of age, and the oldest sixty. In a critical analysis of the symptoms presented by these he first objects to the tendency to divide the disease into stages. The etiology of the disease is still entirely obscure. It may be infectious; it may be nervous; it may have some analogy to Raynaud's disease. At any rate, in Neumann's cases there were no symptoms of disease of the central nervous system, the changes resembling, to a certain extent, those found in paralysis

agitans. The patients appeared to have seriously impaired nutrition, so that there is some reason to suppose the existence of a state of chronic poisoning. The cases improved occasionally upon treatment, although we do not know what drugs are most efficient. Internal preparations of salicylic acid sometimes proved effective, and locally, in addition to ordinary rubbing, etc., ichthyol has proven of service. Fango was used in one case without result. Tallerman's hot air treatment has proved beneficial in some cases. [J. S.]

9.—Engelhardt has performed a number of experiments upon human blood in order to determine the quantity of fat that it contained. He used for this purpose 10 ccm. of blood obtained from the median veins of various persons, healthy or suffering from some disease. In 8 healthy persons, the average results were .191%; the maximum was .273% and the minimum .101%. In five patients suffering from cachexia the average was .171%; the minimum .112%, and the maximum .284%. The lowest quantity represented the fat obtained from the blood of a vigorous, stout girl. Engelhardt concludes that in wasting diseases no increase in the quantity of fat in the blood can be detected, and that individual variations are very considerable. He calls attention to the difference between his results and those of Bönninger, who found an average of .75 to .85% of fat in the blood. He regards this as due to the errors incident to the methods employed. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

July 25, 1901. (XIV. Jahrgang, No. 30.)

1. Antilytic Serum.
JULIUS DONATH and KARL LANDSTEINER.
2. The Pathology of the Omphalo-mesenteric Duct and Meckel's Diverticulum.
ERNEST VON KARAJAN.
3. The Illness of the Actor Fritz Krastel. O. CHIARI.

1.—Donath and Landsteiner have performed experiments by a new method, to discover the relations between the bacteriolytic and hemolytic substances of the blood and the cells of the same animal. They made three kinds of researches, microscopic examination of phagocytic leukocytes, observation of parallel changes in the leukocytes, serum, plasma, etc., and the production of extracts of the leukocytes. These were made by freezing them and dissolving them in a dilute saline solution. Experiments showed that serum thus obtained resembled leukocytic serum. They consider their leukocytic, erythrocytic, lymphatic, or milk serum to be a "complemental serum." But their cell serum differs from that gained by serum-injection, especially in regard to its specific character in bacteriolytic investigations. Therefore the absolute identity of the two serums cannot be established. The significance of their results lies in the fact that, both in the cells and in the serum, similar substances can be found, which are specific to a certain extent for the species in question. They intend to publish full details of their work later. [M. O.]

2.—Karajan reports in detail three cases. The first was a student of 20, in whom appendicitis with perforative peritonitis was diagnosed. Laparotomy showed diffuse peritonitis with a band from the umbilicus to the small intestine, which obstructed the transverse colon. This band which was inflamed at its intestinal end, was removed and the patient recovered in three weeks. Strangulation was not produced by the persistent omphalo-mesenteric duct, simply compression, like that due to Meckel's diverticulum, when present. In the second case, a man of 38, laparotomy showed a persistent Meckel's diverticulum, which was attached to the mesocolon. This held a fold of the ileum incarcerated. Death occurred the day after operation. An abscess was found at the end of the diverticulum joining the mesocolon. The third case was a man of 30, in which the Bassini operation for right-sided inguinal hernia was done. A band was found in the hernia, which was removed, and the intestine sutured. This was the remains of Meckel's diverticulum. Other similar cases in the literature are cited. [M. O.]

3.—Chiari relates the details of the recent illness of the actor Fritz Krestel. He had a right-sided croupous pneumonia, followed by the occurrence of many small abscesses, with induration. At first streptococci and pneu-

micrococci alone were seen. Later influenza bacilli and staphylococci were seen in the sputum. At no time were tubercle bacilli found. He was ill almost three months, but has now recovered. [M. O.]

August 1, 1901. (XIV. Jahrgang, No. 31.)

1. The Excretion of Chloroform by the Respiratory Organs. KONRAD BUDINGER.
2. The Occurrence of Immune-Hemagglutinin and Immune-Hemolysin in Milk. RUDOLF KRAUS.
3. Aneurysm of the Aorta. ANTON KROKIEWICZ.

1.—It is a well known fact that the odor of chloroform is noted upon the breath of a patient for some time after operation. Budinger has constructed an apparatus by which he can collect the chloroform from the expired air in cold water. This apparatus was used once or twice daily, as long as any chloroform could be found in the breath exhaled. The results are unequal, as some patients could not expire into the tube well. In 20 cases, chloroform was found in the expired breath 24 hours after operation. In some cases it was still present on the fifth day after operation. In four of the cases chloroform was found longer than in the sputum expectorated. Thick pharyngeal mucus seems to hold chloroform longer than thin, watery sputum. It is thus plain that the irritation produced by the chloroform during and right after operation continues for some time longer. [M. O.]

2.—Kraus' experiments upon dogs showed that specific hemagglutinin is found in the milk of dogs treated previously with canine blood corpuscles. His experiments upon goats showed that immune-hemolysin could not be found in the milk of immune animals, in the serum of which immune-hemolysin was present. Kraus concludes that immune-hemagglutinin is excreted by the mammary gland; that immune-hemolysin is not excreted by the mammary gland or kidneys; that immune-hemolysin can be transmitted to the child in utero by the mother; and that immune-hemagglutinin is not transmissible by nursing. [M. O.]

3.—After detailing the differential diagnosis between aneurysm of the ascending aorta and aneurysm of the arch of the aorta, Krokiewicz reports an interesting case of an aneurysm of the ascending aorta in a man of 47, both syphilitic and rheumatic. Pain had existed about the heart for three years, with typical pulsation, tumor, dyspnea, etc. The autopsy showed an aneurysm which had spread out in the pericardium and left pleural cavity. It had been a question, clinically, whether this was not an aneurysm of the right ventricle, from its position, the large amount of dullness, etc. Gelatin injections did not appear to benefit the condition at all. [M. O.]

August 22, 1901. (XIV. Jahrgang, No. 34.)

1. Sudden Death from Myocarditis in Children with Apparently Insignificant Superficial Ulceration. ZUPPINGER.
2. The Etiology of Abscess of the Liver. EGON RANZI.
3. Atypical Psoriasis. ALBRECHT BEYER.

1.—Zupplinger reports three cases of sudden death from heart failure in children with some superficial ulceration. The first case, a boy of three, had an infected wound of the back of his foot, received a week before. He refused nourishment, and grew pale and weak. The wound healed. The heart dullness increased, quantities of albumen appeared in the urine, edema developed with ascites and hydrothorax, and he died just 21 days after the wound occurred. The autopsy showed hypertrophy of the heart, with acute myocarditis and nephritis, induration of the liver and spleen, bilateral hydrothorax and ascites. No bacteria were found. The second case, a boy of 14 months, who had been burned in the inguinal region, died suddenly, on the eleventh day after the burn, in a convulsion which lasted hardly a minute. Here, too, autopsy showed acute myocarditis and nephritis. The third case, a boy of three, had eczema for months, followed by abscesses of the cervical lymph-glands. He died suddenly the day after the abscesses had been opened. In these cases the nephritis shows the severity of the intoxication, which must have been due to infection from the open wound. In none of the cases were there symptoms of sepsis, nor were germs found. Thus Zupplinger believes it possible

for death to occur from acute myocarditis, due to an especial susceptibility of the heart in early childhood.

[M. O.]

2.—Ranzi reports a case of abscess of the liver in a man of 62, who died one week after the first symptoms appeared. These were vomiting, chills, pain in the epigastrium, and jaundice. Dullness developed posteriorly on the right side below the angle of the scapula. Coma, tenderness over the liver, arrhythmia, and chills followed before death. The autopsy showed diffuse purulent peritonitis, subphrenic abscess from perforation of one of the abscesses of the left lobe of the liver, gall stones in the gall bladder and ductus choledochus, which closed the latter, cholecystitis and cholangitis, mitral and aortic insufficiency, hypertrophy of the left ventricle, parenchymatous degeneration of the kidneys, etc. Cultures were made from the three liver abscesses, the subphrenic abscess, the peritoneal exudate, and the contents of the gall bladder. The same bacillus was found in all, with a capsule, but not staining by Gram's method. Cultures and animal inoculations showed this to be the pneumobacillus of Friedländer. Ranzi believes that the infection started from the duodenum, thence spread to the gall bladder, then by the blood, and finally reached the heart. [M. O.]

3.—Will be abstracted when concluded.

September 19, 1901. (XIV. Jahrgang, No. 38.)

1. The Operative Treatment of Double Gastric Stenosis. HERMANN SCHLOFFER.
2. Idiopathic and Symptomatic Myalgia. JAR. ELGART.
3. Two Cases of Stromeyer's "Dislocation-fracture." JULIUS BERDACH.

1.—When either pyloric stenosis or hour-glass contraction of the stomach occurs, gastroenterostomy is to be preferred as treatment, should gastro-anastomosis by the Wölfler method be technically impossible. But Schloffer reports the case of a woman of 54, in whom both hour-glass contraction and pyloric stenosis existed. As gastro-anastomosis was impossible, he performed a gastroplastic operation, making a transverse incision above the narrowed part of the stomach, which he sutured longitudinally. Then gastro-jejunostomy was done, with Braun's anastomosis, the two pieces of the jejunum, going to and coming from the stomach, being joined below the stomach. The patient recovered rapidly, and has kept well since. In only a few such cases will it be possible to perform a pyloroplastic operation successfully. [M. O.]

2.—After a detailed review of the literature, Elgart states that severe muscular pain, often called muscular rheumatism, is felt during the onset of many of the infectious diseases, as in influenza. Less severe myalgia is noted with acute rhinitis, tonsillitis, pharyngitis, enteritis, etc. In both cases the muscle pain is but a symptom. After exercise, especially unaccustomed exercise, severe myalgia may develop. This is a true myopathy, with some exudation of serum or blood, so that the intramuscular tension is increased, and pain results. When the extravasated material is absorbed in the succeeding days, the pain disappears. This condition can be caused at will. Idiopathic myalgia may occur during ordinary work or exercise, to which one is accustomed, from an unusual strain. Symptomatic myalgia occurs with the infectious diseases, intoxications, etc. In all cases some traumatic alteration occurs in the muscles themselves. Wide spread degeneration or atrophy may be found in severe intoxication. If a man is well nourished and always takes sufficient exercise, myalgia will not often occur; but when degeneration or atrophy have already begun in certain muscles, care must be taken not to strain those muscles. The treatment of idiopathic myalgia consists of diaphoretics, laxatives, massage, etc.; that of symptomatic myalgia will be the treatment of the disease with which it co-exists. [M. O.]

3.—Berdach gives the case histories of two cases of Stromeyer's "dislocation-fracture," both due to accidents which occurred during intoxication. In the first case, a man of 40, fracture of the internal malleolus and of the lower end of the fibula occurred with outward dislocation of the astragalus. Extension and fixation for two months produced good recovery. The second case was a man of 30, with the same conditions except that the internal malleo-

hus was intact. He went home after extension for a month, then from improper care, developed marked pes valgus. [M. O.]

September 26, 1901. (XIV Jahrgang, No. 39.)

1. A Congenital Malformation of the Colon. KARL TITTEL.
2. The Etiology of Dupuytren's Contracture of the Fingers. WILHELM NEUTRA.
3. The Diagnosis of Concretio Pericardii and Triensplid Disease. WILHELM TIERCK.

1.—Tittel reports a case of congenital malformation of the colon in a boy of 15 months, born with the face presenting after a difficult labor, the infant being badly asphyxiated. During his first week of life the circumference of his abdomen increased markedly, remaining afterward hard and prominent all his life. Constipation lasted eight or ten days at a time, and strong purgatives then produced but one bowel movement. Very rarely did spontaneous defecation occur. Chills developed suddenly, and the child was unconscious six hours. Rales appeared in both lungs, vomiting occurred, with repeated chills and death. At the autopsy the entire colon was found greatly dilated, the rectum and sigmoid flexure forming large sacs; there were broncho-pneumonia of both lungs and general anemia. Histological examination showed the submucosa and muscular layers thickened; while the mucosa was very much thinner than normal. Tittel believes that the colon was congenitally ectatic. The wall of the ascending colon was very thin, while the sigmoid flexure showed greatly hypertrophied walls. He concludes that operation was not indicated in this case, nor would it have accomplished anything. Tables of the colon measurements and diagrams accompany the article. [M. O.]

2.—From a thorough review of the literature, Neutra finds that Dupuytren's contracture of the fascia of the fingers is often hereditary, and symmetrical, and may occur without traumatism. He reports a case in a man of 46, in whom the contracture began six years before, in the left hand, the right hand becoming affected two years later. He had vertigo, headache, and rheumatoid pains in the right arm. There was slight kyphoscoliosis with some atrophy of the muscles of the left forearm. There was neither syphilis nor traumatism. As no signs of hysteria could be found, Neutra decided that this was a case of syringomyelia. Two other case-histories of patients with syringomyelia and Dupuytren's contracture are given, and several cases are quoted from the literature. Neutra concludes that Dupuytren's contracture is probably a trophic disturbance; that any disease which leads to general disturbances of nutrition can in time cause Dupuytren's contracture; that it is often seen with diseases of the spinal cord, especially syringomyelia frequently being among the first symptoms of the disease to appear; that this contracture of the fascia is often erroneously considered traumatic; and finally, that it is not impossible for the condition to improve without operation even though the disease be incurable. A long bibliography is appended. [M. O.]

3.—This will be abstracted when concluded.

NEUROLOGISCHES CENTRALBLATT.

August 16, 1901.

1. The Question of the Regeneration of the Spinal Cord. A. FICKLER.
2. Recurrent Paralysis of the Face in Migraine. G. J. ROSSOLIMO.

1.—Fickler takes occasion to criticise the description of Bielschowsky, of fibres in the dura mater of the spinal cord after total transverse lesion that he regarded as regenerated fibres from the pyramidal tracts. He discusses these findings, and also those in 2 cases of his own already reported, and reaches the conclusion that such fibres are actually evidences of regeneration, but are merely the association fibres between the individual segments of the spinal cord and not fibres derived from the cells in the brain. Although experimental investigation has failed to indicate how regeneration takes place in the spinal cord, it is possible that this is because all experiments have

hitherto been made by total transverse section. Fickler has therefore performed a number of experiments upon cats by inserting small fragments of celluloid in the spinal column, and removing them after a period of 3 or 4 weeks. The animals at first became completely paralyzed, then after the removal of the celluloid improved very rapidly for a week, and then very slowly indeed. The cats that recovered were killed at intervals of from 2 weeks to 7 months. At the latter period no clinical symptoms of injury to the spinal cord remained. Microscopically the spinal cord showed pictures which resembled very strongly those found in compression of the spinal column, and fibres that may have been newly formed. In the human cords it appeared that these regenerated fibres sometimes served to unite the different segments. Sometimes, however, they apparently missed their aim and formed small genuine neuromas in the perivascular interspaces. [J. S.]

2.—Rossolimo reports the case of a woman 28 years of age, who had begun to have headaches with menstruation at the age of 16. These generally increased in intensity and gradually grew still more severe in time. At the age 19 she had an attack of complete paralysis of the left side of the face. Several years later the right side of the face was exposed to cold while she slept, and this also became paralyzed. After the birth of her second child she again had paralysis of the right side of the face, and finally, at the age of 27, after a very severe attack of migraine on the left side of the face, paralysis of this side occurred. When examined there was complete paralysis of all the muscles, diminished reaction to electricity without reactions of degeneration; hearing was not affected. Taste was somewhat diminished on the left side of the tongue. Rossolimo regards this case as a form of recurrent paralysis of the facial nerve, associated with migraine, and strictly analogous to the recurrent paralysis of the 3rd nerve that occurs in similar conditions. [J. S.]

September, 1901.

1. Associate Nystagmus. E. STRANSKY.
2. Intermittent Claudication. M. VAN OORDT.
3. The Supraorbital Reflex. A New Reflex in the Region of the 5th and 7th Pairs of Nerves. D. MCCARTHY.

1.—Stransky describes a form of nystagmus that he observed and that has not hitherto been reported. If the eyelids of a patient are held forcibly apart, and the subject makes an effort to close them, there will occur a twitching in the upper lid, and in some cases horizontal nystagmus. He reports a case in which he was able to elicit these symptoms by simply lifting the eyelids vigorously. This patient suffered from bradycardia. His musculature was somewhat underdeveloped, and there was some hyperesthesia to pain on the left side of the body. There was some contraction of the vessels. He also mentions two other cases in which the same symptom was present. This reflex is of more physiological interest than clinical. It may, however, be of value to know that a purely functional nystagmus of this nature exists, in order that it may not be considered a symptom of organic disease. [J. S.]

2.—Van Oordt reports two cases of intermittent claudication. The first, a man of 63, who was able to walk for about one-quarter of an hour, after which time he developed severe fatigue in the muscles, occasional cramps in the calves, and, more rarely, a sense of burning in the legs. The symptoms disappeared in the course of a few minutes' rest. He was apparently normal, excepting that the muscles of the legs appeared to be poorly developed. The pulsation of the various arteries in the legs could not be detected. The arteries in the arms and neck were normal; there were no further symptoms of disease of the nervous system. As a boy he had been obliged to stand a great deal, and had taken coffee to great excess. Always after indulging too freely in the latter he felt a curious sense of numbness in the limbs. In addition he had worn a truss for hernia for some time, which had pressed upon the femoral arteries. The second case, a man of 69, who smoked cigarettes to moderate excess, had varicose veins in both legs, and after standing or walking, had severe pain in both legs. This disappeared in a few minutes, upon rest. The legs were quite thin, otherwise the symptoms were normal. No pulsation, however, could be felt in the arteries of the

legs. These two cases apparently indicate that intermittent claudication is usually due to vascular obliteration.

[J. S.]

3.—See editorial, Philadelphia Medical Journal, October 12, 1901, page 580.

CENTRALBLATT FUER CHIRURGIE.

July 27, 1901. (28 Jaargang, No. 30.)

1. Experiences in Cystoscopy. B. GOLDBERG.

1.—Goldberg has made over 150 cystoscopic examinations, 22 of them only in women. The cystoscopy found disease of the bladder in 85 people, and showed that the bladder was normal in 37 cases; 21 cases of tumors of the bladder were seen, in 10 of which the condition was diagnosed by 31 cystoscopic examinations. The examinations were made repeatedly to observe the growth of the tumors. Tumors of the bladder are divided into three groups, the rare cases in which cystoscopy is impossible, the cases which are diagnosed without it, and those in which the cystoscope alone diagnoses the condition. The use of the cystoscope is necessary before operation. In stone in the bladder cystoscopy is not so useful. Of 21 cases only 8 were seen with the cystoscope before operation. It should not be used in tuberculosis of the urinary tract, from the danger of infection. Goldberg used it 7 times, in 3 of which tuberculosis of the bladder existed. It was used in 6 cases of hypertrophied prostate, 14 cases of cystitis, 3 of hypertrophied bladder, 1 bladder with a diverticulum, and 1 case of foreign body in the bladder, 6 times he used the cystoscope to catheterize the ureters, 5 times for intravesical operation. Goldberg believes the cystoscope is never employed in vain. He adds a few details of the technique to be followed in its use. [M. O.]

August 3, 1901. (28 Jahrgang, No. 31.)

1. The Extirpation of the Appendix in the Interval Between Attacks. MAX JAFFE.

7.—Jaffé believes that extirpation of the appendix should not be performed between attacks in all cases of appendicitis. He reports two cases, in which the appendix was adherent to the cecum, and had ulcerated through, giving the signs of perityphilitis. The symptoms were tumor and pain in the cecal region, and some difficulty in the movement of the intestinal contents. In such cases, instead of seeking in vain for the appendix, Jaffé believes that resection of the intestine should be performed, and, when necessary, entero-anastomosis, especially if symptoms of stenosis exist. He operated thus upon his cases, with success. [M. O.]

August 31, 1901. (28. Jahrgang, No. 35.)

1. A Syringe for the Subcutaneous Injection of Anesthetic and Normal Salt Solutions.

ALEXANDER VON ZAWADZKI.

1.—von Zawadzki describes a practical and inexpensive syringe which he has devised for subcutaneous injections of Schleich's anesthetic or normal salt solutions. The syringe is of glass, with a slide attachment to permit the suction of the fluid in, which is to be injected by the syringe. The details are fully shown in the photographs which accompany the article. [M. O.]

September 21, 1901. (No. 38.)

The Extraperitoneal Radical Operation for Median Ventral Hernias. A. HAMMESFAHR.

The author describes an operation which he has successfully performed on various occasions for ventral hernia, and which he first reported in No. 10, 1901, of the *Centralblatt für Chirurgie*. The operation is performed as follows: An oval flap is made extending from the xiphoid cartilage to the symphysis pubis, which is to be as broad as possible at the middle and includes the subcutaneous fat. The hernial sac is then loosened from its envelopments without opening it; this entails careful dissection especially where the sac of the hernia consists of thin cutaneous superficial tissue. If care is taken the hernial sac will not be opened; but if this accident should happen, the opening is again closed with fine stitches. If after dissecting away the flap the anterior sheath of the rectus muscle is not yet entirely exposed, more of the abdominal skin and subcu-

taneous fat is dissected away up to the latter margin of the rectus muscle, and better still a little beyond it. It is essential for the application of the subsequent sutures, that a finger of the left hand can be inserted under the rectus muscle. In his first case the author even separated the parietal peritoneum from the posterior surface of the rectus muscle. But this entails great difficulty especially when cicatrices are present with the hernia. The author therefore proceeds as follows: he opens the rectus muscle at any place in the median line; if the medial margin of the rectus cannot be distinctly palpated, a small transverse incision is made into the area occupied by the anterior rectus sheath, whereupon the part looked for can be found. One finger is now inserted in the incision of the rectus muscle, that is between the posterior surface of the muscle and the posterior sheath of the rectus; the finger then strips the sheath in its entire length. Within a few seconds this can be done on both sides, whereupon the bellies of both muscles are in view and covered by the anterior sheath of the rectus. The first step of the operation is now completed and the sutures can be easily and quickly applied. The recti are so brought together that their median margins are directed towards the abdominal cavity, similar to a Lambert suture. In order to prevent any injury, the needles are not to be too pointed, but strong, and the suture material should be soft, flexible, silver wire or silvered aluminum bronze wire. The needle is inserted at the lateral margin of the rectus, glides along the posterior surface of the belly of the muscle, and between the latter and the inserted finger; then between it and the posterior sheath of the rectus; it then takes the median direction and again emerges through muscle and anterior sheaths between the middle and inner third. Then similar stitches are taken on the opposite side. Superficial sutures embracing fascia and muscle are then applied. A short drain on each side and closure of the skin wound complete the operation. [M. R. D.]

JOURNAL DES PRATICIENS.

August 31, 1901. (15me. Année, No. 35.)

1. Ocular Therapeutics. A. TROUSSEAU.

2. The Treatment of Deafness. A. CASTEX.

1.—Treatment of the eyes is of three kinds, local, general, and hygienic. Among the local means employed are compresses, irrigation, eye washes, caustics, antiseptics, bandages, and glasses. Compresses are indicated in keratitis, or in purulent conjunctivitis, associated with irrigation. Cold compresses are employed for injury, hemorrhage, or purulent conjunctivitis; hot compresses, in blepharitis or keratitis. Several layers of gauze, in water, or a 4% boric acid solution, form the compresses. For irrigating the eye, solutions of mercuric cyanide (1-10,000), corrosive sublimate (1-10,000), carbolic acid (1-200), potassium permanganate, etc. are used in conjunctivitis, traumatism, etc. Eye washes may be anesthetic (cocain, 1-20), caustic (zinc chloride, 1-500), mydriatic (atropin, 3-500), or myotic (eserin or pilocarpin, 1-100). Calomel and other powders are used dry upon the eye, while yellow oxide is employed as an ointment. The caustics used in the eye are silver nitrate and copper glycerole. Aseptic dressings and bandages may be needed, and sometimes glasses. The internal treatment is mercury and potassium iodide in syphilis; sodium salicylate and quinine in rheumatism; cod liver oil, etc. in tuberculosis. Hygienically, baths, exercises, and diet are recommended. [M. O.]

2.—Castex reports the treatment of hypothetical cases of deafness in youth, adult and old age. After obtaining family and personal history, questions should be put about existing discharge from the ear, vertigo, loss of hearing, etc. Then the ears must be examined carefully, to determine upon the condition present. This may be catarrh, otorrhea, sclerosis, syphilis, or psychic deafness. If catarrh exists, the naso-pharynx must be kept clean by alkaline solutions; if otorrhea, the ear must also be kept clean with hydrogen peroxide; if sclerosis, sodium iodide may be given; if syphilis, specific treatment, with pilocarpin locally; if psychic, acoustic exercises and electricity will be beneficial. In an adult, there is generally some buzzing or other noises in the ear. For the rest, hygiene, and bromides will do much. In old age, when the hearing also grows weaker, general supporting treatment is necessary. [M. O.]

PRESSE MEDICALE.

July 27, 1901. (No. 60).

1. The Cause of Death in Mastoid Disease. STANCULEANU and DEPOUTRE.
2. Chronic Pentosuria. R. ROMME.

1.—Behind the mastoid cells, which are easily laid open by operation, are posterior aberrant cells, which, suppurating by continuity, cause meningitis or thrombophlebitis and death, even after the anterior mastoid cells have been freely opened. From 100 temporal bones examined, Stanculeanu and Depoutre conclude that these posterior cells are not found in young children, as they found them but once in a child of 9, but that in adult and old age they are common. They divide these cells into 3 groups, postero-superior, posterior, and postero-inferior, from their position. These posterior mastoid cells were found in 40 out of 100 skulls. In 12 cases all 3 groups existed; the postero-superior in 27; the posterior in 13, and the postero-inferior in 12 cases. In only six cases was there no communication with the anterior mastoid cells. From the position of these cells they advise trephining, removing the bone from the postero-superior angle on the parietal bone, downward $2\frac{1}{2}$ cm. to Henle's spine, and backward 3 cm. upon the occipital bone; or this may be left to follow a less radical primary operation. Thus meningitis and thrombophlebitis may be prevented. [M. O.]

2.—Bial and Blumenthal have shown that pentosuria, which causes the same reactions as glycosuria, except by fermentation and the polariscope, is never found in diabetes. Their researches proved that food did not affect the pentosuria, and that the pentose existed in the blood. While the subject remains obscure, Romme believes, from the work of Bial and Blumenthal, that pentose is formed from nuclein. It is found in the blood and urine of the individual only when, for some unknown reason, it is not oxidized. [M. O.]

July 31, 1901. (No. 61).

1. The Rashes of Smallpox. HENRI ROGER and EMILIE WEIL.
2. Strophanthus. A. MARTINET.

1.—The specific eruption of smallpox is often preceded, accompanied, or followed by other rashes. Roger and Weil have observed 928 cases of variola, 171 of whom had rashes other than the eruption of typical smallpox. These cases were more frequent upon men than women. They were seen both in mild and severe cases, mostly in serious cases. Six varieties of rash were noted, erythematous, morbilliform, scarlatiniform, urticarial, purpuric, and ecchymotic. The morbilliform and ecchymotic rashes alone affected the face. The inguinal regions were affected symmetrically in 68 cases, 25 times by associated rashes, 23 times by purpura alone, while the rest of the body was covered with a scarlatiniform rash. In most cases, however, the eruption was generalized. Next to the groin in frequency, the axilla was affected by a localized rash. Out of 171 cases, 146 showed unassociated, 25 associated rashes. In these 25 cases 51 rashes were seen, making a total of 197 rashes in 171 patients. The rash observed was scarlatiniform in 70 cases, purpuric in 68, morbilliform in 42, etc. As a rule these rashes preceded the true smallpox eruption. Purpura persists a long time. Often the smallpox eruption becomes confluent upon the regions previously attacked by another rash. Generalized rashes are unfavorable. Late ecchymotic, erythematous, or purpuric rashes are almost all fatal. The probable cause of the appearance of these different eruptions is a disturbance in the innervation of the cutaneous vaso-motor system, due to the invasion of the individual by the smallpox. This is due to a congestion of the medulla. The position of this medullary congestion determines whether the rash is generalized or local. [M. O.]

2.—After comparing strophanthus with digitalis, Martinet says that it is to be preferred to digitalis at stated intervals in mitral disease; that it is to be preferred to digitalis in atheroma or aortic affections with hypertension; and that it should be given in increasing doses. He advises extract of strophanthus in doses of 1 mg., (or strophanthin, 0.1 mg.), increasing one dose daily. [M. O.]

August 3, 1901. (No. 62).

1. The Lesions of the Cells of the Spinal Ganglions in Tabes. G. MARINESCO.
2. Hypodermic Injections. P. DESFOSSES.

1.—After a comprehensive review of the subject, Marinesco describes the results of his own work. The variability of the normal cells of the spinal ganglions depends upon three factors, the density of the chromatin, the density of the fibrillar chromatin, and the colorability of the fundamental achromatin. The light and dark cells may have the chromatin arranged in corpuscles, granulations, and very fine granulations, and they may be large, medium, or small. In the spinal ganglions of nine tabetic individuals, cells were found with well defined but very light chromatin corpuscles; with pale, small nuclei; or rarely, with retracted cell walls. These changes are not constant, and seem incongruous, when compared with the degeneration in the posterior columns of the spinal cord. These later researches confirm the opinion already expressed by Marinesco, that tabetic degeneration begins, not in the posterior roots, but in the collaterals of the posterior radicular fibers, especially the reflex fibers. [M. O.]

2.—In using the hypodermic syringe, care should be taken to prevent infection, which may be followed by abscesses, scars, etc., or breaking the needle. The syringe, needle, solutions, and technique of an ordinary hypodermic injection are all described in full. [M. O.]

August 7, 1901. (No. 63.)

1. Paramyoclonus Multiplex. GEORGE CARRIERE.
2. The Transmission of Meningococci by the Respiratory Tract. BUSQUET.

1.—Carrière reports a case of paramyoclonus multiplex in a boy of 10. His father is neurotic and irritable. The child is very intelligent, impressionable, sensitive, and nervous. A year ago another boy hit him unexpectedly in the abdomen. He worried over it all day, and awoke with abdominal pain that night. Three weeks later the pain reappeared suddenly one morning, and has come again almost every day since. Then involuntary movements of the neck, shoulders, body, arms, and legs, developed, appearing in attacks close together, almost every 4 or 5 minutes. Breathing is irregular during the paroxysms. Fibrillary contractions are also noted. Everything becomes exaggerated when the boy goes to bed, he is excited, etc. The involuntary movements in the part disappear during voluntary movement of the part, or when the boy's attention is attracted to the part, but they become worse over the rest of the body. Occasionally there are profuse perspiration, salivation, and polyuria. The sensory reflexes are very lively; the corneal reflex is abolished, and the visual field is concentrically retracted. Carrière believes that this was a case of paramyoclonus multiplex, of which disease only 32 cases are so far reported, three of which Carrière has seen. This condition is due to functional hyperexcitability of the motor neurons, found rarely with an anatomic lesion, sometimes with neurasthenia, but most frequently seen with hysteria. He believes that hypnotic suggestion and careful watching should be the treatment. He reviews the literature of the subject, and gives the differential diagnosis between the different forms of chorea and paramyoclonus multiplex. [M. O.]

2.—Busquet has made experiments upon three cases of epidemic cerebro-spinal meningitis, in Algeria. From the first series of experiments upon different sorts of animals, it was shown that when meningococci are present in the nasal mucous membrane of patients with epidemic cerebro-spinal meningitis, and this nasal mucous membrane is placed upon the nasal mucous membrane of animals, the meningococci will invade the animals and reach the cerebro-spinal fluid. The meningococci remain virulent in rabbits, the nasal mucous membrane of one being capable of infecting others of the same species. Busquet's other experiments show that cerebro-spinal fluid, from patients dead of epidemic cerebro-spinal meningitis, containing the meningococcus of Weichselbaum, is virulent to rabbits. Simple deposition of meningococci upon the nasal mucous membrane of rabbits will cause epidemic cerebro-spinal meningitis. This proves that epidemic cerebro-spinal meningitis can be transmitted by the respiratory tract, especially through the nasal mucous membrane. [M. O.]

August 10, 1901. (No. 64.)

1. The Thyroid Gland in the Treatment of Infantile Myxedema. BEZY and STOIANOFF.

1.—Bezý and Stolanoff believe that the infectious diseases predispose to infantile myxedema, and that the thyroid gland is essential to normal growth and development, especially about the time of puberty. They report the case of a girl of 5, cured by rapidly ascending doses of fresh thyroid gland, up to 24 grains a day. Photographs show the improvement which followed the administration of the thyroid gland. [M. O.]

August 28, 1901. (No. 69.)

1. Echinococcal Cysts of the Peritoneum. GUIBÉ.

2. The Pathogeny of Muco-membranous Enterocolitis.

A. BROCCHI.

3. The Indications for Arsenic. A. MARTINET.

1.—There is no doubt that the echinococcus embryos travel through the cellular tissue or the circulation, from the stomach. This is the exogenous theory. But Guibé believes that the endogenous or auto-intoxication theory occur after the rupture or puncture of a hepatic cyst, found especially in Douglas's pouch. This theory is confirmed by animal experiments, several of which are quoted in full. From an extensive review of the subject, Guibé concludes that the female echinococcus vesicula, set free in the abdominal cavity, may become attached to the peritoneum, develop and reproduce there; that the fluid alone cannot reproduce hydatid cysts, except when scolices or vesicles are present in it; that a fragment of a cyst wall with scolices or vesicles upon it can produce a hydatid cyst; and that echinococcal cysts which have become attached to the peritoneum soon develop an endothelial covering and thus become secondarily extraperitoneal. Therefore, in operation upon such cysts, great care must be taken to prevent the contents of the cyst from touching the peritoneum. [M. O.]

2.—Brocchi reports two cases of muco-membranous enterocolitis in middle-aged subjects in excellent health, in whom the symptoms developed after grave emotion and slight traumatism. As a rule Brocchi believes that intestinal atony precedes all nervous symptoms, especially in neuro-arthritic individuals. In his two cases, on the contrary, the nervous symptoms preceded the intestinal, in people neither neurotic nor lithemic. [M. O.]

3.—Will be abstracted when concluded.

August 31, 1901. (No. 70.)

1. The Side-chain Theory of Immunity. C. LEVADITI.

2. Arsenic. A. MARTINET.

1.—Levaditi explains clearly and fully, with diagrams, the side-chain theory of immunity advanced by Ehrlich. The subject is in most technical language, and is comprehensible only to those well versed in the subject. [M. O.]

2.—Arsenic increases the number of red and white blood corpuscles, augments the body weight, and causes general stimulation of the organism and its various functions, especially assimilation and hematosis. The cacodylates do not cause any symptoms of poisoning, even when continued for some time. They should be administered hypodermically, in aqueous solution, with a few drops of carbolic acid added; more than 5 cg. of sodium cacodylate should not be given as an initial dose, rising gradually to 10 cg., an average dose rarely to be passed. It is well to continue the injections for 8 or 12 weeks, one injection weekly. The same doses may be given to children. Rarely, sodium cacodylate may be given by the mouth or rectum. It is indicated during the first and second stages of phthisis, and in the convalescence from rheumatism, bronchitis, pleurisy, and the infectious diseases. It has been employed with some success, also, in malaria, asthma, neurasthenia, and various skin diseases. The only contraindication to the use of the cacodylates seems to be hepatic insufficiency. [M. O.]

Society Reports.

MEETING OF THE NEW YORK MEDICAL ASSOCIATION.

(Concluded from Page 822.)

Vesical Emergencies—Their Surgical Management. Dr. Eugene Fuller, New York. This was a particularly technical paper, covering operation, instruments, their adaptation to certain cases, catheterization, tenesmus, and spasm, as well as perineal operation with or without a guide, and supra-pubic incision. He surgically subdivided cases of vesical tenesmus into two general classes—those amenable to catheterization and those which are not. Antiseptic precautions should be taken in the catheterization of all patients, especially where traumatism, the result of external perineal violence, is not the evident cause. Harmful traumatism can never be done by a soft rubber catheter. Gum elastic, silk-covered catheters are often of great value. In those cases not amenable to catheterization, the surgeon has to meet the emergency by liberating the retained fluid through the medium of an incision. In case of complete rupture of the urethra, where the operation is undertaken early and gangrene has commenced, retrograde catheterism, after locating the posterior urethral segment and repair of the urethra, should be undertaken immediately after the bladder has been drained supra-pubically. Where prostatic retention occurs in cases not amenable to catheterism, the rule should be immediately to perform prostatectomy, thus effecting and radically removing all obstruction or retention.

Uterine Prolapse. Dr. Frederick Wiggin, N. Y. Of the various local chronic diseases to which women are liable, complete uterine prolapse produces the greatest disadvantages and discomfort. The condition is best described as a reducible hernia through the pelvic floor. Causation: primarily a separation of the tendons of the muscles forming the pelvic floor, where they unite in the median line; this is usually due to the passage of the child during parturition. In the treatment of the disorder, hysterectomy has not been very satisfactory. The writer's treatment is to place the patient in bed, reduction of the tumor, employment of gravity to retain the parts; tampons moistened with glycozone are placed in position and parts treated until all ulcerations on the vaginal wall are healed. The next step is laparotomy. The operation seems to be well borne by old women.

Typhoid Cholecystitis with Report of Cases. Dr. Chas. G. Stockton, Buffalo. The doctor gave a recitation of interesting cases. The gall-bladder is generally infected in typhoid fever, but often so mildly as to escape notice. Sometimes it remains latent. Usually develops within 10 to 30 days, but cases were reported in which it came on respectively 17 and 18 years after typhoid. In the discussion, Dr. Ferguson (Troy) stated that gall stones are not the cause of gall-stone colic, but that the pain is caused by the presence of cholecystitis, that smooth gall-stones are not able to produce pain.

What Percentage of Gouty and Rheumatic Patients Develop Fatal Pulmonary Phthisis? Thomas F. Reilly, N. Y. The doctor's paper was rather an interrogation with no deductions drawn or original opinions presented, and, as there was no discussion, no conclusions were made.

AFTERNOON SESSION, OCTOBER, 24, 1901.

In a contribution entitled **A Durham Tube in the Right Bronchus**, Dr. E. D. Ferguson, Troy, reported the case of a young woman in operating upon whom a tube of the kind referred to disappeared, and after some difficulty was extricated from the bronchus. Considerable hemorrhage took place in removing it, and the condition of the patient for a time was such as to cause anxiety, though ultimately she recovered. The author of the paper exhibited a device which would prevent the recurrence of accidents of that kind.

Indications of Treatment in Uterine Myomata. Dr. George Tucker Harrison, New York. Myomectomy has developed out of ovariectomy. Many myomata remain moderate in size and do not interfere with the patient in any way. It is nevertheless the law that these do undergo retrograde

metamorphosis. A large sized tumor of quick growth is usually regarded as demanding a radical operation. However, this cannot be admitted without qualification. When a woman is more than 50 years of age with a large tumor and suffers no inconvenience, operative intervention is not justifiable. When a woman is comparatively young and myomata grow rapidly, radical operation is indicated. Hemorrhage does not cause death directly, but might do so indirectly by anemia and by tumor on a vein which might create thrombosis. Cystic degeneration of a myoma is an indication for myotomy. When there is a myoma in conjunction with peritonitis, it should form an indication for operation. Reference has been made to the fact that great progressive changes exist at the time of the menopause. The author believed that when myoma was complicated with pregnancy, if birth could be accomplished without endangering the patient's life, natural labor should be permitted. If it interfered, however, with the patient's life, then operation should be performed. Statistics show that the mortality of myotomy is decreasing. Nowhere in the whole domain of surgery is the difficulty greater than in the case of uterine myoma.

Dr. Wilbur B. Marple, New York, read a paper on **Re-section of the Cervical Sympathetic in the Treatment of Glaucoma; Its Present Status.** There were, he remarked, certain methods of treating this condition which were far from satisfactory. In many cases the glaucoma went on without any evidence of having been checked by their efforts. In as many as fifty per cent. of the cases operated on there was said to be no visual improvement, while in ten per cent. absolute blindness was reported to ensue. That being so, he thought ophthalmic surgeons would be pleased to learn of the process which had been adopted by Jonesco of Buda-Pesth. The operation of removing the sympathetic glands for glaucoma had first been performed by that gentleman in 1897, and since then a number of successful cases had been reported. So far it had been almost, if not entirely, confined to simple chronic cases; few observers had suggested its use in acute cases. Some cases unfortunately had found their way into print which had been only a short time under observation, and which were not only valueless but misleading. After carefully studying the literature on the subject, the author had come to the conclusion that the operation of extirpation was a safe procedure in the hands of a skilful operator, but that, while a considerable number of favorable results had been reported, they were not yet in a position to say when the operation was indicated or what permanent results might be expected from it. It was very desirable that cases thus operated on should be watched for a longer period. Dr. James J. Walsh, New York, said he was not an ophthalmologist, and therefore could not discuss the subject from that point of view, but he happened to be with Jonesco when some of the cases had been operated on, and he had since learned from him that he had treated 127 cases in the way described. There seemed to be a future for the operation which justified the watching of future reports with a good deal of interest.

A Report of a Case of Gun-shot Wounds of the Intestines was reported by Dr. H. van Hoevenberg, Kingston, who remarked that he thought it would be interesting, coming as it did so soon after the case of the late President McKinley. The man was shot in the abdomen (median line) with a 32-caliber bullet. The operation described by the author was conducted under very unfavorable auspices six and a half hours after the shooting took place. There were ten perforations of the intestines found, the ascending colon, small intestine and omentum were perforated, and two hours were occupied in exploring the field and closing the lacerations with silk sutures. The patient rallied without unfavorable symptoms, but on the fifth day he complained of localized tenderness, and his temperature rose. This led to the wound being reopened, and the conclusion arrived at that the ball must be the cause of the rise of temperature. A search was accordingly made for it, and it was found in a small pus cavity. After this the temperature dropped to normal, and thereafter there was a history of uninterrupted improvement. No solid food was given until the twelfth day. A feature of the operation which he considered important was the giving of a small dose of morphia for the purpose of restraining the peris-

tafic action of the bowels. He was glad he only gave a quarter of a grain, because he never saw a man so susceptible to the influence of morphia, the pupils contracting to pin-points, remaining so for several hours, but the effect of the small dose was satisfactory, and prevented the possibility of any of the contents being forced through the abdominal wall. Liquid food was given until the twelfth day. From that time on solid food was given and was increased in quantity.

The paper was discussed by Dr. R. H. M. Dawbarn, New York, to whose teaching the author had given credit for the use of morphia. He enlarged on the importance of this feature, which he called the morphia splint. It was, he remarked, in accordance with the dictates of good surgery, which required that the wounded bowel should be put at rest. If this were not done, there was danger of part of the contents being forced out, and causing sepsis. The continuous suture which the reader of the paper had used was also to be commended. When combined with the morphia splint, the continuous suture was safe and ought to come into general use in this class of cases.

Technique of Fixation for Prolapsed Kidney. This was the title of a paper by Augustin H. Golet, New York. The object of the operation, he said, was to fix the prolapsed kidney in a normal position against the muscles of the back in such a manner that there would be freedom from motion until it became firmly adherent. This seemed best accomplished by sutures, and temporary sutures of a non-absorbable material like silk-worm gut were to be preferred. If the gut was prepared by boiling in a solution of lysol it was rendered pliable, and was as easily manipulated as cat-gut. Such fixation of the kidney might not be a normal condition, since the kidneys were normally moveable to a limited degree; but it was much to be preferred to prolapse of the organ and its attendant symptoms and consequences, and it certainly restored the patient to a condition of health and comfort which could not be enjoyed before. Prolapse of the kidney was a surgical condition, because it did not admit of cure by other than surgical means. That it was but one element in a general enteroptosis was no argument against operation. The operation was not one that involved any risk per se, and therefore should not be dreaded by any one obliged to undertake it. It should not be opposed by those who did not choose to endorse it because they did not operate and hence could not observe its results. Summing up, he said: a prolapsed kidney which gave rise to symptoms that produced discomfort or ill-health demanded operation (1) because there was no other means of relief; (2) because there was a tendency to progressive exaggeration of the degree of prolapse; (3) because prolonged prolapse produced congestion and softening of the kidney structure and its fibrous capsule; (4) because the prolapse might at any time interfere with the function of the kidney and entail serious consequences. This paper was discussed by Dr. G. M. Edebohl, Dr. Howard Lillenthal, Dr. Willy Meyer and Dr. Dawbarn, the criticisms being confined to the technic.

A Report of a Case of Glanders, Dr. J. R. Sturtevant, Ithaca, N. Y.

The concluding paper was by Dr. Edward H. Squibb, Brooklyn, entitled, **Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the Year Ending July 1, 1901.** (Read by title).

OFFICERS ELECTED:

Dr. A. A. Hubbell, Buffalo, N. Y., President.
Dr. Wm. H. Biggam, Brooklyn, Vice President.
Dr. Guy Davenport Lombard, New York, Secretary.
Dr. E. H. Squibb, Brooklyn, Treasurer.
Dr. James Taylor Lewis, New York, Counsel.

COMMITTEES:

Dr. E. Eliot Harris, New York, Chairman, Committee of Legislation.
Dr. Alex. Lambert, New York, Chairman Public Health and Medical Charities.
Dr. John W. S. Gouley, New York, Chairman Committee on Library.
Dr. J. Riddle Goffe, New York, Chairman Committee on Publications.
Dr. Charles E. Quimby, New York, Chairman Committee on Nominations.
Dr. Irving S. Haynes, New York, Chairman Committee on Arrangements.

The new office-bearers were installed as follows: President, Dr. Alvin A. Hubbell, Buffalo; Vice President, Dr. Wm. H. Biggam, Brooklyn; Secretary, Dr. Guy D. Lombard, New York.

Adjourned.

MANHATTAN DERMATOLOGICAL SOCIETY.

MEETING HELD FRIDAY, NOV. 1, 1901.

Dr. Gottheil in the Chair.

Dr. Abrahams showed a child of eight weeks with **seborrheic eczema** involving the entire body. There was *coryza*, but no signs of syphilis. Dr. Gottheil remarked that macular lesions were unusual in seborrheic eczema. Dr. Sobel presented a child of 2½ years with **chronic papular urticaria**. Itching was intense, and the inguinal glands were enlarged. Some papules were infected and became pustules. Dr. Bleiman stated that prurigo and scabies could be excluded. Dr. Weiss termed such cases *strophulus infantilis*, often preceding prurigo. He believes this case will eventually develop prurigo. Dr. Gottheil remarked that scabies could not be excluded. Dr. Abrahams advised daily doses of pilocarpin, gr. 1/12—gr. 1/10. Dr. Bloiman presented a boy of 11, with **prurigo**. The eruption began at two years, growing worse in winter. Dr. Sobel hesitated to make a positive diagnosis of prurigo. Dr. Oberndorfer and Dr. Abrahams considered it chronic papular eczema. Dr. Gottheil said there were no positive symptoms of prurigo. Dr. Gottheil then presented a woman of 64, with **rhinoscleroma**. The alae nasi were hard and cartilaginous and ulceration had occurred. Dr. Geyser remarked that radiotherapy would only hasten death. Rhinoscleroma may occur primarily in the tonsil, resembling chancre and cancer. Dr. Weiss presented a man with **keratosis follicularis** of both forearms. Dr. Oberndorfer presented a man with **multiple mollusca contagiosa of the penis**. This situation is rare. The lesions are auto- and hetero-inoculable. Dr. Weiss remarked that as a rule other parts of the body are also affected. Dr. Gottheil reported a case in which there were numerous mollusca on the penis and scrotum. Dr. Abrahams presented a man of 57 with **atrophia cutis propria**. Forty years ago eczematous lesions appeared in the popliteal space; later at the ankle, followed by atrophy, varicose veins and ulceration. Dr. Sobel considers it a tropho-neurotic atrophy. The atrophy and varicosities are probably not related. Dr. Gottheil stated that the erythema seen at the edges of the atrophy points to inflammation. Dr. Gottheil then showed photographs of cellulitis of the lip, *favus corporis*, *sarcoma* of the skin, *lichen planus*, *lichenification* in old eczema, *erythrasma* of the buttocks, *disydrosis* and *erythema multiforme*.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopedic Surgery.

OCTOBER 18, 1901.

George R. Elliott, M. D., in the Chair.

Dr. A. B. Judson presented a baby five months old with **infantile paralysis simulating congenital talipes calcaneus**. A three days' sickness occurred at two months, with fever, trembling, and general hyperesthesia, but no vomiting, diarrhea or convulsions. Dr. W. R. Townsend believed well marked congenital talipes calcaneus to be very rare. Dr. Henry Ling Taylor agreed that the severe forms were rare, but milder varieties were fairly common, usually correcting themselves without special treatment. Dr. Judson presented a case of **crepitus heard in cervical Pott's disease** in a woman of 40. Pain on moving her head and deformity were marked, partly due to a forward displacement of the axis. The width of the neck posteriorly was increased. At one time the head was much flexed and inclined to the left. Six months ago she noticed that motion of the head in rotation was accompanied by a crackling sound. Drs. Townsend, Elliott and Taylor did not agree with the diagnosis of cervical caries, being inclined to consider the case one of *osteoarthritis*.

Dr. Homer Gibney presented six cases of **osteotomy for the correction of bow-legs and knock-knees**, and described

his method of operating. Dr. L. A. Weigel, of Rochester, was somewhat in doubt as to the proper course to pursue. An outline tracing of the leg might show an apparent bowing, while a skiagraph would demonstrate that the shafts of the leg bones were straight. He exhibited skiagraphs of two cases. In one the deformity was corrected by osteoclasis, but the skiagraph showed that the legs were straightened by making the bones slightly crooked. Dr. Taylor called attention to the importance of correcting inward rotation of the tibia in bow-legs. Neglect to correct this rotation meant an incomplete correction of the deformity and the liability of recurrence. He advised breaking the tibia as well as the tibia, well loosening the fragments, and twisting the foot out as much as possible—the resulting eversion would not be too great. Dr. Sayre remarked that in many cases the distortion was found close to the epiphyses, while the shafts of both tibia and fibula were straight. The operation should be performed at the point where the deformity existed.

Dr. Taylor presented a boy of six years with **coxa vara**. He walked at eleven months and had been lame in the left leg since. There was one-half inch shortening of the left leg, the trochanter was elevated a half inch and the head of the femur could not be felt. A skiagraph showed that the head of the bone was in the acetabulum and that the neck was bent downward. There was no rachitis. Dr. Sayre judged from the skiagraph that there had been fracture of the neck of the femur, or epiphyseal separation. Dr. Taylor said that it was evident that coxa vara was present, whether the result of traumatism or malformation.

Dr. Weigel read a paper on **skiagraphy in orthopedics**, illustrated by stereoscopic skiagraphy. The technique was not difficult. An idea of depth was given which was not apparent when viewing the negative alone. By reversing the negatives in the apparatus, the pictures could be viewed from the opposite surface. Dr. Weigel also showed **fractures and dislocations in tubercular joint diseases** with skiagraphs. A boy said to have double congenital dislocation of the shoulders proved to have tubercular destruction of the joints, with partial dislocation. On one side an abscess cavity of large size communicated directly with the joint.

A Case of Unilateral Clubbed Fingers.—Dr. A. Bécélère showed photographs of two hands, upon one of which, the right, typical clubbed fingers were seen, at a recent meeting of the Medical Society of the Paris Hospitals, (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, 1901, No. 11). Röntgen photographs show no difference in the two hands. The patient, a man of 65, with an aneurysm of the right subclavian artery, often shows cyanosis of the right hand upon any motion. The right radial pulse is slightly less in volume than the left. Bécélère compares this unilateral condition with that found in congenital pulmonary stenosis. He believes that the clubbed fingers of the right hand are due to pressure, stenosis, or obliteration of a number of branches of the pulmonary artery from the aneurysm. As certain chronic hepatic affections always accompany clubbed fingers, Bécélère suggests that some relation may exist between them. [M. O.]

Acute Dilatation of the Heart in Acute Articular Rheumatism.—Pierre Teissler, in the *Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, (1901, No. 12), reports two cases of acute dilatation of the heart in acute polyarticular rheumatism. The first case was a girl of 17, who had her first attack of rheumatism. She took 60 grains of salicylate daily for three days. Then the heart dilated rapidly. Two weeks later it returned to its normal size. The second case was in a woman of 30, with her fourth attack of polyarticular rheumatism. Her heart had never before been affected. Dilatation of the heart occurred, but it returned to its former size in 10 days. In both cases the right ventricle dilated, without a sign of endocarditis or pericarditis. This shows plainly that the myocardium alone may be affected in acute polyarticular rheumatism. [M. O.]

Original Articles.

HISTORICAL NOTE ON SMALLPOX.

By JAMES TYSON M. D.,

of Philadelphia

Professor of Medicine, University of Pennsylvania.

It is probable that smallpox prevailed in China many centuries before the Christian era. It is believed to be the same disease as the *pesta magna* described by Galen, in the latter part of the second century. It is known to have prevailed during the sixth century and again during the Crusades. The first accurate description was, however, given in the ninth century by Rhazes, an Arabian physician, and distinguished by him from measles. It is thought to have been introduced into America by the Spaniards early in the sixteenth century. Sydenham's classic description was made in the seventeenth century. In 1796, Juncker wrote that 400,000 lives were lost yearly in Europe by smallpox, and in 1803, King Frederick William of Prussia published an edict to the effect that 40,000 died annually in his Kingdom of the same disease.

Inoculation of smallpox with a view to securing immunity from subsequent attacks was introduced into England in 1718 by Lady Mary Wortley Montague, the wife of the British Ambassador to Turkey. It was, however, practiced for centuries previous to this in China and other Asiatic countries. It was introduced into Germany in 1721, but was not popular until 1740.

As to vaccination the peasantry in various parts of the world, particularly in England, had learned some years before any systematic observations were made that the sores on the hands of a person who milked cows affected with cow-pox conferred immunity from smallpox.

It is said too, that a Dorsetshire English farmer successfully vaccinated his wife and two sons as early as 1774 from a cowpox on himself. In 1791, Plett, a Holstein schoolmaster, vaccinated three children, in one case on the finger-tips. This caused such inflammation that he was deterred from repeating the experiment, but the three children escaped the epidemic in 1794. Edward Jenner, while a student of medicine, learned of the traditions on this subject, and conferred with his preceptor, John Hunter. He settled the question effectually May 14, 1796, when he vaccinated a boy, James Phipps, with matter from a kine-pock on the hand of a dairymaid, Sarah Nelmes, and on July 1, introduced into this boy pus from a smallpox pustule, without effect. Two years later—June, 1798,—he published his celebrated "Inquiry into the Causes and Effects of the Variolae Vaccinae," illustrated by four plates, and within a year or two vaccination became general over the continent of Europe.

Vaccination was introduced into the United States July 8, 1800, by Benjamin Waterhouse, Professor of Physick at Harvard University, who vaccinated his own children, and about the same time into Philadelphia by John Redman Coxe, who vaccinated his oldest child and then tested the experiment by exposing him to smallpox. The re-

liance on the protective power of vaccination in America was strengthened materially by this bold act. President Jefferson was instrumental in introducing vaccination in the Southern United States.

THE CHARACTERISTICS OF GENUINE VACCINIA:
EXPERIENCE WITH GLYCERINATED LYMPH AND
SOME STATISTICS OF THE PRESENT SMALLPOX
EPIDEMIC.*

By WILLIAM M. WELCH, M. D.,

of Philadelphia.

Physician-in-charge of the Municipal Hospital for Infectious Diseases.

and JAY F. SCHAMBERG, M. D.,

of Philadelphia.

Professor of Diseases of the Skin at the Philadelphia Polyclinic; Assistant Attending Physician to the Municipal Hospital.

It is essential for the reputation of vaccination that no misconceptions should arise concerning the criteria upon which a diagnosis of true vaccinia is based. Nothing is so injurious to the cause for which Jenner so conscientiously labored as to give to a spurious or false disease the name of vaccinia.

The following may be regarded as the typical course of the vaccine disease. On the third or fourth day after vaccination a very faint redness may be seen at the point of inoculation. This redness gradually increases, while at the same time a distinct reddish papule is formed which varies in size according to the extent of the abrasion. On the fifth day the lesion begins to assume a vesicular condition. This is usually seen first at the margin of the site of inoculation. The vesicle gradually increases in size, the contained lymph being at first thin and perfectly transparent. On the eighth day the vesicle reaches its greatest perfection. It is then considerably elevated above the level of the skin and presents a pearly or yellowish appearance. When examined closely it will be found to have, even at an early stage of its development, an umbilicated form similar to that seen in vesicles of variola. About this time there appears around the vesicle an inflammatory circle which is called the areola. During the ninth or tenth day the redness increases, the inflamed skin becomes tense and painful, and streaks of redness often extend a considerable distance from the lesion. The neighboring lymphatic glands become enlarged and painful.

At the same time mild constitutional symptoms appear, slight rigors, a rise of temperature of one or two degrees, malaise, anorexia, disturbed sleep, etc. Many children, however, pass through the regular course of vaccinia without any apparent systemic disturbance. Occasionally in severe primary vaccinations a macular eruption, designated as *roseola vaccinosa* and bearing considerable resemblance to measles, may appear.

On the eleventh or twelfth day the pock begins to fade, its contents become opaque and desiccation appears in the centre. By the fifteenth day desiccation is usually completed, although the crust does

* Read at the Philadelphia County Medical Society, November 13th, 1901.

not fall off until the end of the third or frequently the fourth week. The completed crust is of a mahogany color, rough on its exterior, thin at its centre and periphery, with a thick circular ridge between. The scar is at first red, but in the course of a few months becomes paler than the surrounding skin. It is pitted or foveolated, and not infrequently presents radiating bands or striae of cicatricial tissue.

The query is often asked, what constitutes a successful revaccination? This is a question about which there is some diversity of opinion. Many believe that, unless the vesicle and areola observe the course of true vaccinia, the effect is merely local and devoid of prophylactic power. But it is evident on a little reflection that there is no more reason why we should expect the vaccine disease produced by revaccination to be typical than that we should expect smallpox after vaccination to run the typical course of variola vera. If there be modified smallpox or *varioid* after vaccination, so should there be modified vaccinia or *vaccinoid*. From these premises the conclusion may be deduced that, as varioid confers immunity against a recurrence of smallpox, so also does the modified form of vaccinia resulting from revaccination remove from the individual whatever susceptibility to the disease may be present.

As the analogy between cowpox and smallpox is in most respects very close, and as variola frequently differs in the duration and severity of its local manifestations, so also it must not be expected that the local lesions of vaccinia will invariably follow the typical course just described. In some cases, the disease is undoubtedly shorter and milder, while in others it is longer and severer. No deviation, however, should occur in the evolution of the pock; that is to say, it should pass through the stages of papulation, vesiculation and pustulation. It has been known to appear as late as one month after the inoculation was done, and then develop and run regularly through its course. Likewise the constitutional symptoms are not uniform. They may be mild or entirely absent.

There are certain false vaccine conditions which claim attention. The raspberry excrescence when seen usually appears from three to seven days after vaccination, beginning as a red elevation at the site of inoculation, quite similar in appearance to the papule of true vaccinia, but instead of advancing to the vesicular stage it remains hard, dense, bright red in color and nodular in form, looking not unlike a small nevus. It is very persistent, remaining usually weeks or months, and is not followed by a scar. This spurious excrescence is more frequently seen since the general employment of bovine lymph. Experience has proven that this raspberry form of the vaccine disease is utterly devoid of protective power against either variola or vaccinia.

There are some physicians who allege that practically all of the lesions produced by glycerinated lymph are spurious.

Dr. F. J. Runyon, of Clarksville, Tenn. (*Memphis Med. Monthly*, Aug., 1901), condemns glycerinated virus and quotes series of cases in which the lymph, although apparently producing successful vaccina-

tions, failed to protect against successive inoculations and also against smallpox. He says, "When using the glycerinated lymph I had, as I thought, some beautiful results from it, but I now question whether any of these are thoroughly protected from variola. I vaccinated with points (to make sure of protection) those who had recently been successfully vaccinated with the tubes, and observed that in every instance the vaccinia was apparently just as severe as in the primary vaccinations. The converse of the above trial did not hold true, for I found those upon whom the points had been successfully used immune to the glycerinated lymph." The virus was fresh and that largely employed was made by a prominent western firm. (The name is mentioned by the author, but is here omitted.) The physicians in adjoining States to whom these results were communicated also found that in the majority of instances the points would take upon those whom they thought they had rendered immune by the previous use of glycerinated lymph. One of the physicians stated that, of all the vaccinations done by him with tubes, not one that he had seen left a satisfactory scar. Another wrote that of a certain series of vaccinations "the best result he had was in a negro who subsequently contracted smallpox." Similar statements were quoted from a half dozen or more physicians, the consensus of opinion being that the glycerinated tubes were totally unreliable.

Our experience with glycerinated lymph at the Municipal Hospital has been quite different from that above quoted. It has been employed to the exclusion of all other forms of virus, this being the lymph provided to us by the Philadelphia Board of Health, which obtains it from a different source from that mentioned by the paper above referred to. Not one thus far, who has been vaccinated previous to exposure, has contracted smallpox. About fifty individuals, including physicians, nurses and attendants, have been continuously and freely exposed to the disease. Nearly all of these were vaccinated with glycerinated lymph, with a successful result in a considerable percentage of cases. Some had very sore arms and sufficient constitutional disturbance to necessitate rest in bed for a day or two. A number of the unsuccessful cases underwent a repetition of the vaccination. In all of these cases there appeared to be full protection. It should be stated that the vast majority of the number referred to had scars from primary infantile vaccinations. In addition to the individuals above referred to as being exposed, there were some sixty or more workmen, engaged in the construction of a new pavilion, who were in close proximity to the smallpox patients. These were vaccinated with glycerinated lymph, some for the first time, and none up to the present date has contracted the disease. One workman who, by the way, was the only one to refuse vaccination, has within the past week been brought into the hospital with smallpox. He bears upon his arm a good scar from infancy. An unvaccinated garbage-wagon driver and several other unprotected individuals, who were merely exposed upon the grounds, contracted the disease.

The opportunity was also afforded of testing the value of glycerinated lymph in primary vaccinations

in individuals exposed in the wards. One of the nurses who has been employed in nursing smallpox for over two months, and in whom the vaccination was primary, has been found to be absolutely immune. A child of one year, vaccinated with glycerinated lymph about ten days before, was sent into the hospital with a vaccine roseola which had been diagnosed as variola. The child was in the smallpox wards about three weeks and remained perfectly well. A colored child, about two years old, having some fever, was brought into the hospital with a sister suffering from smallpox. The child was successfully vaccinated with glycerinated lymph on admission and did not contract the disease. Several other unprotected children and adults who were vaccinated after admission have been rendered absolutely immune to smallpox.

We have from time to time received in the hospital patients with well-marked and even fatal smallpox in whom vaccination, performed some weeks before, had failed. We recall one patient, a large stout woman of thirty years, who had been vaccinated without result some years before and who was vaccinated with glycerinated lymph one month before admission. There was some local reaction and the physician in attendance was for a time in doubt as to whether there had been a successful "take," finally deciding in the negative. The patient was brought into the hospital with confluent smallpox and died in ten days. From our examination of the patient on admission we were convinced that the result had been spurious.

Such unsuccessful results can scarcely be specifically charged against glycerinated lymph, inasmuch as occasional failures with bovine lymph, more particularly with dry points, have been for years common even in persons susceptible to vaccinia or smallpox.

The striking difference in the experience of different observers, with glycerinated lymph, may be explained in two ways.

It is quite within the bounds of possibility that the virus furnished by the various propagators of lymph may not be equally reliable. If this be true, it would constitute a strong argument in favor of a government vaccine establishment, similar to those existing in England and certain other European countries. The lymph could be gratuitously dispensed to physicians, thus eliminating the commercial factor in the preparation and sale of vaccine virus.

Or the discrepant results may be explained by diversity of opinion, as to what constitutes true vaccinia. Any result which deviates to any considerable extent from the description of primary vaccination given by Jenner should not be regarded as genuine. There are certain local reactions not infrequently met with after the use of glycerinated lymph and perhaps other forms of bovine virus which deviate considerably from the Jennerian delineation. In these cases it is not uncommon to note an abnormal degree of inflammatory action even as early as the second, third or fourth day. Upon this area there frequently springs up with surprising rapidity a more or less conical or globular blister instead of a typical vesicle. This elevation is thin-roofed,

readily ruptured and gives exit to a thin irritating fluid which speedily dries in the form of yellowish brown bulky crusts, the exudation continuing to ooze out at the margins. After shedding of the crusts there is left a faint scar which is devoid of the characteristics of a true vaccine cicatrix. The so-called "takes" which do not protect against smallpox or vaccinia are probably of this nature. Whilst it is impossible to positively affirm that these lesions are entirely devoid of all specific reaction, yet they should not be relied upon to give protection against smallpox. An observation which militates strongly against their being even partial "takes" is that they may develop in individuals who are known to be immune against smallpox. Recently such a lesion developed in a physician who has been steadily exposed to smallpox for a long time. Reactions of the character above described are more common in cases of revaccination.

In many successful vaccinations in which glycerinated lymph is employed, there is an excessive amount of inflammatory reaction. A sort of dermatocellulitis develops, the redness and swelling involving at times the entire arm. The vaccine vesicle spreads considerably beyond the border of the scarification, reaching often the size of a quarter dollar. Not infrequently this area undergoes necrotic change, giving rise to a slough, which, when cast off, discloses to view a large, deep, cup-shaped ulcer which very slowly heals up by granulation. The resultant scar in these cases is apt to be smooth and shining, and devoid of the depressions and bands seen in a typical vaccine cicatrix.

It is surprising that with a virus which is alleged to be free from extraneous micro-organisms such sore arms should be produced. Upon theoretic considerations we would expect such results to be eliminated by the use of a lymph which contained no active principle save the vaccine matter. It may not be out of place to remark that many propagators of virus are to-day violating an important precept of Jenner in the preparation of the virus. Jenner insisted upon the exclusive use of the clear lymph of the vesicle. In the preparation of the glycerinated lymph the entire lesion is curetted, bringing away lymph, vesicle walls and broken-down epithelial tissue, all of which is made into a pulp and mixed with glycerine and water. May not the sore arms be possibly due to the admixture of this tissue debris?

The question is frequently asked, "at what age should an infant be vaccinated?" When smallpox is absent from a community, this may be delayed until the child has reached the age of three months. During an epidemic of smallpox, however, no age is a contraindication to the performance of vaccination. Children born at the Municipal Hospital of mothers suffering with smallpox are vaccinated immediately upon their entrance into the world. Recently a woman with a mild varioloid gave birth to an infant of seven and a half months development. This child was successfully vaccinated in two places, although it later succumbed to a varioloid with which it had been infected *in utero*.

Many physicians hesitate about vaccinating individuals who are suffering from some other disease.

At the Municipal Hospital recently scores of patients suffering from diphtheria and scarlet fever were vaccinated as a precautionary measure. The vaccination did not unfavorably influence the original disease, and on the other hand, the course of the vaccinia was in no case unusual.

Since the beginning of the present year (1901) about three hundred cases of smallpox have been treated at the Hospital. *Of this number not a single patient has been recently successfully vaccinated.* The shortest period elapsing between a successful vaccination and the contraction of the disease was five years. In this case, which occurred in a boy eleven years old, the eruption consisted of only a score or so of papules, which scarcely developed into vesicles but dried up in a few days. It was not found necessary to confine the lad to bed.

Whilst the majority of the patients admitted were unvaccinated, a very large number had been vaccinated in infancy. To our knowledge none, save the boy mentioned, had been successfully vaccinated within the past ten years.

The writers believe that it may be laid down as a rule, that if a child be successfully vaccinated in infancy, and again at the age of puberty, the protection will be permanent. The exceptions to this rule, however, may be sufficiently frequent to warrant a repetition of the vaccination whenever there is exposure to smallpox.

The opinion has been advanced, more especially by Marson of London, that the degree of vaccinal protection in an individual is directly proportionate to the number of insertions made. According to the experience of the writers the *quality* of the vaccine scars is a far more reliable indication of the degree of protection than the *quantity*. A perfectly good vaccine cicatrix presents well defined margins, is reticulated or foveolated, and looks as if it had been stamped into the skin with a sharply cut die. It has been said that genuine pocks are frequently not followed by scars, but without denying this absolutely, we would advise that such assertions be regarded with a considerable degree of skepticism. The general mortality rate from smallpox, as far as we are able at the present time to estimate it, has been about twenty per cent. This is merely an approximate statement, as the ultimate outcome of the two hundred cases now in the Hospital cannot be accurately predicted. The mortality rate among the vaccinated has been about 11 per cent., and among the unvaccinated about 33 per cent. Of the former class the mortality rate of those bearing good scars was about 4 per cent., fair scars about 8 per cent., and poor scars about 20 per cent. In concluding the writers desire to express their condemnation of the use of tight fitting shields. These, by constricting the circulation of the surrounding skin, serve to increase the inflammation and tendency to early oozing. There is no objection to the use of a shield for a few hours, until the vaccine lymph has dried upon the abrasion, but its continuous use during the development of the vaccine lesion is apt to do more harm than good.

PROPHYLAXIS OF SMALLPOX IN CITIES,

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of Philadelphia.

The empirical fact established and insisted upon by Jenner a century ago that persons inoculated with cow-pox, an eruptive disease of the udder of the cow, were immune to smallpox, has been amply confirmed by the experience of a hundred years, and the little operation of vaccination performed with the lymph of the vaccine vesicle procured directly from the young cow, the material now almost universally used, holds the first place in the prevention of that loathsome disease.

The duration of immunity from smallpox secured to the individual by a single vaccination is estimated on good authority to be from eight to twelve years. The problem, then, to produce an ideal exemption from the disease would be the performance of vaccination upon every person in the community, with his revaccination at intervals of eight years. The passage of a law compelling this thorough vaccination would be possible under a government of autocratic ideas like that of Germany, and, indeed, an edict almost as sweeping as this has been enforced in that empire for more than twenty years; it provides that every infant must be vaccinated before it is a year old and every child in a private or public institution revaccinated before it has accomplished its twelfth year. Compulsory vaccination, however, is considered inconsistent with the ideas of personal liberty proclaimed in this country; the consent of the individual to the operation must be obtained before vaccinating him or his children. This complicates the methods of prevention to be adopted here; nevertheless they can be made very efficient.

These methods divide themselves into those which are to be pursued continuously, day in and day out; and those special ones, made necessary when a case of smallpox appears in the community, an event dangerous only in proportion to the carelessness with which the other procedures have been carried out.

The continuous methods (assuming the adoption of the usual precautions against infectious diseases in general) provide for as general a vaccination as possible. They necessitate a corps of vaccinators, who should be educated physicians under the order of the health authorities. These should visit every house in the community offering, urging, and performing when permitted vaccination without pecuniary cost upon every unvaccinated person over four months old and revaccination upon any one upon whom the operation has not been successfully performed within eight years; a second visit at the end of eight days, the period at which the vaccine disease should be at its height, should be made to those operated upon, and if the vaccination has been unproductive of the vaccine disease, a second application of the virus should be made and the visits continued at the same period until a successful result has been reached in the primary cases and the vaccinator has been satisfied that the protection in the revaccinated is sufficient. Discretion obviously should be observed with regard to weak children and sick persons, and the operation should be avoided generally in hot weather upon infants less

than two years old on account of the possible complication of cholera infantum.

Experience has shown, however, that the precious boon of vaccination will not be accepted willingly by every one and means must be found to overcome this opposition. It is held that the State has a right to withhold certain privileges from persons who do not accept special provisions made for the safety of the community: under this view a law has been passed prohibiting a child from attending a public school unless it has furnished a certificate of successful vaccination. This is a useful and far-reaching act, and it should be extended to include all institutions, public or private, where children are received. Vaccination should be made a pre-requisite to entrance into the civil service, the army, the navy and the militia. No immigrant should be permitted to land on our shores unless similarly protected from smallpox.

When the disease actually appears in the community, action must be taken with the greatest possible dispatch and thoroughness. The case is reported at once to the health authorities by whom a medical inspector with a vaccinator is sent to verify the diagnosis, and if the sick man is found to be suffering from smallpox or varioloid, all unprotected persons in his environment are immediately vaccinated; a strict inquiry is made into the origin of the attack, the associations of the patient for the previous two weeks, the limit of the period of incubation for smallpox, being strictly scrutinized so that, if any other case exists in the community, it may be discovered. If the disease is found to have been imported from some other locality, that health authorities there should be notified, and any other person coming from the same place is to be treated as a "suspect." The sick man should at once be removed with the rest of the household to a hospital devoted to the care of smallpox cases, those not attacked by the disease to be detained until there is evidence that the vaccinations are proving successful or they remain well for two weeks, the period already mentioned as the limit of the incubation of the disease. All the articles of little value in the room which had been occupied by the patient are to be destroyed. The room itself is to be closed for a few hours to allow for the subsidence of suspected germs; then the crevices of the windows and doors being closely stopped or pasted over with paper, the vapor from a heated mixture of formalin with ten per cent. of glycerin is introduced through the key hole of the door, five hundred cubic centimeters of the disinfectant being used to each one thousand cubic feet of air space in the room; after a few hours of this fumigation the room is to be opened and aired. Owing to the want of penetration of formalin, experiments having shown that it disinfects surfaces only, the mattresses, pillows and any articles, to the interior of which the contagium may have found its way, are removed in canvas bags and disinfected by the thorough application of wet and dry steam. The floors, walls, ceilings and furniture are then to be scrubbed with a solution of corrosive sublimate, one part of

the bichloride to one-thousand parts of water. If the walls and ceiling have been covered with paper, this, previous to the washing, must be stripped off and burned; finally, the room must be ventilated several days by leaving the windows and doors open before it is again occupied.

If, however, the victim of smallpox is found dwelling in his own house, which is occupied by his family alone, he may decline removal to a hospital, as he has the option under the law. Then the situation becomes more difficult; guards, already protected by vaccination, must watch the front and rear of the house day and night and prevent any one except the physician in attendance from entering or leaving the premises; dogs, cats and domestic animals of all kinds are also excluded. Supplies for the household are to be brought and placed before its entrance, from which situation, after the departure of the messenger, they are to be taken in by the inmates of the house. The guards are under no circumstances to enter the dwelling. The patient is placed with his nurse in a room without carpet, or unnecessary furniture; window curtains of material which may be readily washed are allowed. No one but the physician is to enter the room, and he on such occasions must put on overshoes, cover his head with a handkerchief and protect his usual dress with a garment reaching to his heels, these articles to be disinfected before being used again. Within the room should be a vessel of several gallons capacity containing a disinfecting solution; this may consist of the solution of corrosive sublimate, before mentioned, or as A. C. Abbott* recommends, on account of the fixing of the stains of blood and the discharges by the mercurial salt, a solution of three parts of carbolic acid and two parts of common soft soap in one hundred parts of water. Into this all the bed clothes and garments of the patient, when they are changed, should be placed, to remain there for two hours before they are carried out to be boiled and washed; the plates, saucers, spoons, forks and other utensils are to be treated in the same manner, remembering that the corrosive sublimate is destructive to metallic objects. Whatever remains of the food uneaten must be disinfected before its removal from the room. The patient's skin, the supposed source of the infection, is to be sponged from time to time with a disinfecting solution, one of the less poisonous being used, as for instance a five per cent. solution of Labarraque's disinfection fluid; his discharges are to be received in a vessel containing a disinfectant. When the patient has recovered, all the crusts having fallen from his skin, he is thoroughly washed with soft soap to remove the outer layer of the cuticle before leaving the sick room. Should he die, the body is to be wrapped in a sheet, saturated with the corrosive chloride solution, and preferably cremated; if not thus destroyed, the remains are encased in a hermetically sealed metallic coffin and carried without a public funeral to grave.

* Hygiene of Transmissible Diseases, Second Ed. p. 331.

TECHNIQUE OF VACCINATION.*

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What we hope to accomplish by vaccination is the artificial production in the human being of a disease derived from smallpox through the passage of the poison through lower animals whereby its virulence is lessened and its manifestations made local, instead of general. In order to bring this disease about in the human being we make use of material derived from the calf and preserved in various ways. Our object is to so use this virus that it shall gain access to the vital tissues of the body so that the materials manufactured by the active principle of the virus may be disseminated through the body and produce general immunity from variola. By the vital tissues of the skin I mean the portion in direct lymphatic communication with other parts of the body as opposed to portions of the skin whose function is apparently simply mechanical. Another object which we wish to attain is the inoculation of the special virus of vaccinia free from contamination. Still another is the avoidance of everything which would interfere with, and the observation of any precautions that might make more certain, the obtaining of the local results and the general systemic effects supposed to be produced during the life of this active agent in the local lesion. Still further we have to bear in mind that in thus destroying the continuity of the protective surface of the skin and exposing the deeper structures, including especially the lymphatic spaces, to the exterior, we are creating an artificial portal of entry, whereby infectious material may gain ready access to the organism.

It is possibly beyond the province of this paper to discuss the question of the advisability of using virus prepared in various ways. Having, however, made use of two kinds of "points", and having had a personal experience in my youth with the human virus, I feel as though it might be proper for me to briefly state my impressions.

At the present time no one would think of using lymph from human sources. The danger of transmission of disease from one human being to another in spite of all the care that we can exercise, and the danger of infection of the scab while on the original patient and while preserved in the dry state for future use, are themselves sufficient to prevent our employing this method when material can be obtained so directly from the calf. Two ways in which vaccine material is preserved are the drying upon an ivory or celluloid point and the keeping of the material in glycerine contained in a hermetically sealed tube, or, what might be called a combination of these two, where the ivory or celluloid point is kept submerged in a hermetically sealed cell containing a mixture of the vaccine material and glycerine. After a fairly extensive use of the first two of these methods I would unqualifiedly advocate the employment of the hermetically sealed tube containing glycerinized lymph. Theoretically the airtight tube would be supposed to be more free from danger of contamination than would the dried vac-

cine material on a point which is capable of being handled by the fingers of a possibly not overly clean drug-clerk. Practically I have found that fewer sore arms result from the use of the glycerinized vaccine kept in hermetically sealed tubes, while I am sure that my proportion of successful vaccinations is as great if not greater with this than with the method formerly universally employed. There is another difference between the employment of the two methods of preserving vaccine. I feel sure that with glycerinized vaccine we get more irregularity in the period of incubation, some cases, for instance, developing the local lesion at the end of 36 hours while others may apparently fail to develop until even the 10th day. Why this should be it is impossible to say, but I think it is undoubtedly the case. I should also say that the occurrence of generalized eruptions is far more frequent after the use of vaccine preserved in glycerine than after that dried on the quill. Those interested in this question would find it to their advantage, if they have not already done so, to read the report of the Lancet Commission upon glycerinized lymph which was published in the *Lancet*, of April 28, 1900. Objection is made by some to the use of glycerinized lymph because they believe that fewer successful vaccinations were performed with it than with the vaccine dried on points. To this opinion I cannot subscribe as I have never seen the slightest reason to think that I was having less success with the glycerinized than with the older method of preserving the material.

When we intentionally make our patients ill, even though this is done to avoid a greater evil, we are, I take it, more than ever bound to see to it that we do the very least harm that is possible under the circumstances. The production of a sore arm from vaccination with its accompanying two or three days, at least, of malaise and discomfort cannot but make the conscientious physician wish that we had some other way by which we could prevent the occurrence of variola. The production of a sore arm due not to vaccination pure and simple should make us feel that in some way either we had been faulty in our precautions or in the thoroughness of our directions to our patients or else that the patient had not been sufficiently exact in following our directions. He who would vaccinate his patient off-hand with an instrument carried loose in a possibly dirty pocket, or even in a supposedly clean pocket case, and should feel that all that was necessary in the way of paraphernalia for the operation were the scarificator and the vaccination point, runs serious risk of infecting his patient, not simply with the protective agent but with microorganisms capable of producing serious disease, or even loss of life. To properly perform vaccination, a man should have at hand soap and water, alcohol, certainly clean vaccine and some form of protection to apply after the operation is concluded. In my own bag which I use in vaccinating I carry two large bottles of alcohol, in one of which I keep my scarificator; some clean absorbent cotton, a bottle of bichloride tablets and vaccination shields. The vaccine points I put in on leaving my house as I keep them in the refrigerator between vaccinations. I do not believe that with a less elaborate array of

*Contribution to a Symposium on Vaccination. Philadelphia Pollard Society, November 12th, 1900.

apparatus the operation of vaccination is justifiable. Before proceeding to vaccinate a patient, the hands of the operator should be thoroughly scrubbed with soap and water, then thoroughly wetted with either alcohol or corrosive sublimate solution. Then the skin of the patient should certainly be rendered sterile or as nearly so as possible. In our present ignorance in regard to the exact agent of vaccinia we have no antiseptic, of which I am aware, that will sterilize the skin and at the same time avoid danger of destroying the vitality of this agent, except alcohol, which has in addition the advantage that it probably more thoroughly cleanses the skin than do any of our ordinary watery solutions or antiseptics, and that it promptly becomes inoperative against the vaccine virus through evaporation. The skin should be thoroughly scrubbed with alcohol on a pad of absorbent cotton and then either dried with a clean towel or the alcohol allowed to evaporate.

The instrument with which the lymphatic spaces are exposed is unimportant except for the fact that it must be capable of being thoroughly cleansed and also adapted to the exposure of a limited area of deeper tissue without drawing blood. The needle, the scalpel or tenotome, or a special scarificator may be used. My own preference after the use of all three is for the latter. My reasons for choosing it are that it is used for this purpose alone, that it is thoroughly capable of being cleansed and kept ready for use in pure alcohol, that it can make an abrasion sufficiently deep without drawing blood and that the area exposed can be thoroughly well regulated. The one that I have been using measures about a half a centimeter in width and is composed of six prongs, looking very much like a miniature ice-pick. It can be readily sterilized by the use of soap and water and a scrubbing brush, after which it can be dipped in alcohol, ignited from a match, and then after cooling suspended in a bottle of 95% alcohol. I believe that this instrument causes less discomfort than does the scalpel or tenotome, and that we are more certain not to draw blood than we are when we use a needle.

The point to be selected for the scarification is of course of slight importance save for one or two things. No matter what portion be selected, it is, I believe, important to avoid old areas of scar tissue from previous vaccinations or other wounds. If we vaccinate over an old cicatrix we cannot feel sure that the lymph spaces are sufficiently patulous, while after vaccination in the neighborhood of scar tissue the latter may break down and form a nasty sore, if it is encroached upon by cellular infiltration resulting from vaccination. As nearly as possible to the deltoid insertion is, I think, generally allowed to be the most favorable seat in the arm. I hear indirectly that many are vaccinating above the knee, while some are employing the inner surface of the leg. I have been in the habit of choosing a point just below the head of the fibula for the following reasons: If vaccination is done above the knee there is danger that in sitting down the dress will be tight above the knee, whereas below the knee it hangs loosely; while the outer side is selected because of its less liability to rubbing from ac-

cidental interference with the other leg. The only thing that would make me vaccinate elsewhere in the leg would be the occurrence of superficial varices or a bunch of varicose subcutaneous veins at the point which I usually prefer. Whether this is a valid objection or not I do not know, but I have always rather dreaded the possibility of an endophlebitis from contiguity. The area of denudation need not be large, provided only that it is sufficiently large to enable us to be sure that we have opened up the lymphatic spaces. I believe that one of the most frequent causes for failure in producing a successful vaccination is the drawing of blood. Where more than the most minute quantity of blood is obtained, we cannot be certain that we have not in contact with our denuded surface either bloodclot alone or vaccine material so diluted with blood that its activity is either inhibited or prevented. A large drop of blood might be capable of floating on its surface all of the active vaccine material, and in the contracting of the clot it is very likely that all of the serum and vaccinal matter would be squeezed out and allowed to evaporate on the surface. The ideal result of the scarification alone is simply a little pinkish or rosy moisture. With a little practice I think it is possible so to scarify the skin that we can remove all of the epidermis and get a slightly moist surface, then place thereon our vaccine material and finally again scarify sufficiently to thoroughly rub in our infecting material and yet not cause the outflow of any blood. An additional precaution against pyogenic infection is accomplished by wiping the exterior of the tubes with alcohol on cotton before breaking the ends.

After this point we have left behind a surface covered with serum mixed with our vaccine material, a condition of affairs preeminently suited for the retention and growth of microorganisms. The care of such a surface is certainly important. At one time in my eagerness to avoid doing harm I dressed every scarification with several layers of sterile gauze held in place by a bandage. This made my conscience easier, but did not bring physical ease to my patients, as the under layer of gauze invariably stuck to the dressing on its first removal, and I am sure that this contact of material, even though sterile, causes an excessive inflammatory reaction in the already insulted tissues, a reactive inflammation that may interfere with the production of vaccinia. It would seem, however, that we ought to afford some protection, and I believe that this can be done by the use of one of the many shields for the purpose now in the market. I take it the general practice should be that no shield should be used which interferes with the circulation of the lymph and blood to and from the infected area. It also seems to me that it would be improper to use any form of shields which absolutely prevents the radiation of heat from the skin in the immediate neighborhood. The recently introduced celluloid shields have the advantage of allowing the patient from time to time to inspect his arm and derive more or less amusement therefrom, also of permitting the radiation of heat and thereby obviating the poulticing effect that would be

produced by an airtight covering, while no irritating material comes in contact with the wound.

The shield can, I am convinced, be worn too long, and it has been my habit so soon as the vaccine material has evidently produced a specific local lesion to have the shield removed, and then have the arm dressed either with boracic acid ointment or one composed of aristol, one drachm to the ounce of ointment base. The latter gives the best results, although either of the ointments has to be changed upon the filling of the area with granulation tissue, as neither of them seem to be sufficiently stimulating to cause the surface to be covered with epithelium.

In spite of all care in regard to asepsis a few arms will get "sore" from simple intensity of the local process. In cases with much surrounding edema or cellulitis I believe that the rational treatment is to surround the arm with an antiseptic poultice of gauze soaked in (1 to 3000) bichloride of mercury solution. Another point that I would consider of great importance before the vaccinator can consider that he has done his whole duty is proper judgment as to whether the vaccination has been successful or not. I believe from what I have seen during the past few years, that there is by no means unanimity of opinion in regard to the appearance of the successful vaccination, and one of my regrets at being unable to attend this meeting is that I shall not have the opportunity of hearing the discussion upon the standards by which others judge in regard to whether their effort has been successful or has been a failure.

NOTES ON THE SMALLPOX ERUPTION, ITS CLINICAL FEATURES AND DIFFERENTIAL DIAGNOSIS.

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Smallpox, like syphilis, presents itself in various forms and differs in severity even more than is observed in the latter disease. At the same time it seems almost incredible that a disease manifesting itself so conspicuously on the surface as smallpox does should be difficult of recognition. Even more to be wondered at is the fact that of all diseases, those of the skin are the most confusing to the general practitioner. While concomitant symptoms and the prodromata of smallpox are always associated with the eruption, yet it is the latter that is and must be chiefly relied upon in making a diagnosis. It is necessary, therefore, at the outset to understand the first pathologic changes in the skin to appreciate their true significance.

The Prodromal Rash.

A prodromal rash sometimes appears in variola, for the most part in mild cases, and especially in the variety commonly called varioloid. Again, although more rarely, it is met with in hemorrhagic cases which usually terminate fatally. In position it most frequently appears on the inner regions, as

for example, the axilla, the arms and back. In appearance it resembles the rash of scarlet fever, excepting that its color is duller. On the other hand, in distribution as well as in the order of its appearance, it does not correspond with this disease. At the same time it must be admitted that the presence of a prodromal rash in variola often leads to errors in diagnosis, such cases oftentimes being considered as instances of double infection of scarlet fever and smallpox. Many times the writer has been called in consultation in these cases, and invariably the mooted question was, Is it scarlet fever?

In hemorrhagic smallpox the prodromal rash is liable to appear earlier than in the milder forms, oftentimes late on the first or during the second day. Moreover, this is not infrequently the only rash that appears, the disease terminating in death before the advent of the true exanthem. The prodromal rash in this form has distinctive features which may be recognized as follows: First, by its deep-red color which soon assumes a dark or dusky-bluish tint, and not infrequently actual vibices or hemorrhagic puncta may be made out; second, it does not disappear on pressure. If the patient survive until after the appearance of the true eruption, this gradually subsides, although more slowly than in the simple form as seen in varioloid. Again, in other cases the hemorrhagic features appear during the first day and continue to the termination of the disease. The prognostic significance of the prodromal rash should not be lost sight of. The first or simple form erythema presages that the disease will pursue a mild course to favorable termination, while with the hemorrhagic prodrome a severe and nearly always fatal form—the so-called black smallpox—is sure to follow.

The prodromal rash is due to dilatation of the superficial plexus of the derma, indicating that the nerve-centers are profoundly affected even in mild cases. In hemorrhagic smallpox extravasation of blood through the vessels takes place.

The Eruption Proper.

After a period of fever, pain in the back, headache and vomiting—the prodromal symptoms—the eruption of smallpox appears. Its advent is subject to some slight variations, but usually it may be seen on the morning of the fourth day. The order of its appearance is likewise characteristic and therefore of diagnostic importance, showing first on the areas of the most plentiful blood supply, namely, parts exposed to the external air, as the face, notably about the region of the nose, the forehead, and on the hands. There are occasional exceptions to this order. Thus the eruption may first appear on the trunk; especially when mustard poultices have been applied to relieve the excruciating backache. I recall an instance previously cited (1) in which the eruption first appeared on the legs, from which it extended over the rest of the body, assuming a confluent form on the exposed parts. In this case no reason could be assigned for its anomalous appearance. It is known, however, that a pre-existing inflammation or anything that causes a determination of blood

1. The Writer, "A Treatise on the Acute, Infectious Exanthemata," Philadelphia, 1901, p. 36.

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to the part, predisposes to the development of the smallpox eruption.

It is a rule for the palms of the hands and the soles of the feet to be involved, although not always to the same extent as the general surface. The importance of the palmar and plantar eruption in making a diagnosis should not be over-estimated, as it occurs in varicella and in syphilis, diseases oftentimes mistaken for smallpox.

With the appearance of the eruption the constitutional symptoms subside. The fever, which had attained a height of 104° F. or higher, suddenly becomes normal. In mild cases the patient feels that the severity of the disease is past, and he is with difficulty restrained from going about; while in severe cases the system remains profoundly impressed by the variolous poison.

The first changes in the skin that we have been able to detect are irregularly circumscribed reddish areas, lentil-sized, due to capillary dilatation in the superficial papillary plexus of the derma. At first they resemble mosquito bites. The erythematous areas soon recede at the periphery and in a few hours a distinct central thickening or induration may be detected by the touch. This at first resembles a parchment-like stiffening, due to localized edema, which shortly assumes a distinct shot-like feel. *This induration continues throughout the whole course of the disease, one of the most constant as well as the most distinctive feature of the variola eruption.* Shortly, on the second day of the eruption, papules rise perceptibly above the surface, and in distribution the eruption extends to the trunk and extremities in regular order on successive days. Last of all, the palms of the hands and the soles of the feet are invaded. The scalp is oftentimes perceptibly and copiously studded, and finally the *mucous membranes partake of the same changes that are observed in the skin.* From this point great variability in the eruption may be noted, which is mainly dependent on the severity of the disease. In variola vera, late on the first and during the second day, the papules which first appeared show deep-seated serous accumulations, due to exudation and cell-degeneration in the stratum mucosum. By the fifth day of the eruption the lesions have enlarged to split-pea sized areas and the serous accumulation, on account of the invasion of plasma-cells, has begun to assume an opaque or milky tint. In mild cases there may be a general retrocession at this time, in which an abortive eruption would be seen and which so closely simulates the eruption of varicella. Invariably, so far as the writer's experience goes, a few lesions adhere to the variola type from which a diagnosis may be made. At this time, too, resorption and rapid keratinization of the superimposed epidermic stratum giving rise to a wart-like eruption called "horn-pox." Again the invasion of pus organisms may give rise to furuncles, abscesses, and the like. When this occurs troublesome sequelae may be expected, sometimes leading to an indefinite period of ill-health. At this time, during the fourth and fifth day of the eruption, umbilication is met with. It should be borne in mind that umbilication is not peculiar to smallpox, as it sometimes occurs in other affections, although to a less extent. Umbilication is not present during the

whole course of the variola eruption, for as the pocks mature and their walls become tense, usually from the seventh to the ninth day, the umbilication is liable to disappear. Many times has the writer sought carefully for an umbilicated lesion in a well marked case of variola, without finding the slightest trace of a central depression. On the other hand, it has been observed in varicella, although to a very slight extent.

In hemorrhagic smallpox, when the hemorrhagic tendency has not previously shown itself, it is liable to occur at this time, the hemorrhage taking place directly into the pocks and extending to the periphery gives rise to a dark-bluish ring. Petechiae may likewise occur independently of the smallpox lesions.

In the scope of this paper it is impossible to go into the various changes that may take place in the smallpox eruption. An endeavor has been made, however, to bring out the most salient features, those which have most strongly impressed the writer in a clinical way. Having taken up the smallpox eruption and its recognition in a general sense, its differential diagnosis and the affections most commonly mistaken for it may be briefly considered.

Varicella.—In the majority of cases it is not difficult to differentiate between variola and varicella from the eruption alone. The following points, however, may assist the inexperienced:—In variola the prodromal symptoms are always present for several days, usually three; while absent or of a few hours duration in varicella.

Furthermore, the temperature often renders valuable aid in differentiating between the two diseases. In variola it rises rapidly, and even in mild or abortive cases usually reaches 103° to 104° F., when, on the appearance of the rash, a crisis takes place, and it falls to the normal within a few hours, where it may remain throughout the remainder of the disease. Varicella, on the contrary, is seldom ushered in with fever, but the temperature usually rises one or two degrees as the eruption develops.

When the case is seen for the first time after the eruption has appeared, and, as often occurs, no definite history can be obtained, other symptoms must be relied upon. The lesions of variola are deep-seated and show a marked predilection to become indurated, while in varicella the lesions are always when uncomplicated situated quite superficially in the upper strata of the epidermic, at first receiving the pseudonym, "water pock", from its resemblance to drops of water on the surface. Moreover, the distribution of the eruption is usually of great diagnostic importance. In varicella the parts protected by the clothing, especially the back and chest, are mainly involved, while variola finds its special seat of predilection on the exposed parts, face and hands, with a strong tendency to cluster about the nose and forehead. In varicella the lesions first appear as macules, never indurated as in smallpox, and in a few hours develop into prominent, transparent vesicle. As has been said, umbilication is generally present during some period in the development of the smallpox lesion, while it is absent or nearly so in varicella, usually the nearest approach

to umbilication in the latter being the formation of a minute central crust, which does not appear until resolution has begun. Furthermore, the lesions are of more uniform size in variola than in varicella, although this is by no means an infallible test. The age of the patient is important; the writer has in one instance only during a period of many years encountered chickenpox after the age of puberty, and the consensus of opinion bears out the statement that varicella is essentially a disease of childhood. Until all reasonable doubt as to the diagnosis is removed, public safety demands that the worst be prepared for, consequently it is a good rule to treat all suspected cases as smallpox until it is definitely determined to the contrary.

Scarlet Fever.—The prodromal rash of variola which counterfeits scarlet fever is always met with in mild cases, and is accompanied by little, if any, anginal symptoms. Again it should be remembered that the premonitory symptoms are always severe in variola and of two or three days duration, while in scarlatina, on the contrary, they are of short duration, usually but a few hours, often slight, and may be entirely overlooked. The pulse in the latter disease is rapid and out of proportion to the fever, while in variola the fever and pulse lines run nearly parallel. In scarlet fever the erythematous blush appears first on the upper part of the chest, cheeks, and neck. In variola the scarlatinaform rash is best marked on the lower part of the abdomen and on the thighs. Another distinguished feature is the swelling of the lymphatic glands about the lower jaw, so common in scarlet fever and seldom, if ever, seen in an early stage of variola. The conspicuous papillae, or "strawberry tongue," so constant in scarlet fever, is never a conspicuous feature in variola. Here again the age of the patient is often of great assistance, for the prodromal rash of variola seldom occurs in young children, while adults seldom suffer from scarlet fever.

The writer has been very strongly impressed during the last epidemic of smallpox in Cleveland with the frequency with which smallpox in the hospital wards has been mistaken for typhoid fever and syphilis. The gastric disturbances in the former disease, and the distribution of the eruption in the latter are mainly responsible for this confusion. It should, however, be borne in mind that in typhoid fever the disease is insidious, whereas in smallpox it is invariably abrupt, being ushered by nausea and vomiting, severe pain in the back and rapid rise of temperature, and that upon the appearance of the eruption the constitutional symptoms rapidly subside. Recently a case of typhoid fever was admitted into the wards of Lakeside Hospital, and after several days an eruption appeared of a papular nature, rose-red in color, slightly indurated feel and quite generally distributed over the body. The history of the eruption indicated that it had first appeared on the abdomen from which it extended over the trunk and the extremities, as well as the face and hands, although to a less extent. The slow evolution of the eruption even without the history of the case was sufficient to exclude variola, although it occasioned some commotion until a positive diagnosis was obtained.

Syphilis.—It is noteworthy that the first case sent to a newly equipped "political" smallpox hospital in Cleveland a few years ago was a negro—suffering from syphilis. With a pustular syphilide when no trustworthy history can be elicited, some uncertainty may be experienced, and adding to the discomfort in such cases an immediate and positive diagnosis is usually imperative. In both affections the face is liable to be studded with the eruption, the palms and soles are conspicuously involved in both diseases, as well as the involvement of the mucosae.

A careful study of the case, however, will reveal diagnostic landmarks, so to speak, of unmistakable significance. First, the writer has never seen a purely pustular palmar syphilide, without its multi-form character being revealed on other parts of the body. Second, provided the skin lesions were similar, the mucous membranes of the mouth afford even more constant distinguishing features. In variola, pustules or denuded areas corresponding to the sites previously occupied, with a slight induration sometime present, will in many instances be observed. In syphilis, excoriated circular or horse-shoe shaped lesions, sometimes ulcerated, will, when present, afford unmistakable evidences as to the nature of the disease. Third, general adenopathy is always more or less in evidence in early syphilis, and absent, or localized and transient in variola.

That there is a distinguishing odor to smallpox I have never been able to confirm; an equally extensive suppuration of the skin from other causes, with like inattention to cleanliness, will, according to my observation, give rise to the same nauseating stench which is encountered in variola.

SOME EXPERIENCES WITH BLOOD EXAMINATIONS.*

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To begin with, it is expected that this paper will not be favorably received by many of the profession. Nevertheless, as the popularity of a paper is the least of its merits, we feel justified in recording our experience with blood examinations, even if they do not verify the extravagant claims that have been made by some of those who have made this subject more or less of a specialty.

During the last few years there have been made at the German Hospital several thousand blood examinations upon the surgical patients and the views given you are based upon the results of these examinations, contrasted with the actual pathological findings at the operating table.

What is said may seem to have the object of discouraging what is sometimes called the scientific side of medicine, but this should not be the case, for if the practical benefits of the laboratory methods

* Read before the Medical Society of Virginia, meeting at Lynchburg, November, 1901.

of diagnosis are not found as great as their originators hoped for, it is their duty to find the reasons for this and place their findings on the firm basis of fact that will make them of the greatest practical benefit to the profession. As an example take the subject of albumen in the urine. When Bright first announced his discovery of this method of diagnosis, after the first wave of incredulity had passed, there was a period when every case with albumen in the urine was expected to die of acute nephritis within a year or so. How untrue that view was we well know, but it was not to those who reported only the cases favorable to that theory to whom credit for advancement was due, but it is to those who reported the cases exactly as they found them, the papers of protest, to which we are indebted for the proper subjugation of this symptom and its establishment as the valuable means of diagnosis that it undoubtedly is.

Just so with examinations of the blood; although not in years, in its development this subject is still in its infancy, and we believe that many of the positive claims made for it must be greatly modified before it is placed on a stable basis and is in proper condition to be of the greatest usefulness to the practical physician and surgeon.

There is undoubtedly much to be learned from examination of blood, and the faults found with its results should not be taken as an effort to hew down the tree, but rather as a pruning to make it take on new vigor and develop into greater usefulness.

With many of the diseases, in which an examination of the blood is said to yield a most gratifying result, our experience has been very limited; and also with some of the different examinations; so that this paper cannot be a complete review of this subject, but only of that part which has been called to notice in a general surgical practice.

Parasites in the Blood.

Undoubtedly examinations of the blood for the hematozoa malariae are of the greatest value, and when found are absolutely diagnostic of the disease. If the only results achieved by the work done upon the blood had been the discovery of this parasite, the labors of the investigators would have been well repaid. There are certain manifestations of malaria that so closely simulate certain septic conditions that without this means of diagnosis their differentiation would be almost impossible. There are for instance irregular types of malaria that simulate gall stone disease so identically, and were it not for the presence of the hematozoa in the blood, a prompt diagnosis would be impossible. However, it has been our experience that the more irregular and atypical the case of malaria, the harder are the organisms to find, and therefore in a case where malaria is suspected, a single negative blood examination should not carry much weight.

The filaria sanguinis hominis is another of the parasites of the blood, the detection of which might be a valuable means of diagnosis, but since elephantiasis is quite rare in this locality, we have never met with a case which was confused with any more purely surgical affection. Indeed, at the

German Hospital there is only one case in which the finding of this parasite is recorded.

With the spirillum of relapsing fever we have had no experience whatever.

In regard to the various pyogenic bacteremias we must say that we have received very little practical benefit from cultures taken from the blood. In the first place the results of such cultures are usually negative, except in such advanced cases that this method was not needed to diagnose the condition. In the second place, a careful bacterial study takes such a long time, that by the time the surgeon receives this report, the patient has often passed on to the care of the Great Physician, and the only object achieved is to file the bacteriological report along with the report of the post-mortem in order to make the records of the case complete.

We have frequently had the blood examined for microorganisms in cases in which malignant endocarditis was suspected, but usually with negative results; and even when successful it is hard to see with what benefit to the patient.

We should like to place ourselves on record as being bitterly opposed to painful, or disturbing examinations of a patient that do not promise him, or her, any benefit, but are made merely because they are interesting. Often too much zeal in scientific examinations has a very disturbing mental effect on a patient and acts very much to his detriment.

Serum Examinations.

The action of the blood serum of a patient suffering from a bacterial disease upon a culture of the specific microorganism has received much attention lately. Of these the Widal reaction for the diagnosis of typhoid fever is the only one with which we are at all familiar.

Undoubtedly a positive Widal reaction can be obtained after the seventh or tenth day of the disease in a very large percentage of cases of typhoid fever, but as a diagnostic aid to a surgeon its results are upon the whole disappointing. Sometimes in the first days of an enteric fever the clinical picture very closely resembles that of acute appendicitis. At this early date the Widal reaction has not been established and in practically all cases the clinical symptoms have made the diagnosis before the Widal reaction has become positive.

There is, too, a certain percentage of cases of typhoid fever in which the Widal is negative all through the disease, until the third or fourth week, or is intermittent. In our experience it is in the cases in which the clinical symptoms are the most perplexing that the Widal reaction most often fails.

Another source of error is that a few patients without definite typhoid give a positive Widal reaction. Our attention has been especially called to two cases of acute miliary tuberculosis and one of tubercular peritonitis, all three of which gave the Widal reaction and occasioned some confusion in the diagnosis. After an attack of typhoid fever the blood will give a positive Widal reaction for an indefinite number of years, a fact that should never be forgotten, as sometimes it is only with the most careful questioning that we can elicit a history of typhoid, if it is possible at all.

From the observations enumerated we conclude

that a positive Widal is rarely of much value to the surgeon, however, valuable it may be to the medical man. A negative Widal reaction, especially after an illness of two or three weeks, seems more often of service; for, if after two or three weeks the Widal is persistently negative, we can be almost certain that the case is not one of typhoid fever.

Value has been claimed for the serum reaction in colon, paracolon, proteus and pyocyaneus infections and Infectious Tropical Dysentery, but personally we have had no experience with these serum reactions and we are not in a position to judge of their merits.

The subject of the coagulability of the blood in jaundiced patients is another of the serum examinations that has received attention lately. In jaundiced patients the blood is certainly much slower in coagulating than is normal blood, and, after the administration of calcium chloride or gelatine, the length of time necessary for coagulation seems to be diminished, but yet at operation there seems to be very little difference in the amount of hemorrhage, whether these substances have been given or not. However, there is no harm in their administration, if the operator should fancy them; but in our experience proper gauze packing at operation and full doses of opium afterward have given the best results in troublesome oozing in gall bladder surgery.

Sugar in the blood can be quite easily demonstrated, but this examination is usually more interesting than valuable. For the urine of all surgical patients is examined for sugar, and tests for sugar in the urine are as reliable and easier of application than are the blood tests.

Examination of Hemoglobin.

Justi's hemoglobin test for the diagnosis of syphilis has proved itself very satisfactory in the cases in which we have used it, and in a doubtful case is well worth a trial.

Oligochromemia in surgery has been considered of great importance. Some surgeons have stated that they would not operate upon a case in which the hemoglobin was reduced below 40 per cent, others take 30 per cent. as the limit of safety. Our experience, however, does not bear out this view. For an acute suppurative condition or after acute or chronic hemorrhages, operation for the relief of the condition may be undertaken, no matter what the percentage of hemoglobin, and we have records of several cases operated with only from 10 to 20 per cent. of hemoglobin that terminated favorably.

In appendicitis there is a marked loss of hemoglobin, usually from 20 to 35 per cent, and this occurs in both the acute and chronic cases. It, however, seems to have very little prognostic importance, for out of 118 cases two had a percentage of less than 40 per cent. of hemoglobin and both of these were operated successfully.

Erythrocyte Count.

This gives the surgeon an index as to the powers of resistance of a patient as well as a guide to the severity of the infection. In a case which appears to be only a moderate infection if the hemoglobin and erythrocytes fall rapidly and markedly, there

are several points to be seriously considered. First, has the patient a very feeble power of resistance due to individual idiosyncrasy, or a complicating disease, such as nephritis and must we therefore make our surgical procedures as limited as possible. Or, secondly, have we misjudged the severity of the infection.

In carcinoma in the advanced stages there is a marked fall in the number of erythrocytes, but this fall is in no way diagnostic and in the less advanced cases with which the surgeon has usually to deal is either absent or insignificant.

There may be in appendicitis a very notable fall in the number of red blood cells both in the chronic and acute forms; and this although interesting, and often apparently out of proportion to the severity of the condition, we have not been able to make of any great diagnostic or prognostic use.

A chlorotic condition of the blood is often valuable in explaining the cause of amenorrhea and leucorrhea in young girls, as well as in other conditions.

Leucocytosis.

This phase of our subject is both the most valuable and the most disappointing part of the examination of the blood. Dr. J. C. Costa, Jr., hematologist to the German Hospital, took 118 cases of appendicitis and tried to define the rules governing the leucocyte count, with the following result.

"In simple catarrhal and interstitial forms the numbers of leucocytes, as a rule, did not exceed 10,000 per cubic millimeter. In a certain proportion of cases, however, exceptions to this rule were noted, for counts of 12,000 or 15,000 and even higher were sometimes made. 36.8 per cent. of catarrhal or interstitial cases showed a leucocyte increase of from 10,000 to 17,100 per cubic millimeter, the latter being the maximum, while in 60.1 per cent. the counts were below 10,000, the minimum being 1,600. Most of these high counts were attributed to a local non-purulent inflammation limited to the peritoneal covering of the appendix, since a circumscribed peritonitis of this sort was very commonly found in this form of the disease. It was tentatively suggested that in some cases the increase represented simply a blood finding of the associated anemia or, perhaps it resulted from blood concentration produced by vomiting or by purging.

In cases with abscess, gangrene or peritonitis a well marked leucocytosis was found in the great majority of cases. In instances of thoroughly walled-off pus foci from which little or no absorption occurred, leucocytosis was often absent; it was also absent in profoundly septic patients in whom the crippling effects of the poison had stifled reaction. Absence of leucocytosis under this latter circumstance was, however, comparatively rare, since in only 16.6 per cent. of fatal cases was a well defined leucocytosis absent, the counts in these two cases being 6,000 and 11,000 respectively. In the other ten the leucocytes ranged from a minimum of 14,200 to a maximum of 58,200, and averaged 19,400 per cubic millimeter.

In three cases extension of the pus focus and general peritonitis was indicated by a progressive increase in the leucocytosis; this increase having been found to vary from 6,600 to 14,000 cells to the cubic

millimeter in excess of the number previously counted. While absence of leucocytosis was observed in connection with small pus collections, it was by no means always true that low counts indicated small abscesses.

Leucocyte counts ranging between 10,000 and 15,000 or 17,000 cannot be depended upon to reflect the nature of the local lesion, since this degree of increase may be found both in mild catarrhal and in purulent cases. Counts of 20,000 or more *invariably* indicate pus, gangrene, general peritonitis, one or all. Absence of leucocytosis means nothing definite.

In operative cases complete evacuation of the abscess is followed within a few days by a decline to normal in the number of leucocytes, provided that the recovery of the patient is uneventful. Persistence of a leucocytosis after the third or fourth day following operation may usually be attributed either to an undrained pus pocket, or pockets, to general peritonitis, or to both.

Attention is called to the fact that as a rule just those conditions which bear the closest clinical resemblance to appendicitis give rise to blood changes identical with those found in the latter disease, so that the blood count as a means of differential diagnosis is greatly limited. Thus, leucocytosis is the rule in such conditions as ovarian abscess, pyosalpinx, ectopic pregnancy, renal abscess, hepatic abscess, gall bladder empyema and malignant disease of the cecum, all of which conditions have been confused with appendicitis. Since renal and hepatic colics are generally associated with inflammatory complications which produce leucocytosis, neither of these conditions can be distinguished with confidence from appendicitis, simply by the blood examination. Acute gastritis may or may not be accompanied by leucocytosis, so that the blood count cannot be relied upon as a clue in distinguishing this disease from appendicitis. The same is true of dysmenorrhea, in which disease inflammatory changes of the uterus may be the factor of a leucocyte increase. Should the diagnosis lie between appendicitis and enteric fever, the former is suggested by the presence of leucocytosis, since in typhoid this sign is practically never observed, except in the event of such a complication as intestinal hemorrhage or perforation. In typical cases a leucocytosis is sufficient to exclude such non-inflammatory conditions as simple enteralgia, lead colic, ovarian neuralgia, ovarian cyst and a movable kidney."

Irregular and inconclusive as these cases are, there are individual cases met with that are still more disappointing. For instance—a young man was admitted to the German Hospital with all the symptoms of a severe attack of appendicitis, the leucocytes on the day of admission numbered 20,000. Operation was refused by the patient. He was treated medically with improvement in all symptoms, the leucocytes gradually fell from day to day, after six days they numbered 7,500. At this time permission for operation was granted and a large abscess was found in the pelvis, containing at least 500 cc. of pus. At the time of operation the temperature was normal, bowels moving freely, pain absent and stomach retentive. The only indications

of the abscess were tenderness and rigidity of the right rectus and a mass discernible upon rectal examination.

In this case the blood examination proved itself entirely unreliable and it does not take a very large number of such cases to severely shake our confidence in leucocytic counts.

In carcinoma there are no marked blood changes, except the anemic and blood destruction of extreme cachexia, which is in no respect pathognomonic. Leucocytosis is absent unless due to the absorption of septic material from an ulcerating area or from some intercurrent conditions.

Our experience with the variations in the leucocyte count have been given in a paper published in the *Philadelphia Medical Journal*, of June 1st, 1901, and we will not infringe upon your time to repeat them here. But in summary we will say that the leucocyte count, although at times very valuable, is often very disappointing.

Quite recently it has been announced that the way out of this difficulty lies in the differential count, in which an increase in the polymorphonuclear leucocytes will show the presence of pus without an absolute increase of the leucocytes. Let us hope that this statement will be verified and remove the discrepancies we have found, but as yet this theory has not been investigated fully enough to be conclusive.

The differential count is very valuable in the diagnosis of pernicious anemia and the various forms of leukemia and these diseases cannot be positively diagnosed or eliminated without a differential count. It is said to be of value in the diagnosis of trichinosis, but with its value in this disease we have had no experience.

With the differential count in suppurative conditions the benefits received have been purely negative in character. The theory of the polymorphonuclear increase already mentioned has not as yet been of any practical benefit to us, yet we cannot say that in the future it will not prove of value.

Although we have made a few examinations of the alkalinity and specific gravity of the blood, their results were entirely inconclusive.

This paper, as we have already said, is in no way a complete review of the value of the blood examinations in surgery, but is only some of the more prominent experiences met with in a general surgical practice. There are many diseases in the diagnosis of which blood counts might be and are of value and also many conditions not mentioned here that interfere with their usefulness.

We have no desire to belittle the real value of blood examinations, for the preceding pages show that they have very often been of greatest value to us. What we do object to is the unfounded claims that have been made for this procedure, which experience does not bear out and which are almost sure to deceive practitioners and lead them into errors likely to sacrifice valuable lives. For instance, the statement that hemoglobin below 40 per cent. precludes successful operation, if followed out would cost many lives by denying to patients the benefits of operation. Then the statements concerning appendicitis that have appeared from

time to time in the Medical Journals that certain operators depend upon the blood count alone to indicate the time and need for operation in this condition. And so with many other inaccurate, though rosyhued, statements, which, unless protested against, are likely to deceive all but the most experienced.

We have mentioned in another communication the many artifacts that may interfere with and negate the value of the blood count, such as physiological and drug leucocytoses, errors in technique, etc., and will not repeat them here.

Therefore, let us make use of blood examinations, but not view the results through such rosyhued glasses that we cannot see their inaccuracies and limits of usefulness.

THE SUPRAORBITAL REFLEX IN FACIAL PARALYSIS.

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At the March meeting of the Section on Internal Medicine of the College of Physicians of Philadelphia, D. J. McCarthy demonstrated the supraorbital reflex. This had not been described previously. It consists of a slight, but distinct contraction of the orbicularis palpebrarum when the supraorbital nerve, or occasionally one of its branches, is struck a slight blow. McCarthy regards this reflex as important for the reason that it demonstrates conclusively the sensorio motor mechanism of reflex action; that is to say, mechanical irritation of a purely sensory nerve (the supraorbital) produces contraction in a muscle not immediately in relation with it and supplied by a purely motor nerve, the seventh. In a subsequent communication (*Neurologisches Centralblatt*, Sep. 1, 1901, p. 800) he reiterated his views, and incidentally mentioned that the reflex was invariably lost in facial paralysis.

At the time of demonstration objection was made that it was not possible to exclude contraction as a result of direct irritation of the orbicularis fibres extending above the eyebrow, nor irritation of the periosteum to which the muscle is attached. As the contraction is usually more distinct in the lower lid, the first of these objections seems improbable. As the matter is one of considerable interest, I desire to report some cases* that prove to my mind, that the original explanation of McCarthy is correct.

CASE I.—The patient, K; white, male, 25 years of age, a laborer by occupation, was admitted to the Philadelphia Hospital suffering from tuberculosis of the larynx and lungs, and chronic otitis media. He gave the following history. His parents and other near relatives—all in Germany—were either healthy or had died from unknown causes. He had had an attack of dysentery in childhood, but no other sickness. He had never had venereal infection. Three years ago he had a severe attack of pain in the left ear followed by a discharge which has persisted in considerable quantity until the present time. About one year ago he had lost his voice. Between two and three months ago he noticed that he could not move his

left eye and that food collected between the teeth and the left cheek. He is an ignorant, well-nourished man, with the physical signs of a slight catarrhal inflammation of the left apex. Tubercle bacilli have been found in the sputum. There is only whisper speech. A continual discharge of pus takes place from the left ear which is totally deaf. Hearing is decreased on the right side.

The opening of the left eye is wider than the right; the left side is smooth and expressionless. If the patient puffs out his cheeks, air escapes on the left side. When told to close both eyes, the left ball rolls up and in, but the lid does not droop to cover it. When told to look downward, the lid follows the eye for about half the distance, and then stops. When told to close the right eye, there is very slight drooping of the left upper lid. Mastication is well accomplished. The masseters contract strongly; there is no paralysis of the palatal or pterygoid muscles. The tongue is protruded in the median line. The left platysma appears to be paralyzed; the other muscles of the neck are normal. All the muscles of the right side of the face contract normally to electricity; on the left side only the platysma, masseter and temporal muscles respond. Taste has been tested a number of times on the anterior, and also on the posterior part of the tongue. The patient, although very willing, appears to be too unintelligent to understand that he must answer promptly, and, even with the strongest caution, always hesitates some time, and endeavors to move the tongue after a drop of the solution employed has been placed upon it. As far as can be judged, however, taste is normal on both sides. It appears from this description that the lesion is peripheral, and is probably situated somewhere between the geniculate ganglion and the brain, in all likelihood involving the nerve in its course through the petrous portion of the temporal bone.*

The interesting feature of the case is the behavior of the supraorbital reflexes. When the trunk of the right supraorbital is struck with a percussion hammer, the right eye-lid gives a distinct and vigorous contraction. When the trunk of the left supraorbital is struck, no contraction occurs in the left orbicularis, but there is a distinct contraction of the right orbicularis, not quite as vigorous as when the right nerve is struck. That is to say, there is a distinct crossed reflex, proving beyond any dispute, that the motor nerve in this reflex is innervated from the medullary centre as a result of afferent impulses conveyed along the opposite sensory trunk. The reflex is only elicited when the trunk of the nerve is struck directly. It cannot be obtained by striking the distribution of the nerve filaments in the frontal and anterior parietal regions of the skull.

Two other points deserve notice. Percussion upon the lower edge of the malar bone on the right side produces no response; on the left side there is distinct sluggish, worm-like contraction of the muscles elevating the corner of the mouth. This is evidently not caused by the reflex action, but is simply an evidence of increased myotatic irritability in the diseased muscles which have apparently not lost all contractile power. I have not been able to find any note regarding this phenomenon, in a rather cursory examination of the literature of facial paralysis.

Koster (*Deutsches Archiv für klinische Medizin*, Vol. 68, pp. 343 and 506) has recently called attention to the extreme frequency with which the lacrimal secretion is involved in this condition. In the present case it appears to be equal on both sides. No

*These cases were all observed in the medical wards of the Philadelphia Hospital whilst I was substituting for Dr. Alfred Stengel, to whom I express my thanks for permission to report them.

*Dr. George M. Marshall has since operated upon the left ear, opening the mastoid and tympanum and agrees in the above localization of the lesion.

trophic changes have occurred in the left eye, although lagophthalmus persists during the patient's sleep, and there is marked pyrexia, and general impairment of nutrition.

Krause (*Münchener medicinische Wochenschrift*, Nos. 26, 27 and 28, 1901) does not believe very strongly in trophic ulcers of the cornea after trigeminal resection, but has observed ulceration produced by traumatic irritation (in a miller's wife). It is possible that in this case the active tear secretion had kept the exposed conjunctiva clean, and I think that the rolling of the eyeball may assist considerably.

The second patient presents somewhat similar phenomena, and others that are still more interesting.

CASE II.—W. L., 25 years of age, an iron-moulder by occupation; always healthy with a good family history; at the age of 22 noticed a lump at the angle of the right jaw. This continued to enlarge, others appeared, and two years later an operation was performed, several glands being removed, and others left *in situ* on account of extensive adhesions. The patient has several large scars in the carotid region, and numerous enlarged glands can still be felt just beneath them. Since the operation he had suffered from fever, coughing and occasional sweats. There had been considerable loss of weight, and tubercle bacilli had been found in the sputum. There was infiltration of both apices. Immediately after the operation he noticed paralysis of the right side of the face. This has persisted, with slight improvement, to the present time. Upon examination it was observed that the right corner of the mouth was drawn slightly down; the right side of the mouth was persistently open; and the right palpebral orifice was smaller than the left. There was occasional tic of the muscles on the right side. Sensation to pain and touch were everywhere normal. Motion was very imperfect. The patient was able to lift the right eyebrow slightly; the right eyelids could be approached, but not completely closed. He was not able to show his teeth upon the right side, and upon puffing out the cheeks air escaped freely on this side. Upon repeated effort he was able to draw up the right corner of the mouth, but usually this was associated with drawing up of the left corner, and sometimes, in attempts to draw up the right corner, only the left was moved. The movements of the jaw were not impaired, excepting slight limitation toward the right by the scar. The masseters contracted equally and vigorously. The right platysma did not contract, although the left contracted vigorously. With the exception of the masseter and temporal muscles, none of the muscles on the right side of the face responded to faradic electricity, while those on the left side responded readily. Hearing in the right ear was very much impaired, the watch being heard at 3 inches; in the left ear the watch was heard at 4 feet. Taste was equal and normal on both sides of the tongue. It seemed certain, in spite of the defect in hearing on the right side, which may possibly be accounted for by some local conditions that have not been detected, that in this case the paralysis was due to division of the nerve after its emergence from the skull as a result of the operation, and that a certain amount of repair has taken place.

The supraorbital reflexes when tested gave the following results. Upon striking the left side there was a very marked contraction of the orbicularis, but there was no contraction on the right. Upon striking the right supraorbital, there was only a very slight contraction on the right side, and a moderate contraction on the left, that is to say, a crossed reflex was present in this case also. But the most interesting phenomenon was the apparent extension of the reflex. When the right supraorbital nerve was struck with moderate force, there was in addition to the slight contraction already noted, a distinct lifting of the external angle of the mouth for a distance of about a quarter of an inch. This was entirely involuntary, and appeared to be due to the irradiation of the reflex to several of the medullary motor centers. Why the particular

group of muscles employed in lifting the lip should be especially affected, I do not know.

Striking upon the malar bone and upon the points of emergence of the facial nerve upon other parts of the face failed to produce any contraction, but very slight upward twitching of the lip occasionally occurred upon striking the infraorbital nerve just below the edge of the orbit.

The third case merely serves to confirm the existence of the crossing of the reflex.

CASE III.—J. H., 46, a carpenter by occupation, 4 years ago had several abscesses of the thigh which finally healed. Six weeks ago he began to cough and expectorate freely, and lost his voice. About a month ago the left eye was injured, and shortly after that he developed paralysis of the muscles of the face, giving rise to persistent lagophthalmus. The masseters and temporals still contracted; there was a continual discharge of pus from the left corner of the mouth. The patient was totally deaf in the left ear and the left eye was intensely injected. No tubercle bacilli had, however, been found in the conjunctival secretion; they were numerous in the expectoration. The patient was in such a desperate condition that careful examination was not possible. However, upon tapping upon the left supraorbital no contractions occurred in the eyelids of that eye, but there was a distinct twitching of the eyelids of the other eye. The right supraorbital reflex was apparently normal. Irradiation could not be determined.

These three cases appear to prove, first, that McCarthy's reflex is a true sensori-motor reflex, and that the irritation of the supraorbital nerve may, under certain circumstances, produce contraction of the muscles of the opposite side. Second, that in certain cases the reflex manifestation may extend to the other muscles which are removed to a considerable distance from the supraorbital nerve.

As a subsidiary observation I desire to call attention to the loss of ability to move the platysmā in cases I and II. Babinski (*Gazette des Hôpitaux*, 1899, No 52) regards this as a symptom of organic plegia. It apparently exists also in peripheral facial paralysis.

The Study of Hand Imprints.—In *La Contemporaine*, for March, 1901, Madame A. de Thèbes gives photographs of imprints and models of the hands of Paul Deschanel, President of the French Chamber of Deputies, member of the French Academy, etc., in illustrating a study in palmistry. These are reproduced in the *Gazette Medicale de Paris*, (June 15, 1901) with quotations from her article, though her conclusions are omitted. Here the hands are described scientifically, side by side with the chiromantic description. Should M. Deschanel be arrested or assassinated, he can now be identified by these imprints. A plea is made for a more detailed and more general study of hand imprints, for determining the identity, profession, or trade of an unknown individual, an action which will certainly prove of great anthropometrical value. [M. O.]

Cyclic Cerebro-Meningitis in Adolescents.—Professor P. E. Launois and Jean Camus report three cases of epidemic cerebro-spinal meningitis, benign and cyclic in character. All three patients were boys from 16 to 18 years old. None of them would permit the performance of lumbar puncture. The illness began with gastro-intestinal symptoms, fever, pain in the neck, headache and general malaise. Kernig's sign was intense, persisting until defervescence, when it suddenly disappeared. Patellar reflexes were absent until recovery, when they rapidly returned. Complete paralysis of the bladder occurred temporarily. The temperature fell to normal suddenly upon the ninth day in each case. There was no stage of prodromes or of convalescence. Launois and Camus suspect that the condition was a pneumococcal meningitis, from its cyclic character. The case-histories are given in full. Rendu and Sicard have already reported similar cases. Triboulet has also observed some cases like these. (*Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris*, June 27, 1901, No. 22). [M. O.]

THE PRESENT STATUS OF THE BOTTINI OPERATION AS A METHOD OF TREATMENT IN OBSTRUCTIVE HYPERTROPHY OF THE PROSTATE GLAND, DERIVED FROM A SUMMARY OF EIGHT HUNDRED AND EIGHTY-EIGHT OPERATIONS BY FORTY-EIGHT OPERATORS.

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(Continued from Page 829.)

The results of the observations of many surgeons upon patients where complete retention had existed and those affected with a frequent desire to micturate accompanied by the detention of residual urine, is that beneficial results from treatment are very nearly equal; if there be any difference, it is in favor of those cases where complete retention exists. Such has been my experience. In several instances I have been agreeably surprised, after operating upon individuals who had relied upon the daily use of the catheter for several years, to find that soon after the operation they were enabled to partially empty their bladders, the residual urine greatly decreasing in amount until they were finally able to completely empty the viscus. The restoration of the function of the bladder after this operation is probably as Bangs surmises: "Spontaneous urination which follows the operation is due not only to the formation of the grooves, but to the contraction of the cicatrices together with atrophy of the gland." In quite a number of instances, on examining the condition of the prostate some months after the operation, I have been agreeably surprised to find that the organ had greatly diminished in size.

The claim that the Bottini operation may be employed as a prophylactic measure, thereby preventing all the discomfort and danger so frequently attendant upon "catheter life," is based upon an experience of fourteen patients operated upon between the ages of 49 and 61, all of whom were just beginning to suffer from the effects of their prostatic obstruction, residual urine being present in each instance. Twelve of the patients had employed a catheter from two to four months, the remaining two were affected with an increased frequency of micturition, each having about four ounces of residual urine, the catheter never having been resorted to. Not only was the operation in each instance successful, attended by a prompt recovery, but the effect has been permanent, two years having been elapsed since the first operation was performed.

The question as to the length of time that should elapse before operating upon an individual suffering with an obstructing prostate gland is yet in abeyance. The concurrent opinion of those who have had large experience in prostatic surgery is that an operation should be resorted to as soon as it becomes evident that catheter life can no longer be continued with safety to the individual. In other words, the time for the performance of the operation is early, before serious secondary changes take place. I agree with Willy Meyer when he says, referring to the Bottini operation (*Medical Record*, April 28,

1901): "The question when a Bottini operation shall be performed I would answer to-day as I did eighteen months ago, namely, as soon as it will be necessary to give the catheter into the hands of the patient himself. As I have said in a previous paper on this subject, the danger to life begins about this period."

The operation should be performed just as soon as the surgeon becomes convinced that the employment of the catheter is unsatisfactory, and before cystitis, pyelitis or pyelonephritis has been developed.

An operation which is performed early is attended with but little pain and discomfort and promises permanent relief.

More skill and care are required to operate upon a prostate when only beginning to increase in size than on one which has reached considerable dimensions, as in the former condition there is danger of injuring either the bladder or urethra by the blade of the instrument. In operating upon early cases, where but a slight enlargement exists, the incision on the roof of the urethra is a very dangerous procedure, and should not be attempted. The instrument employed, in cases of beginning prostatic enlargement, should be constructed with a much smaller blade than that which is used in more advanced cases. When the operation is performed in the early stage of the disease it is safest to resort to a perineal cystotomy, using for the purpose a modification of Bottini's instrument, devised by Dr. Charles H. Chetwood, known as the "perineal galvano-cautery incisor" (*Medical Record*, May 10, 1901).

The incision into the perineum adds nothing to the danger of the operation and gives the surgeon the advantage of determining by touch the size, configuration and condition of the gland; it also enables him to place the instrument in such a position that the resulting cut will be most effective. The danger of passing entirely through the gland into the membranous urethra is obviated, allowing the operation to be performed with absolute precision.

The results obtained by numerous operators demonstrate that in those cases where prostate obstruction has existed for a lengthened period, the employment of the catheter being required daily, the general health of the patient being still in good condition, that in the majority of such instances galvano-caustic prostatotomy will remove the obstruction to urination, together with the gradual disappearance of the residual urine, with the accompanying cystitis, and the frequent desire for urination, the prostate gland, too, often markedly diminishes in size. Patients advanced in years, in whom the symptoms caused by obstruction have existed for a length of time, who are broken down in health, with blood-vessels atheromatous, bladder and kidneys more or less diseased, retention of urine being a common feature, where a radical procedure could not be undertaken, have in the Bottini operation a method of treatment which is surely palliative, with insured relief to the urgent symptoms. Where an incurable cystitis exists, the bladder being hopelessly damaged, no operation that could be performed would be otherwise than

palliative. As a rule the Bottini operation is followed by sufficient relief to enable one to pass the catheter without pain or difficulty, prostatic spasm disappearing as well as the obstinate constipation from which these individuals usually suffer, together with a marked improvement in the general physical condition. I have several times known individuals gain from 20 to 25 pounds within four months after the operation. The cystitis will persist, but in less aggravated form, and will be amenable to treatment.

The detail of the history of a few cases here submitted forcibly portrays what results may be expected when the galvano-caustic incisor is employed at the outset of prostatic hypertrophy.

G. L. Aged 49. Occupation conductor. Sent to me by Dr. William Miller. Married man. Mild attack of gonorrhea when 20 years of age. For the past year he has been passing water at intervals of every three hours during the day and twice at night. Has no pain, but complains of "an irritability at the neck of the bladder." Examination of urethra and prostate with negative results. By means of the stone-searcher the middle lobe of the prostate was found to be enlarged, observation verified by a cystoscopic examination. Length of urethra normal; residual urine two ounces. Bottini operation performed May, 1899. Present condition; patient perfectly well, all abnormal symptoms having disappeared.

S. L. Aged 62. Married. No venereal history. Has suffered from irritability of the bladder for the past year and a half. Urinates every three hours during the day, twice at night, never feels as if the bladder had been completely emptied. Sometimes suffers from spasmodic pain at the neck of the bladder. Examination per rectum showed the prostate gland to be enlarged and hard to the touch. The urethra half an inch longer than normal. On making a cystoscopic examination found the middle and right lateral lobes enlarged. Three and a half ounces of residual urine. Patient had used the catheter twice daily for the last three months, by the advice of his physician. Urine normal. Operation November 1899. Condition eight months after the operation normal. Patient states that sometimes, though rarely, especially if he has had a hard day's work and is much fatigued, he may have to urinate once during the night. No residual urine was found on examination.

The results obtained from the remaining twelve cases, the Bottini operation having been performed at the outset of the prostatic obstruction, are similar to those above related. I do not think that any further comment is necessary. The lesson that these cases teach is obvious, and justifies Willy Meyer in stating: "I would operate as soon as it becomes necessary to give the catheter into the hands of the patient himself." I think that the results attained in the fourteen cases here referred to fully justify the claim that the Bottini method of treatment may fairly be regarded as a prophylactic measure, and if practitioners would resort to this mode of treatment at the incipiency of their patients' trouble, hypertrophy of the prostate would cease to be a bugbear of old age. The cases now to be recounted illustrate the results of the operation in persons in whom the obstructive symptoms have existed for a lengthened period, on whom the use of the catheter was daily required, the bladder beginning to undergo pathological changes, the physical condition of the patient being good.

S. C. Aged 63. Laborer. Admitted to the Jefferson Hospital October, 1900. Patient states that he had an attack of urethritis when a young man. Never had any urinary difficulty until four years before he came to the Hospital; when he began to suffer from frequency in

passing water, which greatly increased, both by day and night. He has been unable to pass any urine without the aid of the catheter for the past six months. Has been using the instrument for over a year. Examination revealed a much enlarged gland apparently of a mixed type. The urethra was increased one and a half inches in length. There was absolute retention of urine. The urine was acid in reaction, urea 2%, pus, leukocytes and a trace of albumin. He was kept under treatment for three weeks before he was in a proper condition for operation, which was continued for at least four months after the operation was performed. When last seen, nine months after surgical treatment, the patient was able to completely empty the bladder. Had ceased to employ the catheter, passed water about every three hours during the day, and occasionally, though rarely, once at night.

The next case shows the effect of the operation in an advanced case of prostatic hypertrophy complicated by prostatitis, cystitis, pyelitis, polyuria, chronic urethral fever, and retention of urine.

W. F. Sent to me by Dr. E. E. Montgomery. Patient 60 years of age. Gives the following history:

No venereal disease. Began to suffer from frequency of urination at the age of 50. Trouble greatly increased, until efforts to empty the bladder had to be made every two hours day and night. Had employed a catheter for the past four years, and for the past year and a half has been unable to void his urine without the aid of the instrument. He suffers from very violent paroxysms of pain in the vicinity of the neck of the bladder, and at times in the left flank shooting down the course of the urethra, simulating renal colic. Has chills followed by fever about every third day, the temperature reaching as high as 104 degrees. Is weak, emaciated; about 30 pounds below weight; is worn out by fever, pain and loss of sleep. The appetite is poor and he suffers from constipation. On examination the prostate gland was found to be enormously enlarged, apparently fibrous in character. The urethra was over one and a half inches longer than normal. The stone-searcher showed that the enlargement encircled the neck of the bladder like a collar. Owing to the condition of the kidney, the cystoscope was not employed. The urine varied, being sometimes acid, sometimes alkaline, very offensive, filled with gelatinized pus, leukocytes, and albumin; urea 1.1½%. He voids about 65 ounces of urine during the night. Operation performed July, 1900. Repeated September the same year. Condition, as shown by a letter received from the patient, February 13th, 1901, "I am markedly improved. There is no residual urine, spasm, or constipation. Have not had an attack of fever for some time." Report of Dr. Mitchell, his family physician, June, 1901, "Patient has gained in weight and strength, no further need for catheter, no more fever. Spasm has disappeared; still some polyuria and a little pus in the urine. Patient has resumed his usual vocation."

That this individual, in the face of all the complications that existed, should be restored to a very nearly normal condition surely speaks strongly in favor of the Bottini operation.

The next case illustrates well what may be accomplished by means of a galvano-cautery, prostaticotomy employed as a palliative measure.

L. S. Aged 79. Sent to me by Dr. Gartmann. Suffering from prostatic hypertrophy for the past eight years. On admission to the Jefferson Hospital it was found that the prostate was much enlarged; the urethra 1¾ inches longer than normal. Necessary to insert the catheter every two hours day and night. Suffered greatly from prostatic spasm and constipation. Has had occasional attacks of hematuria. Bloodvessels atheromatous; is very feeble, appetite poor, and is below weight. Suffers from loss of sleep, owing to the irritability of the bladder. Urine, alkaline, offensive, full of pus, and contains blood. The bladder was found to be contracted, holding about 3½ ounces of urine. Cystoscopic examination showed that the bladder contained numerous pockets with hypertrophy of the mucous membrane, which was thrown into ridges, the organ being chronically inflamed. Kept in bed for one month with continual drainage and appropriate treatment

preparatory to operation. Operation performed December, 1900. Five months after, during which time the treatment was continued, he gained in strength and weight, pain and constipation disappearing. Catheter can be readily inserted. Cystitis still persists and he is unable to void urine without the use of the instrument, but the use of the catheter is needed but twice during the night.

Owing to the length of time that had elapsed since the initiation of the disease and consequent damaged condition of the bladder, any operation would have been purely tentative. The marked improvement and the relief to the urgent symptoms which followed surgical interference were all that could be hoped for.

The next case demonstrates that the operation may be employed as a curative measure in cases of suprapubic fistula, which, owing to the obstruction caused by enlarged prostate, refuses to heal.

J. B. Aged 67. Sent to me in 1897 by Dr. F. X. Dereum. Suffering from vesical calculus, hypertrophy of the prostate gland and retention of urine. At the time of his admission to the Hospital patient was very ill; he was in the institution six weeks, before it was advisable to have recourse to an operation. A calculus was removed by suprapubic lithotomy. In October, 1900, the individual again came under my care for relief of a suprapubic fistula, a consequence of the operation. The patient was subjected to the Bottini process. As a result the normal function of the bladder was restored, the residual urine disappeared, and at the time of writing this article the individual is in perfect health. A letter received from him January 15th, 1901, says: "I am happy to say that my fistula has entirely closed up and I have not passed a drop of water through the opening for a long time."

D. S. Aged 69. Farmer. Vesical calculus of large size associated with retention of urine due to prostatic hypertrophy. For the last eighteen months has depended entirely upon the use of the catheter to empty the bladder. Suprapubic lithotomy March, 1901. Went to his home three weeks after the operation; returned in the latter part of May, with a suprapubic fistula which had refused to heal. Bottini operation was performed. Five days later passed a portion of his urine per urethra for the first time in eighteen months. At the present time, empties the bladder completely; fistulous tract closed, but has frequent desire to urinate, owing to chronic cystitis. Is enabled to hold the urine five hours during the night; much improved in health and strength.

(To be Concluded.)

JOURNAL DE MEDECINE DE BORDEAUX.

August 4, 1901. (31me. Année, No. 31.)

1. The Surgical Treatment of Ascites in Atrophic Cirrhosis of the Liver. F. VILLAR.
2. Encapsulated Cavernous Angioma of the Orbit. FELIX LAGRANGIE.

1.—Talma of Utrecht first sutured the omentum to the abdominal wall to establish a communication between the veins of the omentum and those of the abdominal wall, thus withdrawing the blood from the portal circulation. So far only 17 cases have been reported. Villar reports two more. He believes that the method of Schiassi, of Bologna, suturing the omentum between the external surface of the parietal peritoneum and the muscles of the abdominal wall, is the best. A parahepatic incision is made. The case-histories of two such operations follow, with temporary success in both cases. Of the 19 cases, six deaths have resulted soon after operation, while only six patients have been cured. An exploratory laparotomy is sometimes followed by the disappearance of the ascites. [M. O.]

2.—Lagrange reports the case of a man of 35, who had a small tumor of the right orbit since birth. His sight is excellent and the tumor only began to pain him a few months before he saw a physician. The tumor was about the size of a small almond, situated in the deeper tissues of the angle of the orbit. It was diagnosed a congenital venous angioma. After removal, examination showed an encapsulated cavernous angioma. He recovered in a week. [M. O.]

October 6, 1901. (31me. Année, No. 40.)

1. Epithelioma of the Gall Bladder with Cholecystostomy. CHAVANNAZ.
2. Poisoning from Shoes Dyed Black with Aniline. G. CHEVALIER.

1.—A woman of 25 had had pain for three years in both iliac fossae and the epigastrium. She grew worse, jaundice developed, the feces were clay colored, the urine very dark. She was much emaciated and the pain was so severe that she could not lie down. A large tumor was palpable in the left hypochondrium, epigastrium, and right hypochondrium, reaching to the right iliac spine. A sensitive tumor as large as an orange was felt along the edge of the liver, which was also tender. Erysipelas appeared upon her face, in spite of which cholecystostomy was performed. The pain ceased at once. She died ten days after the operation. The ductus choledochus was found closed by a mass of degenerated lymph-glands, while an annual epithelioma was found in the gall bladder. [M. O.]

2.—A boy of 17 had noticed headache, vertigo, and cyanosis of the face and extremities for three days. His heart was irregular, and he was trembling from cold and emotion. There had been no nausea or vomiting. Three days before he had worn a pair of shoes which had just been dyed black, for eight hours, only removing them because of their disagreeable odor. Chevalier found that they had been dyed with a solution of aniline black in aniline oil. He recovered rapidly from the aniline poisoning. [M. O.]

JOURNAL DE CHIRURGIE.

August-September, 1901. (Première Année, No. 8.)

1. Backward Dislocation of the Right Index Finger. A. MOUCHET.
2. Total Hysterectomy for a Uterine Sarcoma in a Child of Three. J. LORTHOIR.

1.—A man of 23 fell two months ago, landing upon his hands. Upon rising he found that he could not move his right index finger, which, bent back, formed a Z upon the back of his hand. All efforts at reduction failed. The first phalanx of the index finger was dislocated upon the metacarpal bone, backward, the ends of both bones being palpable. All movements of the finger were impossible. The efforts to reduce the dislocation moved the luxated phalanx further back upon the metacarpal bone. Radiographs showed the absence of any fracture. Arthrotomy by a lateral incision showed a sesamoid bone which was removed, the head of the metacarpal bone being resected. After a week at rest in dressings, the finger was moved passively; on the tenth day he moved it voluntarily; on the fifteenth day he had completely recovered. [M. O.]

2.—Lorthoir could find few cases of total hysterectomy for malignant tumors of the uterus in young children. He reports a small round-celled sarcoma in the uterus of a girl of three, for which partial vaginal hysterectomy was performed. The tumor had recurred three months after the removal of a supposed uterine fibroma through the vagina. Two months later, as the tumor had again recurred, he performed total abdominal hysterectomy. The child fully recovered. The specimens show that the tumor originated in the posterior uterine wall. [M. O.]

Gynecology.—The opening lecture in the course upon gynecology just begun by Professor Pozzi appears in the *Presse Medicale* (June 1, 1901, No. 44). After mentioning the course of events which led to the creation of the new chair of gynecology in the University of Paris, with expressions of his thanks for the appointment, Pozzi reviews the subject of gynecology in France. Gynecological procedures commenced in 1858. It is only about 25 years ago that Péan and Terrier first performed ovariectomy. Since that time various proceedings have been imported from Germany, England, and America. The first operations, the later methods, the good work of the French gynecologists, are all described. Pozzi concludes by stating his intention to teach gynecology, both medical and surgical. While many operations will doubtless be necessary, some cases will undoubtedly respond to purely medical treatment. [M. O.]

(CONCLUDED.)
TABLE III.
SIMPLE CHRONIC ABSCESES AND BRONCHIECTASES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Result of Autopsy
Körte, Archiv für Klin. Chir. Vol. 43.	Male, 52.	Pneumonia 2 years before.	Dullness and small and moist rales over middle lobe. X-ray showed distinct cavity, middle of right lung.	None.	Catgut suture of pleu a. Marked dyspnea during operation. Only once small quantity of pus obtained.			3 hours after operation.	Showed a system of bronchiectatic small cavities, surrounded by pneumonic areas. Only the smallest cavity had been opened.
Körte, same.	Male, 21.	Pneumonia 6 months before.	Dullness, tympany and amphoric breathing, with large moist rales over right upper lobe.	Yes.	Pneumotomy. Pus evacuated from a bronchiectatic abscess found in right upper lobe.	In 15 weeks			
Körte, same.	Female	Influenza. Pneumonia 2 years before.	Over left lower lobe marked dullness, bronchial breathing. Resonance decreased, and dry rales over rest of lung. Later amphoric breathing over left lower lobe before operation.	Yes.	Bronchiectatic pus cavity opened. Later a communication with a second cavity established.			3 months later	Stenosis of main bronchus. Extensive cavities in left lung.
Körte, same.	Female, 11	Influenza. Pneumonia of right lower lobe, one year before.	Posteriorly on right side, dullness increased from above down over upper portion; bronchial breathing, from angle of scapula down; light amphoric breathing	Yes.	Small, circumscribed empyema opened. Also opened abscess in right lower lobe.			7 days after operation, of fresh pneumonia of R U L. there were smaller ones present not opened	Showed that operation had opened wall of R U L. right lower lobe, but there were smaller ones present not opened
P. R. Sherwood, Chicago. (Unpublished case.)	Male, 42.	Septic pneumonia, 2 months previously.	Area of dullness from outer border 4th rib and 1/2 inch to right of left mammary line. Large moist rales and bronchial breathing. Icteric fever and 8 to 10 ounces of pus expectorated daily. X ray located abscess accurately.	Yes.	Thoracotomy; found circumscribed empyema corresponding to shadow weeks in X-ray picture. Could not find communication with lung at that time.	Healed in 5 months. Gained fifty pounds			
Carl Beck, (N. Y.), N. Y. Med. J., Aug. 28, 1897.	Male, 31.	Pleuro-pneumonia, one year previously.	On right side in front; tympany and rales, and bronchial breathing.	None.	Resected 8-10th ribs. One ounce pus evacuated. Some odor.	Healed two months after operation.			
Karewski, Arch. f. Klin. Chir., Vol. 57, p. 555.	Female, 35.	Left pleuro-pneumonia 4 months previously.	Dullness from angle of scapula down. High temperature.	Yes.	Opened abscess, size apple, in lower left lobe. No communication with bronchus found.	Recovery.			
Quincke Berl. Klin. W., 1888, No. 18.	Male, 26.	Pneumonia two years before in left lower lobe.	None given.	None.	Zn Cl ₂ paste applied and 4th rib resected. 3 weeks later pus discharged through wound.		Alive 12 years later (1896) with fistula		
Quincke, Mittheilungen aus den Grenzgebieten, 1896.	Male, 25.	Double pneumonia 2 months before, complicating older bronchitic cases.	Periodical expectoration of large quantity of pus. Dullness over sixth space (left). Bronchial breathing, metallic rales. Dullness from 5th left rib down in front. Later amphoric breathing and large moist rales.	Only partially before paste used.	Zn. Cl ₂ paste to cause adhesions. 9th and 11th ribs resected. Opened into cavity communicating direct with bronchus. After operation sputum greatly decreased.	Recovery in 2 months			
Quincke, same place.	Male, 34.	Pneumonia 17 years before, and again 2 years before.	Respiratory mobility decreased on left side. From 7th dorsal spine down dullness; bronchial breathing, metallic rales. Paroxysmal expectoration of large quantities of non fetid sputum.	Don'tful before paste used.	After paste (Zn. Cl ₂) used, pneumotomy, 5 weeks later. Pus evacuated and cavity drained.		Much improved still has fistula		

TABLE III (continued).
SIMPLE CHRONIC ABSCESES AND BRONCHIECTASES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Result of Autopsy
Massachusetts General Hospital.	Male, 61—8.	Four years ago fell upon a stove, striking side and back. Few days later appeared ill, one day unconscious. Then was said to have pneumonia. Was treated at Children's Hospital for nine months, and afterward was aspirated twice, at intervals of three months. No pus found. 2½ years ago was said to have abscess of right lung, but operation was refused for one and a half years. Has had two bad hemorthages.	Evidence of retraction of upper portion of right lung.	None.	Ether given. Portions of 7th, 8th and 9th rib excised. Lung was slightly retracted and honey-combed with sinuses. Tissue friable. A smooth bulging surface seen, apparently the diaphragm. Rounded mass, proved to be thickened visceral pleura, forming a wall of abscess cavity. Pus at once followed incision.			Three weeks after discharge from the hospital.	
Oder and Halstead, Johns Hopkins Hospital Bulletin, Dec. 1891.	Male, 40.	Pneumonia several times. Exact date not known. At intervals left axilla. Loud bubbling rales, hemoptysis and putrid at base of left lung. Resp. 40 expectoration for years. Temp. 104, 3—40°C. fetid expectoration daily.	Loud resonant rales, amphoric breathing, and metallic rales in left axilla. Loud bubbling rales at base of left lung. Resp. 40. Temp. 104, 3—40°C. fetid expectoration daily.	Yes.	Resected 11th and 15th ribs, and opened freely a series of cavities.				Three days after operation, they had opened into a system of large bronchiectatic cavities in left upper lobe.
Kijewski, Centralblatt f. Mith. aus den Grenzgebieten der Inn. Med. und Chir., No. 1, 1901. Also Gazet Lekarska, No. 4, 1897.	Female, 32.	Right - sided pleuropneumonia, followed by severe dyspnea and cyanosis some time before.	Psychic type of fever. Diminished over right lower lobe.	Yes.	Resection of 10th rib after successful exploration had shown pus. Lung curetted and packed with gauze. Fever continued for some time.	Yes.			
Kijewski, same place.	Male, 63.	Broncho - pneumonia (right side) after influenza some time before. cal signs given.	Intermittent fever. Exploratory puncture showed pus. No physical signs given.	Yes. Pleura greatly thickened.	Ninth rib resected. Lung incised, felt very hard, and contained many small abscesses. Curettage, accompanied by considerable hemorrhage. Cavity packed with gauze. Fever disappeared, but abundant pus came from wound.		Ten months later was very weak, had night sweats and there was a fistula.		

TABLE IV.
CHRONIC PUTRID ABSCESES AND BRONCHIECTASES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Result of Autopsy
Körte, Archiv für Klin. Chir. Vol. 63.	Male, 11.	Bronecho-pneumonia, 2 years.	Anterior axillary line on right side. Tympany and amphoric breathing. Gurgling rales. Decreased resonance rest of lung.	Yes.	7th and 8th ribs resected. Musculo-cutaneous flap. Chloroform found encapsulated empyema; also cavity in right lower lobe, 6x8 cm., with dilated bronchi, opening into it. Latter cauterized.			10 days after operation of general sepsis.	
Körte.	Male, 33.	Pneumonia, 10 months previously.	Tympany, gurgling rales, amphoric breathing below right clavicle and in axilla.	Yes.	Curved incision. Pectoral muscles divided. Exploratory puncture negative. With thermocautery opened large cavity filled with cold fluid and gangrenous lung.	Yes, in 18 weeks.			

TABLE IV (continued).
CHRONIC PUTRID ABSCESSSES AND BRONCHIECTASES.

Author	Age and Sex	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died.	Result of Autopsy
Körte.	Male, 29	Pneumonia, 2 years previously.	Tympany in front. Dullness behind, over left upper lobe; no respiratory murmur over entire lung. Many rales over dull area. Typical 3 layer fetid sputum.	None.	Pleura sutured. Marked cyanosis. No further operative measures.			4 days after operation.	Entire left apex composed of a system of communicating bronchielectatic cavities.
Körte.	Male, 23 years.	Duration, 7 years.	From angle of scapula down, bronchial breathing and dullness.	Yes.	Exploratory puncture revealed putrid pus. Pneumotomy. Putrid abscess emptied; left lower lobe near it was encapsulated empyema.	Recovery in 4 months.			
Körte.		Pneumonia, 5 months previously.	Absolute dullness; no respiratory sounds from third rib down on right side. Diagnosis before operation was putrid empyema and gangrene of lung.	Yes.	Thoracotomy, pus evacuated. No communication found with abscess cavities. Patient remained septic.			Death in 10 days.	Showed two large abscesses in right lower lobe, not opened and diffuse bronchielectasis.
F Krause.	Male, 36	Pneumonia, nine months previously, of left lower lobe.	Dullness, amphoric breathing, moist metallic rales, near angle of scapula. Lower down, dullness, diminished respiratory sound and fremitus. Bad odor to expectoration and elastic fibers.	None.	Pleural cavity tamponed, opened 10 days later, when adhesions were found. Cavity in middle of lower lobe opened, size of an apple, containing putrid fluid, and large sequestrum of lung tissue.	Recovery in 3 months.			
F Krause.	Male, 56.	Broncho-pneumonia, 4 months previously.	Dullness and bronchial breathing, on right side; below spine of scapula. Putrid sputum, large quantities. Remittent fever.	Pleura adherent.	Third and fourth right ribs resected on angle of ribs to scapula. Exploratory puncture at adherent area as well as deep cauterization gave negative results.			Death, 4 weeks later.	Autopsy showed abscess cavity in upper lobe, size of an egg and a second in the middle lobe of the same size.
Hadra Centralblatt f. Chirurgie, 1897, p. 103, Supplement.	Female, 38.	Severe pleuro-pneumonia, 8 years previously. Since then invalidism.	Large quantity of putrid sputum. X-ray showed shadow in entire left lung, heart displaced over right lower lobe dullness and when full expectoration, tympany. Exploratory puncture negative.	Yes.	Pneumotomy, abscess cavity opened.	Recovery			
Krause.	Female, 19 years old.	Pneumonia of left lower lobe, and left-sided pleurisy, with effusion, six months previously.	Dullness over left lower lobe.	Yes, at first operation; at second, lung retracted.	At first operation found empyema with greatly thickened pleura. Fever and expectoration increased after operation. Sputum putrid and contained elastic fibres. No physical signs of a cavity. At second operation decorticalized the lung and looked for abscess cavity in vain over both upper and lower lobes. Two abscesses opened spontaneously into dressings.	Healed 5 months later.			
James H. Dunn, Minneapolis, (Unpublished case)	Female, 22.	Pneumonia, 1 years previously.	Expectorated cupful fetid pus daily, unusually at one time. Signs of cavity on right side, posteriorly.	None.	Two operations; one between scapula and spine; other in axilla. Some pus discharged from posterior opening, but no improvement, probably large cavity not opened.			1 year after operation.	
Wiemer, Centralblatt f. Chirurgie, 1896, p. 1183.	Male, 33.	Pleuro-pneumonia, 2 years before.	Dullness over left lower lobe. Tympany in axillary and upper-lateral areas. No respiratory mobility. Putrid sputum in large quantity.	Yes.	Resected 8th to 10th ribs; opened cavity with cautery, size adult fist. Contained large sequestrum. On 11th day after operation found a second cavity.	Healed in 6 weeks.			

TABLE IV (continued).
CHRONIC PURTID ABSCESES AND BRONCHIECTASES.

Author	Age and Sex	Etiology and Duration	Physical signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Died	Result of Autopsy
K. Lichtenauer Deutsche Zeitschr. für Chirurgie Vol. 50, p. 389.	Male, 32	Traumatic pneumonia, 2 years before.	Behind, on left side, dullness, absence of respiratory sounds, above this area. Sharp bronchial breathing. Putrid sputum.	None	Exploratory puncture in 9th space showed pus; pneumothorax; evacuated 130 c. fluid pus. Cavity, size egg, healed in 3 months. Five months later returns of symptoms, ectatic bronchi found. Constructed corset to compress cavity, after cauterizing bronchi.	Healed in 9 months.		
W. W. Keen, W. Joseph Hearn and W. J. Roe. American Medical, July 20, 1891.	Male, 26	Aspiration pneumonia, 20 years previously.	Paroxysmal cough with expecto- ration; large quantities fetid purulent material (1 pint). Vesic- ular murmur absent below line from spine of 8th dorsal vertebra to 7th costal cartilage, with loud gurgling rales over this area on right side. Dullness over this area. Vocal fremitus lost and resonance decreased below above line.	Yes.	First operation, Dec. 19, 1885. Ex- ploratory thoracotomy failed to find abscess. Second operation, Nov. 20, 1886, also unsuccessful, although had cut down alone exploring needle, which had shown pus in 8th inter- space posteriorly. Third operation, Dec., 1888. Resected 6th rib in mam- mary line; lung adherent; separated toward diaphragm; no abscess found. Encountered resistance at dome of diaphragm. Made second resection just beneath angle of scapula (re- sected 4th rib); pleura found adher- ent; opened abscess cavity, into which large bronchi opened. Drained. Pos- terior wound still open. Fourth operation, Dec. 11, 1890. Wall of cavity excised. Since then fistula, but odor and discharge gone.	Greatly improved after 4th opera- tion.		
Williams and Marshall. Lancet, Dec. 30, 1882, p. 1107.		Chronic pneumonia of both lungs, and fetid cavity, expectoration, for one year.	In right lung symptoms of a cavity.	Probably.	Inserted trocar and drained cavity.		Yes, 6 weeks after operation.	Multiple bronchi- ectases in right lung, largest had been drained. Death due to gangrenous cere- bral abscess.
Priestley, Leech Lancet, Jan. 13, 1891		Pneumonia, 6 months before, followed in 2 months by fetid expecto- ration	Dullness from 2nd rib down on left side with absent vocal fremitus and resonance. Resp. mur- mur decreased. No elastic fibers. No signs of cavity.	Yes.	Exploration in 2nd interspace showed pus. With needle as guide, introduced drain. Pneumonia 2 weeks after operation. No ribs resected.	Eight months after opera- tion		
Quinke, Berl. Klin. Woch., No. 19, 1887.	Male, 26	Pneumonia, 2 years before. Since then fetid expectoration	Dullness from 4th dorsal spine down, and as far anterior as axil- la. Loud amphoric resp., and voice. No change with changed position.	None.	Resected 9th rib; found no cavity, but three weeks pus discharged from wound spontaneously. Second re- section 6 months later to close cavity			Dischar- ged with fistula Able to work.
Quinke, Berl. Klin. Woch., No. 18, 1888.	Male, 32	A typical pneumonia, 3 months before.	Dullness on right side, with no sharp boundaries, to spine of scapula and mammary line. Loud bronchial breathing and metallic rales. Very purulent fetid spu- tum.	None.	Zn Cl ₂ paste in 8th intercostal space, followed by adhesions. Resected 8th and 9th ribs, and again applied zinc paste. After days later abscess opened.	In 1 month		
Burgess and White, Lancet, April 16, 1888.	Female, 25	Pneumonia (?), 3 years before.	Hectic fever, large amount putrid sputum expectorated. Lower left lobe dull. Decreased vocal fremitus and resonance.	Yes.	Found circumscribed pleural effu- sion beneath it; abscess drained.	Recovery, two months.		

TABLE IV (concluded).
CHRONIC PUTRID ABSCESSES AND BRONCHIECTASES.

Author	Sex and Age	Etiology and Duration	Physical Signs before Operation	Adhesions Present	Operation and Condition found	Recovery	Improved	Died	Result of Autopsy
Sutton (quoted by Mosler) "Lungen-Chirurgie" 1883, Wiesbaden.		Acute attack pneumonia 5 years before. Two lobes, with fetid expectoration, hemoptysis.	Signs of cavity in left lower lobe.	Yes.	Incision in 4th intercostal space. Drained. Daily irrigation with carbolic solution.			Sudden, on 31st day.	No cause found for death. Cavity occupied entire lobe.
Oehler. Münchener Medizin Woch., 13, Oct., 1891		Three years before had gangrene following pneumonia of left lower lobe. No cavity signs shortly before operation had after influenza a fresh pneumonia.	Chills, dyspnea, dullness, bronchial breathing, and metallic rales.	Not at first, but at second operation (four weeks later).	Exploration negative. Seventh rib resected, followed by pneumothorax operation. Latter soon disappeared. Second operation (four weeks later) found pleura adherent; could not find cavity, but inserted tube. On second day pus discharged.		Still had fistula		
Kümmell. Centralblatt für die Grenzgebiete der Inneren Medizin und Chirurgie, 1891, No. 3.	Female.	Left lower lobe pneumonia, two years before.	Not given.	Yes.	Resection 6th and 7th ribs. Puncture. Thermo-cautery. Very severe hemorrhage. Cavity size of egg, communicating with large bronchus.		Yes, small fistula after six months		
Quincke. Mitt. a. d. Grenzgeb. d. Inn. Med. u. Chir., 1896	Male 31. (Case 6.)	Influenza, pneumonia, one and one-half years before.	Over left apex in front signs of cavity. Dullness behind, marked from 5th dorsal spine down; bronchial breathing, large moist rales.	Yes.	Resected 3rd rib in axillary line incision into cavity, evacuating fetid pus and mucus.			Death 1½ hrs after operation.	Death due to weakness soon after operation. Small bronchiectatic cavity in upper lobe; system of cavities in lower lobe; one opened.
Northrup and McCosh N. Y. Med. Journal, vol. 1, 1897	Female, 23.	Influenza, pneumonia, 6 months before.	Flatness, from 3rd rib down over right lung in front. Absence of respiratory sounds and rales.	Yes.	Resected 6th rib, and opened abscess in lower lobe, containing three ounces of thick and very fetid pus, operation severe shock followed.	Yes, in three months after			
Blunt. Lancet, 1888, vol. 1, p. 622.	Male, 26.	Pleuro-pneumonia of right side; two weeks later fetid expectoration, which continued to time of operation, 3½ months later.	Fetid fever, sweats. Exploratory punctures showed fetid pus.	Yes.	Resected rib one inch below angle of scapula; used needle as guide; and opened gangrenous cavity. Drain ed.	Yes, in six weeks.			
Tuffier. Bull. de la Soc. de Chir., 1883, p. 761.	Male, 41	Pneumonia, with fetid expectoration, 4 months before.	Dullness in front over right lung, amphoric breathing and moist rales. Severe hemorrhage fifth day after operation.	Yes.	Incision in 3rd interspace, opened cavity size of turkey egg. Opened another cavity above it both contained black blood mixed with lung debris.	Yes, in three months.			
Eisendrath.	Male, 60	Right lower and middle lobe pneumonia two years before. Since then over right lung, fever, expectoration of scapula down area of dullness, large quantities of pus, size of palm of hand; also some frequently fetid (three bulging of intercostal spaces pinis daily), emaciation, here. Over this area a few moist rales to be heard. Diagnosis made of gangrene of lower lobe.	Respirations 60; pulse 126. No change in percussion anteriorly from right lung. Behind from fever, expectoration of scapula down area of dullness, large quantities of pus, size of palm of hand; also some frequently fetid (three bulging of intercostal spaces pinis daily), emaciation, here. Over this area a few moist rales to be heard. Diagnosis made of gangrene of lower lobe.	Yes.	Resected 8th and 9th ribs under angle of scapula, entered free pleural cavity, upper lobe collapsed, marked dyspnea and cyanosis. Lower lobe found adherent in front. Resected 9th and 10th ribs in anterior axillary line, pleura adherent, opened a circumscribed gangrenous cavity and beneath it opened gangrenous cavity in lower lobe, and a smaller cavity in middle lobe, containing pus. Drain and gauze inserted.			Twelve hours after operation.	Found cavity size of first in right lower lobe (gangrenous). Adhesions bound lower lobe to chest wall. Had also opened one of a series of bronchiectatic cavities in middle lobe. Some hemorrhage into pleural cavity.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended November 15, 1901.

SMALLPOX—United States.

		Cases.	Deaths.
CALIFORNIA:	San Francisco.	Oct. 27-Nov. 3. 1	
INDIANA:	Evansville.	Nov. 2-9.2	
KANSAS:	Wichita.	Nov. 2-9.1	
LOUISIANA:	New Orleans.	Nov. 2-9.1	
MASSACHUSETTS:	Boston.	Nov. 2-9.22	3
MICHIGAN:	Detroit.	Oct. 27-Nov. 2. 1	
NEBRASKA:	Omaha.	Nov. 2-9.4	
	South Omaha.	Nov. 1-8.2	
NEW JERSEY:	Camden.	Nov. 2-9.3	
	Newark.	Nov. 2-9.29	2
NEW YORK:	New York.	Nov. 2-9.10	1
OHIO:	Cincinnati.	Nov. 1-8.1	
PENNSYLVANIA:	Allegheny City.	Nov. 2-9.2	
	New Castle.	Oct. 1-31.4	
	Norristown.	Nov. 2-9.10	1
	Philadelphia.	Nov. 2-9.72	8
	Pittsburg.	Nov. 2-9.1	
TENNESSEE:	Memphis.	Nov. 2-9.1	
UTAH:	Salt Lake City.	Nov. 2-9.2	
VERMONT:	Burlington.	Nov. 2-9.1	
WISCONSIN:	Green Bay.	Nov. 2-10.1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Oct. 19-26.2	
BELGIUM:	Antwerp.	Oct. 19-26.3	
	Ghent.	Oct. 11-18.2	
BRAZIL:	Pernambuco.	Sept. 6-20.116	
	Rio de Janeiro.	Sept. 15-Oct. 4. 1	205
CANADA:	Halifax.	Nov. 2-9.7	
	Quebec.	Nov. 2-9.25	
COLOMBIA:	Bocas del Toro.	Oct. 22-29.3	
	Panama.	Oct. 27-Nov. 6 125	
EGYPT:	Cairo.	Oct. 7-14.1	
GREAT BRITAIN:	Liverpool.	Oct. 19-26.1	
	London.	Oct. 19-26.180	6
INDIA:	Madras.	Oct. 5-11.2	
ITALY:	Naples.	Oct. 12-19.31	1
RUSSIA:	Moscow.	Oct. 12-19.4	4
	Odessa.	Oct. 19-26.3	
	St. Petersburg.	Oct. 12-26.1	
WEST INDIES:	Curacao.	Oct. 19-26.1	1

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Sept. 15-Oct. 13. 11	
MEXICO:	Vera Cruz.	Oct. 26-Nov. 2. 23	19

CHOLERA.

INDIA:	Bombay.	Oct. 8-15.1	
	Calcutta.	Oct. 5-12.20	
	Madras.	Oct. 5-11.40	
JAVA:	Batavia.	Sept. 14-Oct. 5. 286	183

PLAGUE—Insular.

PHILIPPINES:	Manila.	Sept. 7-28.3	
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PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro.	Sept. 15-Oct. 13. 19	
INDIA:	Bombay.	Oct. 8-15.179	
	Calcutta.	Oct. 5-12.12	
RUSSIA:	Odessa.	Nov. 10. Present.	

Empyema Existing Almost Forty Years.—At a meeting of the Medical Society of the Paris Hospitals, (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 20, 1901, No. 21), Faisans and Audistère report the case of a man of 55, who first had left-sided pleurisy at the age of 16. He was ill for almost a year. Then followed four years in the army. At 27 he had another attack of pleurisy; at 29 still another. Paracentesis thoracis was never performed. Since that time he has always had some dyspnea, with a dry cough. This year a severe attack, diagnosed pneumonia with pleurisy, caused his death, after the withdrawal of some purulent fluid from the pleura of the left side. This liquid contained no bacteria of any sort, but showed crystals of cholesterol, fatty bodies, and completely degenerated cellular debris. The autopsy revealed atrophic cirrhosis of the liver which had been diagnosed. The left lung was a tiny flat cylinder, its wall almost of bony consistence. This wall, formed by the hardened pleura, contained a large purulent collection. The lung, though much congested, was still permeable to air.

This encapsulated empyema was only opened with the costotome. From the conditions found, the diagnosis of an empyema of years duration was made. In all, the purulent liquid measured three liters and a half. With this latent pleurisy, he was a soldier for years, performed his work, and drank enough to cause hepatic cirrhosis. Congestion of what little lung was left was caused by the thoracentesis. The empyema had most probably existed for forty years. In the discussion which followed, Barblat recalled having seen a similar case. [M. O.]

Cervical Adenolipomatosis of Tubercular Origin.—Marcel Labbé and Jean Ferrand report the case of a girl of 18, whose mother died of phthisis seven years ago. She had always coughed much, had blepharitis, keratitis, eczema, and chilblains. At the age of 7 a small tumor appeared in the fold of her right elbow. This had later disappeared under treatment. Since the age of 9, her neck has enlarged gradually and progressively, beginning in the left submaxillary glands. During the past few months this has rapidly increased in size. Her neck, from the parotids to the supraclavicular fossae, is a symmetrical, soft, semiliquid, lipomatous mass. There is no pain, and the glands can be felt, hard and nodular, deep in the swollen tissue. There are no symptoms of pressure from the tumor. She had always been stout and well nourished. They consider the condition one of adenolipomatosis, not of multiple lipomata. Its localization is unique, as it is absolutely limited to the neck. During childhood the cervical glands became tubercular; following this, periglandular lipomata formed; then rose a localized adenolipomatosis. Three conditions seem responsible for this, the tuberculous transmission from her mother, her lymphatic temperament, shown by the blepharitis, keratitis, coryza, eczema, chilblains, etc., and a tendency to obesity marked even in childhood. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 20, 1901, No. 21). [M. O.]

The Lymph-Glands in Cancer.—At a meeting of the Medical Society of Paris, Dr. Courtois-Suffit said that cancer affects the lymph-glands in the same way that the infectious diseases do. But from the external appearance of the lymph-glands, the nature of the anatomic alterations within cannot be guessed. For they may become enlarged and still be free from carcinoma. He divides the lymph-glands into three classes, those which are healthy but hypertrophied, producing leukocytes, a precancerous or paracancerous condition; those which are infected secondarily with either pyogenic or tubercle bacilli, from the ulcerating tumor, or from the lungs, etc.; and the true cancerous glands, with epitheliomatous cells, from near by lymph-glands, through carcinomatous or healthy lymph vessels. The lymph-glands play to some extent a protecting role. Courtois-Suffit divides cancer into three stages, the local, glandular, and blood vessel stages. Youth favors the occurrence of the glandular stage. Either near by or far off lymph-glands may enlarge. The inguinal glands are generally affected with abdominal cancer; the subclavicular, with gastric cancer. When the subclavicular glands are affected, the cancer has spread through the lungs or mediastinum, through the thoracic duct, or there may be no connection at all between the stomach and the enlarged subclavicular lymph-glands. Finally the fact must not be forgotten that all the enlarged glands found in carcinoma are not cancerous.—(*Journal des Praticiens*, 1901, No. 21). [M. O.]

Acute Pneumococcal Meningitis in an Infant of Six Weeks with Hereditary Syphilis.—Dr. Louis Guinon reported a case of acute meningitis in an infant aged six weeks, covered with syphilitic roseola. Examination of the purulent cerebrospinal fluid after lumbar puncture showed polynuclear leukocytes in great numbers. The child died the next day. The brain was covered with greenish pus and there were no serous effusions. From the brain and the blood of the heart, pure cultures of pneumococci grew. Guinon reported this case to remind us that meningitis in a syphilitic must not necessarily be specific, and to show that pneumococcal infection easily becomes generalized in a very young child. The point of entrance of the pneumococcus in this case is unknown. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 20, 1901). [M. O.]

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The St. Louis Catastrophe.—We feel it to be our imperative duty to call attention to the fact that incalculable injury will be done to the cause of preventive medicine if the exact truth about the recent spread of tetanus in St. Louis is not revealed. Many facts have come to light, but we are not assured that *all* the facts are yet known. The coroner's jury rendered a verdict on the 18th instant, in which it blames the Health Department of the city of St. Louis for "negligence," but this luminous verdict proves nothing that was not already known. More to the point is the report of the committee of bacteriologists, published in *The St. Louis Medical Review*, and republished in this number of the *Journal*, to the effect that they arrived at the positive demonstration that the toxic serum dated August 24 and that dated September 30, were "identical." This is in direct contradiction to Dr. Ravold's statement that all the latter serum was destroyed. This discrepancy is vital. If the serum of September 30th was used, there is no longer any mystery about the epidemic, for the horse from which this serum was taken was shot on October 3d, because it had tetanus. The grave questions to be determined are, who is responsible for this fault, and how did it happen?

The statement that the work was done by the almshouse "janitor" in a stable on the almshouse property; and the absence of evidence that the horse had been immunized from tetanus, and that the serum had been properly tested on lower animals—all these points leave a most unsatisfactory impression on the mind and must be cleared up.

That this accident will have the effect of causing distrust of all municipal laboratories (in any and every city) is more than probable. We do not constitute ourself the final judge on this subject, but we recognize that the fault of one municipal laboratory should not be visited upon the heads of all the others. We wish, however, to point out most seriously to all municipal authorities that the cry is already being raised that the attempt has been made in several cities to mix politics with antitoxin serum. We do not know how just this is, but it behooves all municipal authorities who have gone or intend

to go into the manufacturing business, to take heed of this St. Louis disaster, and see that it is not repeated.

The private manufacturing firms which produce antitoxin are naturally not silent in this crisis. They claim that they have never had such disastrous results follow their work (in which respect, however, they have no better record than some of the municipal laboratories) and they point out that the reasons are that they immunize their horses, employ only expert workers, and observe scrupulously the laws of cleanliness. They are entitled to full credit for their success, and we gladly accord it to them. But the lesson to be drawn from this grave calamity is renewed vigilance; and no manufacturer, whether a Board of Health or a private firm, can afford to ignore this lesson.

The St. Louis authorities are to be commended for the promptness with which they have conducted the investigation; and the committee of bacteriologists, as well as the medical profession in St. Louis, are deserving of the highest praise for their conscientious efforts to unravel this dreadful problem.

Gunshot Wounds of the Pregnant Uterus.—Gunshot wounds of the pregnant uterus, although of somewhat rare occurrence, present a subject full of interest to the surgeon and obstetrician, involving, as they do, many delicate points of diagnosis and treatment, and requiring the most careful judgment on the part of the operator. The subject is interestingly brought before us by Dr. George Gellhorn, of St. Louis, in the *St. Louis Medical Review* of November 2nd and 9th. He has collected eighteen unclassified cases of gunshot wounds of the pregnant uterus. These cases show that the contents of the uterus greatly diminish the force of the bullet so that complete perforation of the organ is not the rule. Symptoms of hemorrhage and shock usually set in after such an injury, but in Gellhorn's eighteen cases there are two notable exceptions to this rule. In each of these cases the uterus expelled its contents and the child died shortly afterwards, but the mother recovered. In neither of these cases did any serious symptoms present themselves prior to the emptying of the uterus. Hemorrhage from the wound in the

abdominal wall varied greatly, in some cases being very slight, in others profuse, and in still others mixed with amniotic fluid. In many of the cases intestinal perforation complicated the uterine wound. In those cases which recovered from the immediate shock general peritonitis usually manifested itself. Labor pain setting in a few hours after the infliction of the injury, was the rule. An exact diagnosis of the condition is oftentimes difficult. The absence of fetal heart sounds after the injury is supposed by some to be indicative, but in a case reported by Prichard the fetal heart sounds continued to be heard, and yet when the abdomen was opened the uterus was found to be perforated and the intestine wounded in six places. In discussing the mortality, Gellhorn excludes one case in which death occurred from a cannon-ball injury. Of the remaining seventeen cases five died and twelve recovered. Six of the patients were not operated upon and only one of these died. In nine cases submitted to operation three died. This mortality corresponds very closely to that of other statistics. Gellhorn thinks, however, that it is misleading, since many cases of gunshot injuries of the pregnant uterus which terminate fatally are never reported. The effect of the injury upon the fetus was reported in fifteen cases; in eleven of these death occurred. Gellhorn urges early operation in all cases, in which advice we feel sure all surgeons will concur. Gellhorn inclines to the view that in most instances a better result will be obtained by the Porro operation, although in a few cases in which the uterine wound is small it may be closed and an expectant plan of treatment carried out. We are hardly prepared to agree with the writer in his suggestion of always removing the uterus in these injuries. In the early months of gestation and where the uterine wound is not extensive, we cannot but feel that the more conservative treatment of emptying the uterus and closing the wound, is not only more likely to result in recovery, but is also the most rational form of treatment.

Gastric Wounds during Pregnancy.—In this issue is published a most interesting report of a gunshot wound of the stomach and intestine, occurring during pregnancy. The promptness and skill of Dr. Gloninger in opening the abdomen and suturing the wounds are worthy of great praise. He saved not only the life of his patient, but also that of the fetus, which was born a few months later. The case is eloquent testimony to the accuracy of the views expressed in these editorial columns, that such injuries should have, in the majority of cases, immediate operative treatment. An incidental deduction from this instance of successful surgery is the great value to

the public of the hospital in small cities and towns. It is not probable that Dr. Gloninger would have had this brilliant result, had he not had the advantages of hospital environment for his patient. A hospital in a community trains the local medical profession to do great deeds, and gives the citizens, whether poor or rich, the possibility of the benefits of modern surgery in urgent emergencies.

Decortication of the Lung.—The question of priority in medical discovery is one of the most perplexing of those that concern the student. Discoveries in medicine, even more than in any other branch of knowledge, seem to be made when the time is ripe for them. Thus, bacteriology can scarcely be said to have developed until the microscope had reached a state of perfection to enable it to be possible. And in many surgical operations we are obliged to wait until perfection of technique, anesthesia and antisepsis have reached such a point that we can safely explore cavities and attack organs that were previously inaccessible.

So much for the scientific aspect of the question, but there is another which is entirely human, and most exasperating; that is to say, the so-called patriotic side, which prevents the German from recognizing the priority of a Graves: which arrays the continent of Europe against England, and the Eastern Hemisphere against America. Of all people, among the least patriotic in this respect are our own; due, perhaps, to a too assiduous cultivation of Teutonic medical literature, and a habit of speaking contemptuously of the indigenous product, because there are unquestionably some very disreputable medical journals published in America, just as there are in France, Germany and Switzerland, only, fortunately for us, they are rarely transported.

We are impelled to these reflections by having had our attention called again to the dispute between Fowler, of Brooklyn, and de Lorme, of Paris, regarding the possibility of stripping the pleura from the lung and thoracic parietes for the purpose of curing empyema. So far as originality goes, in this case as well as in many others, both appear to deserve equal credit. The idea occurred to de Lorme in April of 1893, and at that time he made some experiments upon dogs, but these experiments were not reported in such a manner as to obtain any wide circulation. When Fowler, in October of the same year, actually performed the operation upon a patient and succeeded in curing a very chronic and intractable condition in the left lung, he was entirely unaware of de Lorme's work. It was not until several months later that de Lorme actually performed the operation, and we think, therefore, that the credit is entirely due to our American colleague, and that the operation, if it

is to be decorated with a proper name, should bear his. "Fowler's operation" then, or pulmonary decortication, consists in stripping the pleura from the lung, diaphragm, ribs and pericardium and removing it together with all granulating tissue and sinuses that it may contain, with the object of promoting re-expansion of the lung, and completely extirpating the infected focus. In a recent paper, in addition to the report of an exceedingly interesting case operated upon by spinal anesthesia with most brilliant results, Fowler analyses the statistics to be obtained from the literature. In 30 cases in which the functional results had been stated with sufficient clearness, he finds that there have been 11 cures, 3 deaths, and the remainder were either improved, not improved, or doubtful. If, however, we consider only the effect upon the empyema, we find that it was cured 17 times. As 6 of the other cases were suffering from advanced tuberculosis, no permanent effects could have been expected under any circumstances. The final statistics should be 17 cures in 24 operations, with only one death. A very satisfactory result indeed. An interesting point is, that of all the cases recorded, Fowler's were the only ones in which total pleurectomy was performed, so that the operation when carried to its full extent is most emphatically and exclusively his own.

The Administration of Anesthetics.—Probably few things outside of the operation itself give the surgeon more anxiety than the administration of the anesthetic. Until quite recent years in most of our hospitals the important part of giving ether, or even chloroform, devolved upon the youngest and most inexperienced of the resident staff. It is a comfort to observe, however, that this custom is being changed in a number of our larger hospitals. It is to be regretted that practical instruction on anesthetics and their administration receives so little attention in our medical colleges. Great strides have been made in late years to acquaint the student with the practical methods of diagnosis and treatment, both medical and surgical; he is given bedside instruction in percussion, palpation, auscultation, etc.; he is obliged to attend one or more cases of confinement, and occasionally he is made to assist at operations. But how many of our colleges give to their students practical and personal instruction in the immediate duty of administering anesthetics? The rôle of the anesthetist has recently come into considerable prominence, due to the improved methods of producing anesthesia, and we are pleased to see that here in America this heretofore more or less neglected subject has lately been given much more consideration. It would seem to us that the student should be personally instructed how to

administer an anesthetic just as he is taught how to examine a chest, and not allowed to graduate without having once had an opportunity of anesthetizing a patient under the direction of an experienced anesthetist. To one interested in this subject it is a disappointment to examine the lists of textbooks recommended to students in the various college catalogues and find no mention made of a work on anesthesia. To appreciate the importance of this question one has but to refer to his own first experience in the giving of an anesthetic, to observe the manner in which the administration is frequently carried on, or to consider the many complications, immediate and post-operative, arising from the careless and ignorant use of anesthetics. Much might also be said in this connection regarding the importance of choosing the proper anesthetic in the presence of various organic lesions. It is undoubtedly true that most surgeons devote too little time to a choice of the anesthetic. When a careful consideration is given to the condition of the kidneys, lungs and heart prior to operation and the anesthetic chosen which promises the least interference with the functions of these organs, it is our belief that fewer cases of post-operative pneumonia, bronchitis, suppression of urine, etc., will be reported. The combination of nitrous oxide and ether has done much to prevent these post-operative complications, and can be substituted in many, if not all, of the cases in which ether alone is generally used.

The Surgery of the Mind.—We published some months ago in this journal a highly suggestive paper by Professor Pick, of Prague, in Bohemia. The author is an eminent German physician, and his paper should have made a deep impression on the minds of our readers. The purport of the essay was, in brief, to show that surgical operations done primarily for the sake of their effect on the mind, in cases of neurasthenic, hysterical and insane patients, were often disastrous in their results, seldom successful, and hardly ever justifiable. This position will be considered extreme by some neurologists, and by not a few surgeons, but in the main Professor Pick is probably right.

If Shakespeare lived at the present time he would not ask in dubious numbers "who can minister to a mind diseased?" The trouble with Shakespeare was that with all his legerdemain he never fathomed the mysteries of suggestive therapeutics. The answer to him nowadays would be that anybody with a few surgical instruments and an antiseptic training can minister to a mind diseased. The problem reduces itself sometimes to within the narrow limits of dilating the cervix uteri or adjusting a pessary. Even medical experts fall into the temptation of treating

the mind through the solar plexus—and we recall the case of an elderly lady who promptly got better after having a stomach-tube passed into her insides for the purpose of securing a test meal.

In fact, there are probably few of us, in any domain of practice, who have not sinned sometimes in trying to break into the mind by way of the cellar door. It has been said that the wisest physician is he who is the most suggestive, and that every truly honest physician has in him an histrionic element. When Sir William Gull said that people liked to be humbugged, one of his friends retorted that they liked to be *gulled*; and the truth of the saying was seen in the fact that Sir William left a large fortune.

But there is a serious duty involved in this risky kind of practice, and the ethics are not more conspicuous than are certain questions of policy. As Professor Pick showed, many of these patients are not permanently benefited by suggestive surgery, and their last end is worse than their first. A reputation built upon this kind of hypnotism is like a house built upon the sands.

It is too soon to pass judgment on the enterprise of the Paris doctors who, on the 21st instant, went up in balloons for purposes of physiological investigation. They took an assortment of dogs, rabbits, guinea pigs and scientific instruments, and results are promised later. Their observations on the blood appear to have been of great interest—especially on the corpuscular strength of that fluid. The red blood corpuscles are said to have shown an increase up to 10,000,000 per cubic millimeter at an altitude of 4,000 meters. The enterprise was peculiarly Gallic in its main features.

One of the diversions of the day is to observe the lay journals discuss seriously the latest deliverance of Tolstoi on the subject of matrimony. The Russian novelist has become the expatriated apostle of much that is impracticable and absurd, and his preachment to the effect that "marriage is sin" is logical and characteristic. The father himself of a large family, Tolstoi has discovered his own matrimonial sins rather late in the day. His doctrine, of course, is contrary to physiology, ethics and common sense, and physicians certainly would suppose that such a doctrine was not worthy of grave criticism. Charity should prompt us to ignore the illusions of the poor, distracted mind of this Russian mystic, who in his old age thinks that the sublimest virtue and wisdom consist in turning monk.

Current Comment.

THE PLAGUE IN CALIFORNIA.

The report of the special health commissioners, appointed by the Governor of California, adds another humiliating chapter to the already long drawn out discussion of the existence of bubonic plague in this State. It is not proposed to enter into any detail in refutation of this bold, defiant, and stupid document. * * * It seems superfluous to tell the reader that this lucid exposition of supposed facts is quite sufficient in itself to convince any thinking man of the truth it attempts to deny. It is contradictory throughout, and bears openly on its face the imprint of desperation and despair. A sense of distrust and suggestion of falsehood scents every page, and permeates every sentence.

—Occidental Medical Times.

PRAYER HEALING IN GERMANY.

The latest fashionable form of quackery in Berlin is said to be prayer healing. This has for some time prevailed in aristocratic circles in Berlin and Potsdam, and it has also invaded the ranks of the financial aristocracy. A pharmacopœia of prayers to be used against special forms of disease has been prepared. However beneficial to patients this new method of spiritual therapeutics may be, it does not appear to be likely to enrich its professors. The practitioner of prayer healing most in vogue is a lady doctor whose fees are at the rate of 2 marks an hour.

—British Medical Journal.

ADAMI ON KOCH.

In the current issue of the *Canadian Journal of Medicine and Surgery*, Professor J. George Adami writes at length on the same subject (the non-identity of human and bovine tuberculosis), and shows that Koch must have known that the investigations made by himself and Schütz were simply a repetition of those of Frothingham, Theobald Smith, and Dinwiddie. Adami, in August, 1899, read a paper on this subject before the Canadian Medical Association, in which he reviewed the work that had been done, and discussed the arguments *pro* and *con* at considerable length. It is hardly conceivable that Koch failed to see this paper, for the German Consul at Montreal asked for and received copies of it for transmission to his government. It is a serious fact that it was just about this time that Koch and Schütz began their inoculation experiments at Berlin.—*The Medical Record*.

VANITY IN A GOOD CAUSE.

A good story has been rescued from a South German paper by the *Westminster Gazette*. One of the hospitals in Rio de Janeiro bears on its front, in letters of gold, the inscription, "Human Vanity to Human Misery." The history of this strange sign is instructive. The Emperor Dom Pedro, of Brazil, who was the friend of the poor and the suffering, wished to erect a hospital for the benefit of the indigent invalids in the capital of his empire. Hence the public were invited to subscribe to such an institution. But there was hardly any response. Then the Emperor made it known that the title of "baron" was to be conferred on every subscriber of 100,000 milreis, and that of "count" on every subscriber of 250,000 milreis. And lo! and behold, a stream of money began to pour into the coffers of the building fund. The misery of the poor had not touched the wealthy, but the appeal to their vanity had not been in vain. The great day of the opening of the hospital came. An enormous crowd was gathered together. Everybody was gazing up to the gable of the new building which was to be "unveiled." When the cover was withdrawn the newly-made "aristocracy" read their Emperor's estimation of themselves in the inscription, "Human Vanity to Human Misery."—*The Sanitary Record*.

Correspondence.

TRANSPLANTATION OF THE URETER.

By J. F. BALDWIN, A. M., M. D., Columbus, Ohio.
To the Editor of the Philadelphia Medical Journal:

In your issue of October 19th, in an article by Dr. A. Laphorn Smith, he states that the operation of ureteral transplantation, which he had made on the 17th of August, was the eleventh which had been made in this country and in Europe, and he names as American operators Baldy, Kelly, Boldt, and Fullerton. You comment on this article editorially in your issue of October 26th, and add to the list of American operators the names of Penrose and Krug.

If you will turn to the files of your journal you will see that in the issue of November 26, 1898, I reported a case of uretero-vesical implantation which I had made on the 25th of the preceding August, while in the *American Gynecological and Obstetrical Journal*, of May, 1901, I reported two additional cases, making three in all.

In truth, the operation is so easy of execution that I suspect, were all the cases recorded, the number would be very much larger than Dr. Smith's article and your editorial would lead us to infer.

I wish to call attention to two or three points in transplantation technique. I see no reason for ligating the little remnant of ureter attached to the bladder. We would certainly anticipate no reflux of urine from that portion, while if any did occur it would readily escape through the fistula already existing into the vagina. Moreover, the chances of a ligature becoming infected at that point would be very great, and once infected it would of course make trouble until removed.

Since a fistulous opening already exists between the field of operation and the vagina, it seems to me better practice to enlarge this opening sufficiently to permit a drain to be passed from the field of implantation into the vagina instead of putting the drain through at the lower angle of the incision and thus inviting the occurrence of a weak point for a future hernia.

I fail to see any advantage in making the implantation without opening the peritoneal cavity. The extra-peritoneal operation is much more difficult, while at the same time there is necessarily left a large flap of peritoneum having a poor vascular supply and with a dead space between it and the transversalis fascia. The risk of infection in such a dead space is well understood, while the danger of sloughing of such a flap is by no means theoretical. This sloughing is alluded to, with cases, by Alban Doran in his paper on Cysts of the Uraebus, in Volume 81 of the *Medico-Chirurgical Transactions*. So great is this danger that in his paper Doran states distinctly that "the operator should never run risks through extreme anxiety to leave the peritoneal cavity unopened."

UNUSUAL AFTER EFFECTS OF A SNAKE BITE.

By LAWRENCE E. HOLMES, M. D., of Biltmore, N. C.,
To the Editor of the Philadelphia Medical Journal:

In reply to Dr. John G. Sheldon's suggestion, published in the *Philadelphia Medical Journal* for October 12, 1901, with regard to the case I reported in the same journal for September 14th last, under the heading, "Unusual After Effects of a Snake Bite," I would say that, though the carbolic acid theory of the paralysis may be considered as a remote possibility, it seems to me that the explanation on the ground of hysteria is much the more probable. It is hard to understand how carbolic acid applied to a superficial wound on the anterior surface of the forearm, could, several days later, reach the nerves of the back of the forearm in sufficient strength to produce a toxic neuritis before being absorbed, and carried into the general circulation and without causing any injury to the intervening structures. (This argument may be applied, only with less force, against the theory of a toxic neuritis produced by the serpent venom.) If carbolic acid could have such a local circumscribed effect, it would not be delayed five

or six days, for the local anesthetic effect of the drug occurs in a very few minutes and passes off in a few hours at the longest, unless permanent injury to the tissues is produced. There is no reason whatsoever to suppose that the local symptoms of inflammation—pain, redness, swelling, etc.—were, in this case, produced by the acid, for I have seen the same condition, only in a more marked degree, occur as the result of a snake bite, when no carbolic acid or any similar substance has been applied.

The gangrene, which occasionally follows the prolonged local use of carbolic acid is, according to Honsell, the result of "excessive transudation into the cellular tissues, so choking the circulation." This explanation is much more plausible than the nervous theory, for it does not seem possible that the acid could reach the nerve trunks in sufficient strength to paralyze them before being destroyed or absorbed. Though the case is not typical, yet, taking everything into consideration, there can be but little doubt that the editor of the *Philadelphia Medical Journal* was correct in his opinion, expressed editorially in the number of the *Philadelphia Medical Journal* in which the case was first reported, when he pronounced the case an unusual manifestation of hysteria.

Actinomycosis of the Superior Lachrymal Canal.—I. I. Ginzburg (*Medicinskoje Obosrenie*, May, 1901) quotes Aphanasieff's classification of actinomycosis into four groups: (1) Actinomycosis of the head and neck. Infection takes place through the mucous membrane of the oral cavity and the organs contained in it (carious teeth, tonsils, tongue and pharynx); also directly through the skin. (2) Actinomycosis of the thorax and the thoracic organs. Infection takes place through the healthy or injured mucous membrane of the respiratory tract. (3) Actinomycosis of the abdominal wall and organs. Infection takes place through the mucous membrane of the intestinal tract. (4) Actinomycosis of the skin and subcutaneous tissue. Infection takes place through bruises, ulcers, wounds, etc. To these groups the author adds a fifth, namely actinomycosis of the lachrymal apparatus, where infection takes place through the exposed conjunctiva. To the 39 cases of the last group recorded in literature he adds another observed by him. The patient, a woman of 30, had her upper tear-duct completely occluded by a substance resembling closely granulation tissue which, when removed and examined microscopically, proved to be a ray-fungus possessing long filaments, but without the clubbing observed by other authors in such cases. [A. R.]

Muco-membranous Enterocolitis.—The fundamental symptoms of muco-membranous enterocolitis, says Maurice de Langenhagen (*Presse Medicale*, 1901, No. 38) are mucous casts, (false membranes), in the stools, constipation, though this may alternate with diarrhea, and pain, colicky or occurring in violent paroxysms. Besides, there are the various signs of dyspepsia, some degree of nervousness, functional disturbance of the liver, intestinal lithiasis, etc. Anatomically the lesion is generally catarrhal and superficial, in the colon, and accompanied with marked atony. It is mainly seen in nervous and lithemic women. Out of 600 cases seen, 435 were female, 141 male, and 24 in children. There were among the women very few cases of metritis or salpingitis. In 32 patients Langenhagen noticed a typical diarrhetic form of the affection. Marked enteroptosis was found in 41; meteorism and hemorrhoids occurred in almost all cases. Emaciation is the rule. The liver is generally small; the stomach dilated. The right kidney was movable in 136 cases. Langenhagen believes that muco-membranous enterocolitis is a frequent cause of appendicitis. Diet is absolutely necessary; enteroclysis should be practiced for a time; and baths at Plombières, Chatel-Guyon, or Vichy complete the treatment. [M. O.]

Reviews.

Pathological Technique. A Practical Manual for Workers in Pathological Histology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank P. Mallory, A. M., M. D., Associate Professor of Pathology, Harvard University Medical School; and James H. Wright, A. M., M. D., Instructor in Pathology, Harvard University Medical School. Second Edition, Revised and Enlarged. Octavo, 432 pages, with 137 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00 net.

We gladly welcome the second edition of this admirable manual which was designed originally to fill a definite need, and has filled it to perfection. The universal favor which the first edition received at the hands of students, teachers and laboratory workers should be a source of pardonable pride to the able authors. This second edition has been thoroughly revised and brought up to date. The very latest methods are given, and a few new chapters and some very fine illustrations added. On the other hand, the chapter on the examination of urine has been almost entirely omitted. However, there is one urinary test that should have been included, and that is the diazo-reaction which is a very important adjunct to the Widal test. We were somewhat surprised not to find pure beechwood creosote mentioned among the clearing agents. In the hands of those who used it, it has proved a most valuable clearing agent, either alone or in combination with oil of cloves. It does not dissolve celloidin, has only a slight action on the stain (hematoxylin) and clears rapidly from 95 per cent. alcohol. It also flattens out the sections as no other agent does. The rapid method of staining with hematoxylin is not given in a manner which would insure the best results. As practised in some laboratories, the method is: (1) strong hematoxylin, 2 to 3 minutes; (2) acid alcohol, $\frac{1}{2}$ minute; (3) alkaline water (ammonia or lithium carbonate), until blue; (4) distilled water, one or two changes; (5) 95 per cent. alcohol, $\frac{1}{2}$ to 1 minute; (6) creosote, until clear. Eosin or Van Gieson's may be used as counter stains. The staining occupies only a few minutes, and yet splendid preparations are obtained. This, however, is in no way a criticism of the book which in our estimation deserves nothing but praise, and can be highly recommended. [A. R.]

A Laboratory Course in Bacteriology. For the Use of Medical, Agricultural and Industrial Students. By Frederic P. Gorham, A. M. W. B. Saunders & Co., Philadelphia.

This small volume contains the elementary principles of bacteriology and is mostly devoted to methods. It is brief, comprehensively written, very well illustrated and conveniently arranged. The methods are carefully selected and brought up to date. It is evident that most, if not all of them, were tried by the author who is himself an experienced laboratory worker. Useful features are a comprehensive classification of bacteria according to Migula's system and a glossary of terms employed in the description of cultural characteristics.

As seen from the title, the book is too general in its scope, or rather too elementary, to be of any great use to medical students, unless as a convenient laboratory aid to the beginners. [A. R.]

A Text-Book of Diseases of Women.—By Charles B. Penrose, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania. Fourth Edition, Revised. Octavo volume of 539 pages, handsomely illustrated. Philadelphia and London: W. B. Saunders & Co. Cloth, \$3.75 net.

The fourth edition of this well-known book preserves its original excellent form in an up-to-date garb. Dr. Penrose has had the happy faculty of clearness of expression,

and this, supplemented by a large experience in gynecologic practice and teaching has given him a directness of diction that is convincing, to say the least. The methods of treatment advocated in the book are those employed by him in his own work, and are those which in the hands of skilled gynecologists give the best results symptomatically with the lowest mortality-rates. In a close examination of this volume we see much that is new, including a summary of the latest knowledge on kraurosis vulvae, the more recent methods of treatment of uterine prolapse, the latest statistics on ventral suspension, and the accepted management of tubal pregnancy. Wilms's theory of the origin of dermoid cysts is mentioned, but the reader is left in doubt as to the author's stand upon this as yet disputed question. The important subject of gonorrhea in women receives ample attention, and the chapter on this subject is one of the most interesting in the book. The technique of gynecological operations, the text of which is filled with excellent illustrations, is clear and concise, leaving nothing to be desired in the way of asepsis and mechanical maneuvers. A number of the newer illustrations are the work of Miss Margaretta Washington and are equal to the best of the products of that distinguished medical artist. Dr. Penrose's book is a valuable one, of interest to the younger aspirants after surgical standing and of value to the older established surgeons. It must have a continuance of its well deserved popularity.

[W. A. N. D.]

The Physicians' Pocket Account Book. By J. J. Taylor M. D. Published by the Medical Council, Philadelphia, Pa.

A concise, convenient, and labor saving little book of 200 pages, embodying some practical suggestions, based upon strict business principles. It obviates the necessity of more ponderous stationery and can be employed at a moment's notice. In addition to the business suggestions, it would not have been amiss if the author had also included some suggestion as to the reciprocal duties of practitioners, and their professional responsibilities to each other as based upon definitely recognized ethical principles. The paper is excellent for the purpose, and the compilation accurate. [M. R. D.]

Beitrag zur Pathologischen Anatomie der Graviden Tube. Von Dr. med. August Peterson, Berlin. Published by S. Karger. Pages 84.

In this brochure of 84 pages Peterson gives us an interesting contribution on the pathological anatomy of tubal pregnancy, founded upon the study of 14 cases which occurred in the clinic of Professor Leopold Meyer. The specimens were submitted to careful microscopic examination, the object of the author being to discover, if possible, the relationship existing between a pre-existing salpingitis and the pathogenesis of tubal pregnancy; also to discover the relationship existing between the tubal mucosa and the attachment of the ovum. The subject is scientifically treated, there are interesting tables and clinical reports attached and the subject matter cannot fail to be of interest to gynecologists. [W. A. N. D.]

Tuberculosis of Both Suprarenal Capsules Without Addison's Disease.—Charles Le Roy, in the *Journal des Sciences Medicales de Lille*, (June 1, 1901), reports the case of a man of 39, who had had a fistula in ano. Tuberculous meningitis developed, and death followed. The autopsy showed an old phthisis and adhesive pleurisy, intestinal and meningeal tuberculosis, and total tuberculosis of both suprarenal capsules. He had never complained of pain, nausea, vomiting, etc., nor had his skin been at all bronzed, nor had he been weak or unable to do hard work. Le Roy believes that Addison's disease is a cachectic state resulting from cancerous or tuberculous degeneration; while the pigmentation of the skin, the asthenia, and the other symptoms are due either to fatigue, or to a lesion of the central nervous system, which may produce trophic disturbances, with pigmentation, sensory and motor disturbances or functional troubles. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Jewish Hospital.—It is announced that Meyer Guggenheim, of New York, formerly a resident of Philadelphia, intends to donate \$60,000 to the Jewish Hospital Association to erect a building for the treatment of private patients. He has already given the Mount Sinai Hospital, New York, \$200,000 for a similar purpose, and \$25,000 to the Denver Hospital for Consumptives.

University of Pennsylvania.—In memory of Dr. William F. Norris, who died November 18, all exercises in the Medical Department of the University of Pennsylvania were suspended during the afternoon of November 20th, when the funeral services were held.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M. Monday evening, December 2, Academy of Surgery; Wednesday evening, December 4, College of Physicians; and Thursday evening, December 5, Obstetrical Society.

Scarlet Fever.—It is reported in Washington, Pa. that scarlet fever prevails to an alarming extent in Canonsburg, a small town near this place, and all efforts to check its ravages have proved futile. The disease broke out in a negro settlement, and nearly every family in the town has a case. The public schools have been closed, and aid will be asked from the State Board.

Water Measles.—A disease called water measles, supposed to have been brought from the Philippines, has appeared in Stroudsburg, Pa. A number of similar cases is reported a few miles away, in New Jersey. The patients had fever and eruptions formed, like water blisters, which eventually burst.

Kensington Hospital for Women.—Dr. Ellis McDonald, recently substitute resident in the Royal Victoria Hospital, Montreal, has been appointed resident physician in the Kensington Hospital for Women, replacing Dr. S. E. Tracy, who has gone to San Francisco.

Decrease in Smallpox.—Forty-six cases and seven deaths was the smallpox record for Philadelphia for the week ending at noon, November 23. The total of smallpox cases for the year is 655, and the deaths 97. Smallpox patients discharged from the Municipal Hospital cured now number 345. In the city there are now 213 smallpox victims. City Councils at Chester have adopted resolutions expressing a desire to join with the United Health Boards and municipal authorities of Delaware county to secure a hospital for contagious diseases. The resolutions express the belief that such a hospital is needed at once to properly protect the health and lives of the citizens of the county. Deaths are occurring in the smallpox hospital, Norristown, and new cases are reported daily.

NEW YORK AND NEW JERSEY.

Immigrant Detained Because He Has Tuberculosis.—In deciding the case of Thomas P. Boden, now being argued in New York, the courts will rule whether or not a man suffering from tuberculosis can be excluded from this country. The decision which would send Mr. Boden back to Ireland would permit his wife and child to remain here. Mrs. Boden insists upon sharing the lot of her husband, and if he is deported, she and her baby will accompany him. This is the first case in which the constitutionality of the treasury ruling that consumptives be prevented from landing as immigrants will be passed upon by the courts.

Smallpox on a Ship.—The Hamburg-American Line steamer "Graf Waldersee," which arrived in New York November 22 from Hamburg, was detained at Quarantine by the health officer because a woman steerage passenger developed smallpox. The patient was sent to North Brothers Island and the steerage passengers who occupied the compartment with the patient were sent to Hoffman Island for observation. The steamer, after disinfection, was released.

Hospital Building Opened.—Governor Voorhees formally opened the new building at the State Hospital for the Insane, at Morris Plains, N. J., November 21. Three hundred prominent men from all parts of New Jersey attended the services. The new building is of red sandstone and granite, three stories high and covers about an acre and a half. It cost about \$500,000, and is fitted with all the latest improvements. Addresses were made by the Rev. J. M. Buckley, Governor Voorhees, Dr. Britton M. Evans, medical director of the hospital, and Patrick Farrelly, president of the Board of Managers.

New York Orthopedic Dispensary and Hospital.—The Trustees of the New York Orthopedic Dispensary and Hospital announce that Dr. Russell A. Hibbs will give a course of clinical lectures on Orthopedic Surgery at the Institution, Monday and Thursday afternoons, at five o'clock, from December 2nd to January 2nd (both inclusive). The course will be free to the medical profession and students.

Sing-Sing a Disease Spot.—"A jail like the woman's prison on Raymond street, Brooklyn, does not reform, but is a source of contamination to its inmates," says George McLaughlin, secretary of the State Board of Prisons, in his report to the New York State Conference on Charities and Correction. He believes the institution at Sing-Sing to be the most objectionable of the State prisons. "It is a hotbed for the culture of the bacilli of tuberculosis and a distributing centre of the seeds of disease, not only among prisoners, but among the families and the communities to which they return after their discharge. A modern prison should be constructed so that every cell should be open to the sunlight and air. The workhouse on Blackwell's Island may be cited as a good example of the modern prison."

Koch's Theory Substantiated.—Dr. G. D. Barney's attempt to demonstrate that Professor Koch was in error in stating that tuberculosis germs were not communicable from a cow to a human being appears to have resulted in a demonstration that the German scientist was right, as Miss King, the young woman whom Dr. Barney inoculated with germs taken from the mammary glands of a tuberculous cow was reported by him to be in good health two weeks after inoculation.

Consumptive Hospital.—The Board of Trustees of the New York State Hospital for the Care of Consumptives, after inspecting many sites, believe that Ray Brook, on the west side of the Adirondacks, is the best suited for the proposed institution. While Governor Odell has not fully approved of the selection, he thought it was the most available of those he inspected.

Horses to Test Vaccine Virus.—An experiment which will interest the medical profession is to be made in Burlington, N. J. Dr. Glasgow and Dr. Bunting, a doctor and veterinary surgeon, both graduates of the University of Pennsylvania, have secured ten horses, and it is proposed to inoculate each of the animals, using virus secured from a druggist. The animals will be carefully watched and their condition noted from day to day. As the horse is most susceptible to tetanus, if impurities exist in the virus, it will surely develop in one or more of the animals.

Tetanus in Camden.—The special committee of the Camden Board of Health has written to General Sternberg, Surgeon General of the United States Army, asking results obtained in the army by vaccination, and the history of any tetanus cases that have come under his observation. Although more than a week has elapsed since the inoculation of the fifteen white rats with virus at the Cooper Hospital, the rodents have shown no bad effects and the physicians are sure that the vaccine is not the carrier of the tetanus germ, but that it is propagated by insufficient care of a wound. Vaccine lymph used in the process of inoculation at Camden has been examined at the State bacteriological laboratory at Princeton, and has been found free from contamination. The samples were forwarded to Princeton early last week by the health authorities at Camden, and since then State Bacteriologist Baldwin has been making careful analysis. The examination was completed November 25th. Dr. C. F. Brackett, president of the State Board of Health, said that the investigation did not show any evidence whatever that the vaccine contained germs of tetanus.

Death of Acting Assistant Surgeon Stuart Eldridge.—The Surgeon-General of the U. S. Marine Hospital Service has received the sad intelligence of the death of Acting Assistant Surgeon Stuart Eldridge, who was on duty in the office of the United States consul-general at the port of Yokohama, Japan. Dr. Eldridge was a native of New York State, but had resided in Japan for many years. At the time of his appointment in the U. S. Marine Hospital Service, July, 1894, he was a member of the imperial board of health of Tokio, and sanitary adviser to the Japanese Government. He was an honorary member of the New York State Medical Society, an honorary member of the Alumni Association of Bellevue Hospital Surgeons, etc.

An Appointment.—Dr. Smith Ely Jelliffe has been appointed visiting neurologist to the City Hospital, New York City.

WESTERN STATES.

May Destroy Chinatown.—The president of the San Francisco Board of Health recommends the destruction of the Chinese quarter. He says that Chinatown cannot be rendered sanitary except by total obliteration. It should be depopulated, its buildings leveled by fire, and its tunnels and cellars laid bare. Its occupants should be colonized on some distant portion of the peninsula, where every violation of sanitary laws could at once be detected. The day has passed when a progressive city like San Francisco should feel compelled to tolerate in its midst a foreign community perpetuated in filth for the curiosity of tourists, the cupidity of lawyers and the adoration of artists. Dr. Williamson's recommendations are in line with those made last May by Dr. Geo. F. Shrady, of New York, who was sent out to investigate the circumstances that led to the widespread reports that bubonic plague existed in this city. Dr. Shrady was amazed at the filth he discovered in the Chinese district, and, to avoid the possibility of infection, advocated resorting to the radical measure of burning.

McKinley Hall.—The new chapel and amusement hall at the State Hospital for the Insane, Massillon, Ohio, which was dedicated November 21, is to be called McKinley Hall.

Infectious Diseases in Wisconsin.—There are thirty-six cases of smallpox in Oconto, and nearly as many of scarlet fever, according to the report of the Board of Health. None of the smallpox cases have proved fatal, but there has been one death from scarlet fever. Several cases of smallpox have broken out in Hollandtown, one case in the postmaster's family. Two new cases of smallpox have developed near Hayton, and for the first time in a long number of years an epidemic is prevailing near Juneau to more than ordinary extent. Thirty-five cases of scarlet fever are reported, and the chances are that a larger number will develop before long. Cases of diphtheria have also been reported.

Suicides in Kansas.—Owing to an epidemic of suicides in Emporia, Kansas, the Mayor and Board of Health have forbidden the publication of details of suicides or attempts in local papers.

A Removal.—Dr. E. W. Lee, formerly surgeon of the Burlington Railroad in Omaha, Nebraska, who for some time practiced medicine in St. Louis, Mo., and was one of the surgeons who assisted in the operation upon President McKinley, has recently moved to New York.

No Smallpox in Chicago.—Attention is called to the interesting fact that, while smallpox is now more or less prevalent in all sections of the country, and particularly in the great cities, Chicago is entirely free from it. No other city of the first class in this country can make the same boast. This exceptional exemption is ascribed by the Chicago health authorities to the thoroughness with which vaccination has been performed there, no less than 950,588 persons having been examined within the past thirty months. Probably this record is something unequalled in the line of guarding against smallpox in a great city, and the benefit that is now being derived from it should furnish a lesson to other great centres of population. Yet 15%, or over a quarter of a million, are yet unvaccinated.

\$35,000 Verdict for Injuries.—A jury in a Chicago court

returned a verdict of \$35,000 in favor of a physician, against the West Chicago Street Railroad Company. It is alleged in the declaration that while the physician was alighting from a Blue Island avenue cable car he was thrown in such a way that his hand and wrist were crushed, necessitating amputation.

Inter-County Medical Society.—The Inter-County Medical Society met at Eau Claire, Wis., November 19th, Dr. W. B. Lyman, president. Several technical papers were read.

Chicago outclasses all other large cities in the number of deaths from railroad accidents. Its total for the census year is 330, while the combined total for nine other big cities is only 486.

Dr. Nicholas Senn, the famous Chicago surgeon, has just returned home from a tour of the world, which included a trip over the plains and mountains of Siberia, via the new Russian railroad now operating from Moscow to Vladivostok.

The Plague in San Francisco.—There occurred in San Francisco during the month of September six cases and four deaths from the plague. During October there were three cases and three deaths, and in November, up to the 4th, one case and one death.

SOUTHERN STATES.

Smallpox in Kentucky.—The secretary of the State board of health of Kentucky publishes some startling figures in regard to the prevention of smallpox during the last four years. Out of the 119 counties, only nine have been free from smallpox during the present epidemic, and those are remote from the main lines of travel. According to his figures, a total of 398 distinct outbreaks has been reported, eighty-five of which were imported from other States. In four years 11,269 cases were reported, with 184 deaths, giving the remarkably low mortality of 1.63 per cent. Sixty-three counties and municipalities were obliged to erect special hospitals, and, even with these accommodations, the health board thought that the majority of patients had been treated in their homes. During this four-year epidemic, 392,280 persons were vaccinated and 408,825 were found protected by previous vaccination. As the total population of Kentucky is 2,147,174, more than 60 per cent. of the people were either unprotected or not examined. The actual cash expenditures from the municipal treasuries amounted to \$308,000, or more than \$27 for each case of smallpox reported. This makes no account of the loss of money due to interference with business, which must have totalled very close to \$1,000,000. The health board was confident that many lives lost might have been saved and a large part of this money need not have been expended, had the people paid more heed to warnings urging vaccination. Even after a four years' crusade, Kentucky is but a poorly vaccinated State, and until there is a change in that condition, further serious outbreaks of small-pox may be expected.

Maryland Public Health Association.—The regular semi-annual meeting of the Maryland Public Health Association will be held at Rockville, Md., December 3 and 4. Details of the meeting have not yet been completed. The president of the Association, Mr. Henry Brauns, says, however, that instructive and interesting addresses by well-known men and women interested in public sanitation will be made at this meeting.

Delaware Nearly Free From Smallpox.—The State Board of Health has announced that every case of smallpox in Kent County except one has been stamped out by rigid quarantine. Wilmington also is free from the contagion and there are but few cases in Sussex County.

Skipper Also a Doctor.—A barge was towed to Baltimore the other day with her rudder gone, having lost it in a storm. The skipper of the barge, the only skipper on Chesapeake Bay who has the privilege of hanging an "M. D." to his name, is the manufacturer of several remedies. The skipper's laboratory is on the barge, and while traveling he makes his medicines. Upon the arrival of the barge, he hurriedly makes his charter, and then opens up his medicine business. He makes his home at Ches-

penke City, and, while he carries freight up and down the bay, rarely comes to Baltimore.

The North Texas Medical Association will hold its semi-annual meeting in Greenville, December 10th, 11th, and 12th. The officers are: Dr. R. F. Miller, Sherman, president; Dr. J. B. Sheldahl, Dallas, vice-president; Dr. S. B. Moore, Van Alstyne, secretary; Dr. C. A. Gray, Bonham, treasurer. The sections are in charge of the following: Surgery—Dr. Bacon Saunders, Fort Worth; Practice—Dr. R. W. Baird, Dallas; Obstetrics and Gynecology—Dr. J. B. Garrett, Galveston.

Winchester Memorial Hospital.—In the presence of a large throng of people, the cornerstone of the Winchester Memorial Hospital was laid November 18th at Winchester, Va. A parade preceded the ceremonies at the hospital building. Fifteen thousand dollars have been subscribed to the hospital fund.

Southern Surgical and Gynecological Association.—The annual meeting of the Southern Surgical and Gynecological Association has just been held in Richmond, Va. The attendance was very good, while the number and quality of the papers presented were much above the average. The following officers were elected for the ensuing year: President, Dr. W. E. B. Davis, Birmingham, Ala.; vice-presidents, Dr. J. Wesley Boyce, Washington, D. C. and Dr. J. W. Long, Salisbury, N. C.; secretary, Dr. W. D. Haggard, Jr., Nashville, Tenn.; treasurer, Dr. Floyd W. McRae, Atlanta, Ga. The next meeting will be held at Cincinnati, Ohio.

Yellow Fever Institute.—Drs. Formento, Veazie, Salomon, and Prof. Beyer, of New Orleans, have been appointed members of the Yellow Fever Institute created by Congress last Spring.

Youngest Newspaper Reader.—A despatch from Bridgeville, Del., says that the 21 months old son of Prof. Wiley, of the Bridgeville Academy, is a phenomenon. When given toy blocks recently, he arranged them to form words. Prof. Wiley recently found the baby sitting on the floor with a newspaper in his hands, apparently reading. The professor questioned the child, when, he says, he found that the baby knew what the paper contained.—*Public Ledger*.

Maryland State Medical and Chirurgical Society.—The semi-annual meeting of the Maryland Medical and Chirurgical Faculty convened in Elkton, Md., November 19th. Several members of the Delaware State Medical Society were also present. The session was opened by Dr. V. Wallace, of Chesapeake City, president of the Cecil County Medical Society. The papers were of a highly interesting character, and called forth spirited and witty discussion. The officers of the association are: President, Dr. J. McPherson Scott, of Hagerstown, Md.; vice-presidents, Drs. Harry Friedenwald and Brice W. Goldsborough; secretary, J. Williams Lord, Baltimore; treasurer, T. A. Ashby; executive committee, Drs. William Osler, J. D. Blake, L. McLane Tiffany, H. B. Jacobs, the president, secretary and treasurer. The society has 680 active members and 17 honorary members.

Maryland Health Report.—In the annual report of the State Board of Health, Dr. W. H. Welch, of Johns Hopkins University, president of the Board, said that among the preventable diseases he particularly directs attention to the overshadowing importance of tuberculosis, which Maryland should single out for direct attack. The epidemic of smallpox which has been steadily increasing in the United States since 1898, has inflicted no great injury upon Maryland. The Secretary, Dr. John S. Fulton, said that among preventable diseases, tuberculosis is shown to have caused in 1900 12.7 per cent. of all the deaths in Maryland; pneumonia 5.9 per cent.; infantile diarrhea 10.2 per cent.; typhoid fever 4.5 per cent. The ratio of deaths from preventable diseases to the total mortality is 39.4 per cent. Among the counties, Baltimore had the highest apparent mortality—16.3 per 1,000.

MISCELLANY.

Leper Settlement at Darcy Island.—Dr. M. H. Foster, assistant surgeon, U. S. M. H. S., reported that on October 27th he visited Darcy Island, which has been set aside by

the British Columbia authorities for the isolation of lepers since 1892. The island is well suited for this purpose, being about 14 miles from Victoria, and having a good supply of spring water. At one time seven lepers were detained there, but now there are four, all Chinamen. Both the tubercular and anesthetic types of the disease were seen, and the duration ranged from three to four years. They occupy small frame buildings and have a garden, in which they grow vegetables, which keeps them occupied. Every two weeks supplies are sent from Victoria. There are no clean persons on the island, the lepers who are able to be about looking after those who cannot care for themselves. But one white man has been sent there, who came from Alaska, where he was supposed to have contracted the disease, possibly from Chinese in the canneries.

Jamaica.—From Port Antonio comes the news that vessels arriving from Philadelphia are being quarantined on account of the prevalence of smallpox there.

Insusceptibility to Vaccine.—The editor of the *Polio-clinic*, answering a young woman who had been vaccinated sixteen times without ever having taken, who had no scar on her arm, suggested that her first vaccination, in infancy, may possibly have been effective; and that even if all vaccinations have failed, she could not consider herself safe from smallpox, and should carefully avoid all risk of contagion.

Notes.—154 out of every 10,000 convicts are constantly in hospitals.—On an average, 1,700,000 of the world's population are constantly afloat.—Only 900 people in a million die of old age.—Malaria has been bound in Honduras at an elevation of 4,000 feet, far above the mosquito level, where there is good water, natural drainage, and salubrious climate. The flea, it is said, is responsible for this.—The island of Java, which is 673 miles long and 125 miles wide, only three degrees off the equator, supplies practically all the cinchona bark from which quinine is made. There are about 25,000 acres of this island used in growing cinchona.

Yellow Fever Suppressed.—Surgeon General Sternberg has received a report from Major W. C. Gorgas, chief sanitary officer of Havana, showing a great improvement in the sanitary condition of that city. There has not been a single case of yellow fever in the city during the month of October, usually the severest month for that disease. During the past ten years the average number of deaths during the month of October of yellow fever was 66.27. In October, 1896, there were 240 deaths and 25 in 1899, the lowest previous rate in the past decade. In October, 1900, there were 308 cases and 74 deaths. This year there were no cases and no deaths. This result is undoubtedly due to disinfection on the lines commenced in February by the Military Governor to kill infected mosquitoes. It has only occurred a few times since yellow fever became epidemic in Havana, about a century and a half ago, that an October day has passed without a death from yellow fever. The present condition cannot be due to chance and cannot be entirely due to the general sanitary improvement. The only change from last year is that since February all infected mosquitoes have carefully been killed. In Havana they have worked on the hypothesis that the mosquito is the only way of transmitting the disease. They have not considered fomites in any way. Clothing has not been disinfected nor any effort made except to kill the mosquitoes which had bitten a sick person, and to prevent any more mosquitoes from biting after the case was discovered.

Obituary.—Dr. J. W. F. Best, at South River, Md., November 16.—Dr. Dwight Washington Day, at Eau Claire, Wis., November 19, aged 60 years.—Dr. Thomas J. Barron, at Baltimore, Md., November 20, aged 58 years.—Dr. Louis B. Pacetti, at Baltimore, Md., November 20, aged 53 years.—Dr. James P. Jackson, at Kansas City, Mo., November 22, aged 57 years.—Dr. William J. Wright, at Brooklyn, N. Y., November 20, aged 49 years.—Dr. Philo H. Banks, at New Orleans, La., November 23.—Dr. Howard W. Shaffer, at Ponca, Okla., November 14.—Dr. Fred. J. Oelschlaegel, at Cincinnati, Ohio, November 11, aged 46 years.—Dr. Barton W. Stone, at Louisville, Ky., November 13, aged 57 years.—Dr. George B. Robson, at Staunton, Va., November 25, aged 80 years.

GREAT BRITAIN.

Vaccinated Veal.—It has recently been found in London that calves which had been inoculated for the production of vaccine virus were slaughtered and sold as veal after the lymph had been produced. A careful examination was made of the meat, and when any ailment or disease was found, both meat and lymph were destroyed, but when the calf was healthy the meat was sold for veal. The doctors claim that there is no danger in this, as the inoculation gives the calf merely a surface skin cover, and the animals chosen for inoculation are always the healthiest that can be procured. In fact the calves were in such good condition, that vaccinated veal commanded a high price.

Birthday Honors.—On the King's birthday, knighthood was conferred upon Dr. G. A. Critchett, recently president of the Ophthalmological Society, honorary oculist to the King. Medals and insignia were given Drs. W. R. Henderson, of the Gold Coast, R. Allman, of Southern Nigeria, G. H. D. Gmlette, of Indore, T. H. Hill, H. E. Deane, T. E. Dyson, J. McColgbry, and E. Wilkison, in India.

Isolation Hospital, Devizes.—It was decided November 4 to erect an isolation hospital, at an approximate cost of \$47,000, in Devizes for the use of the joint urban and rural districts.

Hospital Sunday at Bath.—Over \$1000 was collected in Bath on November 3 for the Royal United Hospital. At the last meeting of the Birmingham Hospital Saturday and Sunday Funds it was announced that over \$86,000 had already been collected this year.

Gartnavel Asylum, Edinburgh.—Dr. Oswald, formerly medical superintendent of the Glasgow District Asylum at Gartloch, has been appointed superintendent of the Edinburgh Royal Asylum in the place of Dr. Yellowlees, who recently resigned.

Obituary.—On November 5th, Dr. R. B. McKelvie, a graduate of Glasgow University, died in Oban, aged 65 years—A. H. Smee, a graduate of St. Bartholomew's Hospital, chief medical officer of the Gresham Life Assurance Society, died in London November 8th, aged 57 years—On November 11th, Dr. J. S. Taylor, former health officer in Liverpool, a graduate of Aberdeen University, died, in his 80th year—Sir J. W. Agnew, a graduate of Glasgow University, surgeon of the East India Company, died November 8th, aged 86 years—The death is also announced of Dr. John Connel, a graduate of the University of Edinburgh, in Peebles, Scotland, on November 4—On October 30, Dr. M. Ledwith, of Mullingar, died of pneumonia.

CONTINENTAL EUROPE.

France's Big Reformatory.—One of the most remarkable of the foreign institutions in which the reformation and education of juvenile criminals is combined with punishment, is the Agricultural Colony of Mettray, in the Loire country a few miles from Tours. There, with ten inmates, began in 1839 the great institution which served as model for at least five of its kind in France alone. There are from twenty to twenty-five chalets, a church, schools, farm buildings, stables, dairy, cow sheds, bakery and pretty little houses with small gardens for the staff, a large establishment of from 1200 to 1500 acres, where every kind of agricultural product is cultivated. Every requisite for the colony is grown and manufactured on the premises. In one feature Mettray has no parallel in any institution. This is the Paternal Home, entirely apart from the rest, in which children of well-to-do people, not criminals, but idle, insubordinate boys are brought to their senses. The French law permits the father to send his child to a place of detention for six months. The Paternal Home consists of thirty or forty rooms grouped around a circular gallery. The pupil, who is designated by a number during his sojourn in the house, is not permitted to see any one except the director and his teachers. He never sees any other boy undergoing treatment. The reason for this is the desire that no disgrace be attached to a boy temporarily an inmate, as these boys in many cases rise in after life. On his arrival the boy is taken to his room and the programme laid down for his instruction explained to him. He is then locked in and has time to reflect on the course that he intends to take. Sometimes he remains obdurate for several days; but as a general rule sheer ennui causes him to give in and he asks permission to study and work. Ex-

cellent masters are then provided for him, the choice of subjects being left to his parents. A father can put away an unruly son in this manner in France and have an excellent education forced into him at a cost of about \$30 a month. The institution is primarily to educate and reform children of the poor. The life is one continuous round of study, work, clock-like regularity of habits, and attention to duty. They get up at 4.45 A. M., at 5.15 breakfast; 5.40, work begins; 7.50, lunch; 8.30 to 11.30, work; 11.30 to 1, school; 1 o'clock, dinner; 2 to 7.15, work; 7.30, supper, then prayers and bed. The boys sleep in hammocks, with an overseer constantly in the dormitory. The school is divided into groups called families. The head of the house, who makes a special study of the group of boys under him, is called the *chef de famille*. In addition there is in each family an "elder brother," chosen by the boys themselves for his general good behavior. During the sixty years this institution has been in existence it has reclaimed and made good and successful citizens of thousands of young criminals. Statistics show that only 5 per cent. of those who have passed through the institution ever go back to crime. Before its foundation 75 per cent. of France's juvenile offenders went back to crime after being punished.—*The Humanitarian*.

The Plague in Russia.—Up to November 17th three deaths had occurred in Russia from bubonic plague. One case was reported in St. Petersburg, while two deaths were recently certified in Odessa as due to the bubonic plague. The health authorities took vigorous precautions against the spread of the disease, and no further cases have been reported.

Tuberculosis at Menton, France.—Hotel keepers at Menton are uneasy at the number of tuberculosis patients who flock there, and have decided not to take advanced phthisical subjects, but to send them either to private villas or to the sanatorium at Gorbio.

Contagion on Railways.—A petition calling for legislation, requiring separate coaches for children suffering from whooping cough, is being circulated in Paris. As practically no cure exists except change of climate, much travel with the little sufferers is necessitated. It is hoped that this may lead to general legislation calling for the isolation of coaches for the use of adults suffering from other contagious diseases.

Crematory in Russia.—The first crematory in the Russian empire will soon be built by the Japanese. Permission has been granted to them to construct the institution at Vladivostock.

Continental Notes.—In the churches of Warsaw notices are being posted to prevent spitting on the floor.—A new leprosarium is being established near Moscow. It is estimated that the cost of maintenance of each patient will be about 500 roubles (\$250) a year.—Horses killed for food in France yield on an average 450 pounds of meat each.—The abuse of absinthe in France is said to be responsible for 15,000 crimes or misdemeanors, 16,000 cases of lunacy, 1800 suicides, and 30,000 cases of tuberculosis.—Moscow University is giving special instructions in the application of light in the treatment of nervous, skin and other diseases.—Professor A. Koch, of Heidelberg, suggests that the question of employment for the blind should be solved in accordance with the precedents of Japan, where they are much in demand as experts in massage.—Nearly one-half of the students at Switzerland's six universities last Summer—1990 out of 4046—were foreigners. Of the 748 female students only 98 were Swiss, the vast majority—560—having been Russians.—German surgeons say that the delicate membrane which covers the contents of an egg shell will answer as well as bits of skin from a human being to start the healing of open wounds. This discovery has already been successfully tested.—The City Council of Odessa has decided to give up 5000 roubles, almost \$2500, to the family of a physician in the city employ who succumbs to an infectious disease. Should the physician not have children, the brothers, sisters, or parents of the deceased can only get the interest upon the money.—Dr. Vinogradski, director of the bacteriological laboratory of the Institute of Experimental Medicine, St. Petersburg, has offered to give 5000 roubles annually toward the new laboratory buildings, as long as he remains connected with the institution.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

November 9, 1901.

1. The Bradshaw Lecture on Prognosis in Relation to Disease of the Nervous System. JUDSON S. BURY.
2. Two Lectures on Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. FELIX SEMON.
3. On Some Symptoms Produced by Tumors of the Optic Thalamus with a Case. J. MICHELL CLARKE.
4. Enteric Fever Commencing and Complicated by an Attack of Influenza. J. COUBRO POTTER.
5. A Case of Recurrence of Laryngeal Papillomata in a Child after Tracheotomy. E. MANSEL SYMPSON.

1.—An accurate prognosis of disease is well-nigh impossible, and even an approximate forecast presents great difficulties which are perhaps more prominent in relation to diseases of the nervous system than to diseases affecting other parts of the body. Now, if we have to speak so cautiously about the course of diseases produced by poison, the effects of which have been so carefully studied as those of syphilis, how much more caution is necessary in speaking of the action of poisons whose effects are so little known as those which we assume to be the exciting agents of disseminated sclerosis, of Landry's paralysis, and of many other forms of nervous disease. The mere size of a lesion appears to have but little influence on the progress of disease. It may be accepted as a general law that, other things being equal, lesions of the peripheral nerves are more quickly and completely recovered from than lesions of the central nervous system, and that lesions of the brain, at least as regards the degree to which function is impaired, are less serious than those of the cord. Bury believes that each poison has its own point of attack, and that the earliest change of each disease has its own peculiarities, minute enough, no doubt, and still invisible to our present methods, but which, if visible and thoroughly recognized, would enable us to diagnose the condition and to foretell its probable developments. It is, then, the symptoms that testify to active phases of disease that, for purposes of prognosis, require to be carefully studied. They have a natural history of their own which calls for independent investigation, and which is not as yet adequately explained by morbid anatomy. If the author is right in assuming that a poison is the most common exciting cause of diseases of the nervous system, prognosis will vary with knowledge of the proper treatment for elimination of the poison, and of the effects produced by it. But in most cases we know neither the nature of the poison nor the manner in which it enters the circulation, hence treatment is purely empirical and often fails. In addition to remedies for the elimination of poisons we want others to aid us in counteracting their effects, and here we must hope for fresh discoveries regarding the effects of glandular extracts and the nature of toxins and antitoxins. In this connection, the influence of one disease upon another is worthy of renewed investigation. We have, further, to study the influence of one part of the nervous system upon another part. [J. M. S.]

2.—Of the systemic disease in which **throat and nose complications** occur and which may require **local treatment**, tuberculosis, syphilis and affections of the central nervous system are the most important. Lesions of the nose and throat may develop in the course of leprosy, diabetes, general anemia, chlorosis, Bright's disease, typhoid and other acute fevers, influenza, gout, rheumatism, urticaria, pemphigus, actinomycosis and smallpox. But the throat and nose complications in many of the affections just named are rare, and some require no local treatment whatever, except an occasional palliative; while in other instances they must be treated exactly as if the affections were purely local. Laryngeal tuberculosis, however, should receive intelligent and energetic local treatment. [J. M. S.]

3.—Clarke reports the case of a man, aged 19 years, who

complained of a sensation of heat or burning in one upper extremity; a marked intentional tremor in the same limb, absent during rest, and exactly resembling, during movement, the tremor of disseminate sclerosis; hemiplegia of the opposite side of gradual onset, affecting the upper extremity only for a considerable time and predominating in this limb throughout. A diagnosis of tumor of the thalamus was made. Cases of this kind also, although not invariably, present loss of the emotional movements of the face, whilst the voluntary are preserved. At the necropsy, a tumor was found occupying the right thalamus, and extending downward and backward into the subthalamic region, where it invaded the opposite side and pressed on the right internal capsule and crura cerebri. [J. M. S.]

4.—Potter reports a case of enteric fever commencing with and complicated by an attack of influenza. [J. M. S.]

5.—Sympson reports a case of recurrence of laryngeal papillomata in a child after tracheotomy. [J. M. S.]

LANCET.

November 9, 1901.

1. The Bradshaw Lecture on Prognosis in Relation to Disease of the Nervous System. JUDSON S. BURY.
2. An Address on the Personal Factor in Tuberculosis. DYCE BUCKWORTH.
3. The Freezing Point of the Blood and Secretions as an Aid to Prognosis. ALEXANDER OGSTON.
4. The Sanatorium in the Treatment of Phthisis. T. CLIFFORD ALLBUTT.
5. A Further Contribution on Acute Dilatation of the Stomach, etc. CHARLES R. BOX and CUTBERTH S. WALLACE.
6. Brief Notes of a Few Exceptional Cases of Cataract Extraction. CHARLES BELL TAYLOR.
7. The Treatment of Ozena by Cupric Electrolysis. EUGENE S. YONGE.

1.—See Abstract of *British Medical Journal* in this issue of the *Philadelphia Medical Journal*.

2.—Buckworth delivered an address before the Liverpool Medical Institution on October 24th, 1901, on the **personal factor in tuberculosis**. The author maintains that the personal factor of the disease is often overlooked and that "if we treat the disease and not the person, we may be scientists but certainly not physicians." The author holds the view that the scrofulous habit or strumous diathesis is a condition of the body susceptible to tuberculous infection. He differs from Osler whom he quotes: "Scrofula is tubercle, as it has been shown that the bacillus of Koch is the essential element." He fully agrees with Mr. K. W. Treves of Margate, who sustains the view that "scrofula is synonymous with tuberculosis in some form or other." Treves believes that there is a class of individuals who are especially liable to tuberculous disease, in whom it is difficult to stop and especially prone to recur. They are inclined to stoutness, with thick coarse skin, much cellular tissue, of purplish or dusky complexion, and have a poor circulation. Treves does not believe that such persons can be called scrofulous before they manifest tuberculous disease and therefore these individuals possess a scrofulous or strumous habit of body as yet untainted by infection with the bacillus of Koch. The author states that pathologists lose sight of their host. With regard to the development of tuberculosis two factors are essentially concerned, (a) the parasite, (b) the nature or condition of the health of the individual through inheritance or acquirement, or as a result of various debilitating conditions. There is a class of persons who are delicate and frail, and endowed with the specific proclivity to become affected by various irritants and especially prone to tuberculous infection. Some of these individuals may be pronounced scrofulous before the invasion of tubercle bacilli. [F. J. K.]

3.—Ogston discusses the freezing point of the blood and secretions as an aid to diagnosis. The freezing point of normal blood is 0.56° C. below that of distilled water and

does not vary more than one-hundredth of a degree up or down. The freezing point of urine varies from -1°C . to -2°C . in proportion to the solid which it contains in a state of solution. He quotes the conclusions of Kümmell and other observers who state that the normal freezing point of the blood varies within one one-hundredth of a degree or less: If elimination becomes defective, the freezing point decreases markedly. Kümmell has observed the freezing point at 0.7° to -1°C . He believes that the value of cryoscopy promises to furnish definite and satisfactory evidence in regard to renal disease in a patient requiring operation to determine how much disease exists; whether enough healthy kidney substance be sufficient to purify the blood; and whether the lessened kidney elimination which follows operations especially when performed under an anesthetic, superadded to the existing kidney defect is likely to endanger the life of the patient; and finally where the kidney itself is to be operated on, whether the other organ be healthy enough to take over the eliminative work of the two kidneys. Beckmann's apparatus for the determination of the freezing point of the blood is described and an illustration of this apparatus is included in the article. It consists of a jar into which dips a large test-tube surrounded by ice and salt. In the mouth of the test-tube is inserted a perforated cork and a smaller test-tube about an inch in diameter. In the inner tube is placed the fluid to be frozen. The thermometer employed is Beckmann's thermometer which has a scale possessing a range of 6°C ; each degree is divided into one-hundredths. The author states that "the freezing mixture cools the fluid and the mercury first goes down to, and then descends a couple of degrees or so below, the freezing point. At the moment at which congelation begins, the mercury rises again quickly and within a few minutes attains a steady maximum which is the true freezing point. During this observation the fluid is kept constantly stirred by a ring-shaped platinum stirrer that passes down between the inner tube and the thermometer." The calculation of temperatures below zero is made by subtracting from it, for instance, the zero were 4.01° , then the normal freezing point of the blood is 3.45° , that is 0.56° lower. The author reports 12 cases illustrating the value of cryoscopy of the blood. He further mentions that possible and unusual purity of the blood may exist, giving higher freezing points than normal. [F. J. K.]

4.—Allbutt read a paper before the British Congress on Tuberculosis on the sanatorium in the treatment of tuberculosis. He remarks that not only is the modern sanatorium method curing the individual but it is the chief method of prevention. He does not view with favor home treatment of a phthisical patient by a physician unversed in the sanatorium method, or by a patient who has not had at least a month's treatment in a sanatorium. The most suitable climatic condition for the patient he defines as follows: "For the most general terms in which climatic conditions can be put is that the coldest air which the individual can tolerate, if it be dry, clear, and still, is the best, as it calls for more food and thus stimulates the appetite." Allbutt considers it highly important to have a laboratory connected with the sanatorium. A fixed term of residence in the sanatorium for each individual case cannot be given; some maintain that a stay of three months is sufficient but Allbutt thinks that a mean term of this duration is too short. He also outlines the dietetic and medicinal treatment. Educational pursuits should not be neglected at the expense of the medical drill; patients should have their minds occupied. [F. J. K.]

5.—Box and Wallace contribute an article on acute dilatation of the stomach with an account of two cases. The first case occurred in a male, 29 years of age. This patient developed acute gastric and duodenal dilatation after amputation of the thigh; the disease terminated fatal. A post-mortem examination revealed the condition. The second case occurred in a man, 24 years of age, during the course of pleuro-pneumonia. At autopsy dilatation of the stomach and duodenum was found. These authors point out "that in producing the train of symptoms met with in acute dilatation of the stomach two factors came into play. There is

first a paralytic condition of the viscus which leads to distension, and then, at a certain stage of the distended stomach, actually produces obstruction by pressing on the duodenum on the front and to the left of the spinal column." They emphasize that early recognition is of no little importance, as the condition does not yield to treatment when advanced. Repeated physical examinations of the abdomen, with an attempt to elicit the succussion splash, are of great importance in arriving at a diagnosis. Strychnine injections, stomach lavage, rectal feeding, and intravenous or rectal injection of saline solution, are the measures which are advocated in the treatment. They do not recommend the postural method of treatment and should surgical interference be determined upon, gastro-jejunostomy would appear to be the ideal procedure. [F. J. K.]

6.—Charles Bell Taylor gives some brief notes regarding seven exceptional cases of cataract extraction. The first case was that of a man with congenital cataract which however differed from the ordinary variety in that the opacity affected the lense throughout. The patient had been blind for 35 years in the right eye, and the left was little better. The vitreous was fluid in both eyes, the iris was tremulous and whenever the head was moved the lense would also participate in the commotion. Other surgeons had strongly advised against an operation, but the author succeeded in extracting the lense in both eyes with the result that the patient now possesses excellent visual acuity. The moment the corneal section was completed, the eyeball collapsed, the vitreous exuded and the lense sank to the bottom of the chamber. The lense was extracted with a wire spoon, which the author considers as an invaluable instrument on account of its mechanical assistance without adding to the bulk of the lense that is to be extracted. The second case had also been considered hopeless and was certainly an unpromising one. The patient, who was 42 years of age, had been struck in the right eye by a piece of steel 15 years ago, and had a similar accident a year ago in the left eye. The author operated four times extracting the lense in each eye and producing an artificial pupil in both eyes, with the result that accurate vision both for distance and for close work was obtained. The third case resembled somewhat the first one except that iris forceps were brought to the assistance of the extraction of the lenticular mass and capsule. A perfectly black pupil resulted with useful vision. The fourth case illustrates the usefulness of the author's bent knife, by means of which the left eye may be operated upon with the left hand with even greater facility than on the right eye. The fifth case illustrates a successful operation upon an eye previously considered hopeless. The sixth case resembled somewhat the third case as far as the operation was concerned, except that the operation was followed by an attack of acute glaucoma which was arrested at once by a sclerotomy and puncture of the hyaloid fossa with a result that excellent vision was obtained both for reading and for distance. The seventh case was that of a man, 86 years of age, upon whom the author had performed a successful cataract extraction without iridectomy upon the right eye. When the patient reached the age of 96, the author operated upon the right eye with excellent results, the patient now being 101 years of age with excellent sight both for reading and for distance. [M. R. D.]

7.—Yonge believes treatment of ozena by cupric electrolysis may be looked upon as the best remedy that has yet been found. While this treatment does not restore the sense of smell or repair the shrunken turbinates, it will however, in a certain percentage of cases, so reduce or even banish the tendency to crust-formation as to give the patients a state of wholesome comfort. He gives a report of 15 cases treated by this method which consists of first cleansing the nasal cavities with a mild antiseptic wash, then cocaineizing and in a few minutes the copper needle attached to the positive pole is introduced into the middle or inferior turbinate, and the steel needle into the septum. For about ten minutes a current of from 10 to 20 milliamperes was employed. The number of applications used depended on the improvement manifested; as many as five were em-

ployed. Two cases were cured, five were much improved, six were temporarily improved and two did not improve.

[F. J. K.]

MEDICAL RECORD.

November 23, 1901.

1. Is Itabes a Specific Disease? D. E. SALMON.
2. Some Facts Learned in the Management of Typhoid Fever in Central West Virginia. W. W. GOLDEN.
3. Rupture of the Urethra. A Report of Cases. JAMES R. HAYDEN.
4. Operation for Caries of the Mastoid, Secondary Opening of the Lateral Sinus, and Ligation of the Internal Jugular Vein. JULIUS ROSENSTIRN.
5. The Value of the Widal Reaction in the Diagnosis of Typhoid Fever in Children. MILTON GERSHEL.

1.—D. E. Salmon contributes an article with the title, "Is Itabes a Specific Disease?" A reply to the article on "Hydrophobia and the Pasteur Methods," by Charles Winslow Dulles, which appeared in the *Medical Record*, July 13, 1901.

[T. L. C.]

2.—W. W. Golden discusses the management of typhoid fever in West Virginia. He states that fully one-fourth of the medical practice in Central West Virginia consists of attendance upon cases of typhoid fever. Within the last few years, however, a very noticeable abatement in the disease has taken place. This he ascribes to the measures of sanitation and prevention which have been adopted. In his series of cases constipation has more often been observed than diarrhea. The eruption is only seen occasionally. An unduly high temperature at the beginning is frequently seen, but is mostly due to the heavy diet indulged in by the patient with the hope of overdoing his growing weakness before the physician is consulted. This author regards diet as of prime importance in treatment, and he believes that cows' milk is the safest article of food, preferring this to any of the various substitutes. He thinks that the majority of cases of typhoid is over-fed. In a case of a patient with a fair degree of energy and flesh in reserve, a dry mouth and a high temperature indicate a minimum of food. Such cases will do better when the quantity of milk does not exceed one pint in twenty-four hours, if a larger quantity of water be given along with alcohol in doses so small as to produce no perceptible stimulation, but frequently administered. He remarks that tympanites is practically an unnecessary symptom if a correct diet is followed, and recommends the daily use of enema of saponified water, holding in emulsion 1 drachm of oil of turpentine. [T. L. C.]

3.—James R. Hayden reports three cases of rupture of the urethra. His conclusions upon the treatment of this condition are of interest. There is a choice between the operative and non-operative treatment, depending upon the nature and extent of the injury. If there is a severe hemorrhage from the meatus with a complete retention of urine, or difficult and painful urination and bloody urine, associated with difficulty or inability to enter the bladder with instruments, together with the presence of a fluctuating perineal tumor, with a rise of temperature, then immediate perineal section and bladder drainage are indicated. If, on the contrary, there is slight hemorrhage and urination is free, but somewhat painful, the urine tinged with blood, or containing light bloody flakes, and catheterization can be performed normally and there is no perineal fluctuation, then catheterization, irrigation, and urinary antiseptics should be resorted to, the patient being kept in bed, and carefully watched for the first sign of extravasation. In the event of which external urethrotomy with vesical drainage should be immediately resorted to. Partial suture of the urethra, but not complete suture must always be employed in case of complete rupture, in which the divided ends of the canal are widely separated; otherwise it is not essential. [T. L. C.]

4.—Julius Rosenstirn reports a case of mastoid disease

with infectious thrombosis of the lateral sinus and extension of the process into the jugular vein. An operation was performed in which a secondary opening was made in the lateral sinus, and ligation of the internal jugular vein resorted to. The patient recovered. During the operation unusual hemorrhage was encountered, due to a very large intraosseous vein filled to its utmost on account of the sinus thrombosis. The patient was a boy of 15 years. No bacteriological examination was made in the case. A brief résumé of the literature of the condition is given. [T. L. C.]

5.—Milton Gershel has studied the Widal reaction in the diagnosis of typhoid fever in children. He concludes that the main facts concerning the Widal reaction in children are the same as those that hold true for adults. In 84 cases of typhoid fever in children, ranging from one and a half to fourteen years of age, eighty-one cases gave a positive result. In 115 cases that were fevers other than typhoid, the positive reaction was never obtained. The reaction did not occur later in children than in adults, but on the contrary, somewhat earlier. However, he would not lay too much stress on this point. The Widal test is of greater importance in children than in adults, owing to the frequent atypical character of the diseases in the former, and the greater frequency of cases resembling pneumonia and meningitis. He believes that the routine performance of the Widal reaction, as pointed out by Morse, will aid us in establishing the frequency of typhoid fever in children.

[T. L. C.]

MEDICAL NEWS.

November 23, 1901. (Vol. LXXIX, No. 21).

1. Traumatic Stricture of the Esophagus. F. E. BUNTS.
2. "What is the Use of Making a Diagnosis in Nervous Diseases, Since Nothing Can be Done Anyway!" THEODORE DILLER.
3. A Preliminary Note on the Sterilization of Catheters: A Bacteriological Study. C. B. NANCREDE and W. H. HUTCHINGS.
4. Hygiene and Hygienic Legislation. W. SCHEPPEGRELL.
5. On Primary Sarcoma of the Liver: Critical Observation and Contribution of Two New Cases. BINDO DE VECCHI and GUIDO GUERRINI.
6. Note Upon a Case of Pretended Expectoration by Myriapods. ALLEN J. SMITH and R. R. CURTIS.

1.—F. E. Bunts reported eight cases with stricture of the esophagus in which the opening was so small that the esophageal bougies could not be passed. He used and advises for such cases a graded double-bulbed olive shaped bougie. Two bulbs are placed on each staff, the first being one size of the French scale smaller than the second bulb. This served to permit one to follow up the advantage gained by passing one bulb by the immediate passage of one a size larger. The frequency varies in the passage of the bougie in all cases; in some cases it can be passed daily, while in others two or three days will elapse before another attempt is made. Force should never be used, and it is better, if not successful, to wait a day or two before trying again. In children it is necessary to use a gag. The patient should sit upright, the head thrown back somewhat, in order to straighten the line of introduction of the bougie. It is better to pass it into the pyriform sinus at the side of the larynx, which affords a funnel-like aperture that will allow the bougie to slide into the esophagus without encountering the bodies of the cervical vertebrae or the cricoid cartilage. The author believes that the use of this instrument will in a great many cases render the necessity of gastrostomy and retrograde dilatation unnecessary, even in some of the most serious cases.

[T. M. T.]

2.—T. Diller gives the following reasons why a diagnosis of nervous diseases should be made as soon as possible, although in very many instances nothing can be done: (1) physically; (2) mentally; (3) socially; (4) financially. In the first division can be classed those cases in which an early diagnosis will arrest or alleviate the disease. In

the second class the effect on the chronic invalid is of import, when he sees the physician hopefully fighting the disease with all possible means; he is comforted as can be done in no other way. It is often important to know just what the benefit would be if the patient were allowed to mingle with other persons. This cannot be decided until a positive diagnosis is made. The most important of them all is financially, as it has often happened when a patient is only in moderate circumstances that the family use all his money to send him away when he would be just as well at home. [T. M. T.]

3.—C. B. Nancrede and W. H. Hutchling report sixty-five experiments in which different sterilizing agents were used in sterilizing catheters: (1) It was found that soft rubber catheters could not be completely sterilized by boiling under four and one-half minutes; (2) mechanical cleansing will render sterilization easier and will take a shorter time to be effective; (3) boiling elastic and soft rubber catheters five or more minutes will roughen or diminish their elasticity or strength; (4) immersing for five minutes in bichloride solution does not sterilize any catheter which is infected, at best only inhibiting the growth of the germs, as it was found by experiment that, if the mercuric salt be precipitated by ammonium sulphate, the germ will grow freely when implanted in culture media; (5) chemical sterilization should never be used for catheters which are to be retained in the bladder for any length of time, unless subject to a very prolonged action of the mercurial salt; a mere washing with a chemical solution is not sufficient for an infected instrument; (6) formalin vapor will sterilize infected instruments in twenty-four hours; (7) all methods of sterilization commonly employed should be continued for much longer periods than the minimum time required for destruction of germs in a laboratory; (8) English web catheters can be more readily sterilized by heat than can soft rubber ones, probably on account of their interior construction. [T. M. T.]

4.—W. Scheppegegrell gives two reasons why the laity do not exert themselves in demanding stringent legislation for the control of the spitting habit: (1) because they believe that tuberculosis is due entirely to inheritance, not realizing that inheritance in these cases may mean simply a susceptibility, and that infection is the main cause of one member after another of a family being afflicted by the disease when once it has developed in a household; (2) that the incubation of tuberculous disease is so long that the connection between cause and effect is difficult and sometimes impossible to trace. He also gives the ordinance which is in force at New Orleans at the present time: (1) Hereafter it shall be unlawful for any person to spit on the floor of public halls, theatres and other places of amusement, and on the sidewalks; (2) Any person convicted of this offence shall be fined a sum not exceeding five dollars or imprisoned in the Parish Prison for a term not exceeding ten days or both in the discretion of the Recorder. [T. M. T.]

5.—B. de Vecchi and G. Guerrini report two cases of **primary sarcoma** and after closely examining forty-five reported cases find that the majority of them are not primary sarcomas of the liver. They also give various authors' opinions of the origin and development of the disease: (1) Arnold considers two possibilities, viz: proliferation from the connective tissue of the vessels or of the acini; (2) Delépine admits a proliferation of the cellular elements of the vessels by the irritating action of the substances elaborated by the metabolic activity of the hepatic cells; (3) Byrom regards the tumors as starting from the perilymphatic connective tissue; (4) Kahlden looks upon the tissues around the vessels as the origin; (5) Cesar Demel believes that the growth begins in the normal connective tissue of the liver; (6) the authors give another opinion and consider the neoplastic tendency to be attributed to a preceding cirrhosis. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

November 23, 1901. (Vol. LXXIX, No. 21).

1. On the Advantage of a Trace of Albumin and a Few Tube Casts in the Urine of Certain Men above Fifty Years of Age. WILLIAM OSLER.
2. Modifications in the Methods of Operative Surgery resulting from Laboratory Research. JOSEPH D. BRYANT.
3. Vesical Emergencies; Their Surgical Management. EUGENE FULLER.
4. Leucoplakia. JOHN V. SHOEMAKER.
5. Pelvic Inflammation in the Female; Its Diagnosis and Management by the General Practitioner. ABRAM BROTHERS.
6. Cyst of the Appendix Vermiformis. W. C. WOOD.

1.—William Osler emphasizes the importance of basing one's judgment less on the urine than on the general condition of the patient after the age of fifty. It is quite a frequent occurrence to find albumin and casts, but this is not always a serious condition. He states that it is probably due to the expression of presenile changes in the kidneys, the result of arterial degeneration and is often a renal inadequacy. The points one should lay stress on as indicative of serious diseases are: (1) Persistent low specific gravity of the urine, 1.008 to 1.012; (2) the state of the heart and arteries; (3) the presence of albuminuric retinitis. It is not always easy to make a diagnosis, and two conditions have to be carefully differentiated: (a) A primary sclerosis, discovered at the fortieth year in which the kidney changes are secondary, and are expressed by a transitory albuminuria and a not very low specific gravity of the urine which is not in very large amount; (b) the granular contracted kidney. Here arteriological factors are all important. It is met in young persons consecutive to scarlet fever and other infectious disorders, also in middle-aged persons who have had gout, in workers in lead; while in others in whom no definite factors can be determined. Cardiovascular changes are very much the same as in the first division. Uremic symptoms are more frequent, as is persistent headache. Renal changes are very much more common. [T. M. T.]

3.—E. Fuller states that vesical retention can be subdivided surgically into two general classes: (1) Those amenable to catheterization and (2) those that are not. In the first class one of the most important points is gentleness in instrumental manipulation. Much damage can be done with a sharp and rigid instrument, and the author advises the gum-elastic silk woven catheter with bulb or olivary pointed end. In the second class the only thing to do is to liberate the retained fluid. The two routes are either the perineal or the suprapubic, the former being the most frequent. When prostatic retention occurs in cases not amenable to catheterization, the rule should be immediately to perform prostatectomy. [T. M. T.]

4.—J. V. Shoemaker gives the symptoms of leukoplakia as follows: It begins upon the tongue or inner surface of the lips, or cheeks, in the form of a red circumscribed hyperemic spot, or spots. Around the spots or on the surface some of the papillae may be swollen. This is the erythematous stage. After an uncertain duration of weeks or months, its aspect changes. The redness is succeeded by a pearly white, bluish or gray color. The epithellum at this time becomes thick. These spots at length become confluent and form a single lesion, which at first remains red at its periphery. In shape the patches are round, oval or oblong. Shallow, transverse or longitudinal grooves divide the surface into a series of polygonal patches. In certain cases the disease assumes the form of a bend, from half to three-quarters of an inch in breadth, sometimes rough and slightly elevated; at other times smooth, and upon the mucous membrane of the cheek. There is flaky desquamation due to successive reproduction of epithellum (very diagnostic). The surface of the patches gradually becomes cornified, hard, rough, and the constant movements of the tongue may produce fissures, especially on the borders. In the

later course of the disease papillomatous growths may develop from the affected locality, and finally it is very apt to degenerate into epithelioma. An existence of twenty years is not uncommon. If the tongue is involved, its movements are clumsy and speech is embarrassed. Its venous circulation becomes obstructed, especially at the lower surface and lower border. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 21, 1901.

1. An Investigation of the Boston Ice Supply. HUBBERT WINSLOW HILL.
2. Lesions of the Bladder During Abdominal and Vaginal Hysterectomy. CHARLES GREENE CUSTOMS.
3. Suggestions for the Improvement of Training Schools for Nurses. RICHARD C. CABOT.
4. Some Deductions Concerning Mild Modification. R. C. MACDONALD.

1.—On theoretical grounds the danger of infection through ice is very small. Practically, and under the conditions of the present Boston supply, danger of infection through natural or artificial ice is almost nil. Careful search of the records has shown that but one presumably authentic case of transmission of typhoid fever through ice is on record. Snow ice contains a fairly large number of bacteria. Bubbly and clear ice contain a much smaller number. Artificial ice contains, especially in the center and bottom of the cake, about as many as the average in natural ice. The outside of the cake is likely to contain very few. The bacteria present are, except in the extremely rare cases where typhoid bacilli may exist, practically harmless. "Dirt" is found in both natural and artificial ice, usually more abundant and in coarser particles in the former, finely divided in the latter. Artificial ice made from exhaust steam shows at times a slight oily scum after melting. [J. M. S.]

2.—Wounds of the bladder during abdominal or vaginal hysterectomy are not of frequent occurrence. Out of some 300 abdominal sections for gynecological affections Cumston wounded the bladder but once, and he had only one case out of 74 cases of vaginal hysterectomy. If the bladder has been wounded, the wound should be immediately sutured. When permanent drainage of the bladder is employed in the female, it is better to change the catheter every 4 or 5 hours and to insert a new one each time. If a permanent catheter is used, the Pezzer instrument is by far the best. Infection of the bladder, following the use of a permanent catheter, may be avoided if the latter be put in connection with a sterilized rubber tubing, which extends under the bed and dips into a glass receptacle which is plugged with absorbent cotton. After suture of the bladder following suprapubic cystotomy, from 5 to 6 days is usually enough to continue drainage. If the sound should be left without removal for a week or 10 days, it is well to use intravesical injections with a 1:2000 solution of either lactic or phosphoric acid every other day, this will prevent a deposit of urinary salts on the outside or in the lumen of the catheter. The urethritis that follows the use of the permanent catheter in the female will cease spontaneously after the instrument has been removed. If the bladder is opened during vaginal hysterectomy, the best treatment is permanent drainage of the bladder. [J. M. S.]

4.—Any modification of milk which reduces the total casein must reduce still further an already greatly deficient lactalbumin. No modification of milk, as now given, can change the inorganic to organic combinations of phosphorus. MacDonal suggests that both of these deficiencies may be somewhat overcome by a judicious use of whole egg. Egg albumin approximates quite closely to lactalbumin, and in the egg yolk we have a veritable storehouse of organic phosphorus compounds. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 23, 1901.

1. The Non-Surgical Treatment of Heterophoria. GEORGE M. GOULD.
2. The Operative Treatment of Heterophoria. G. C. SAVAGE.
3. A Table of Ocular Extrinsic Paralysis. HORACE M. STARKEY.
4. Mules' Operation. FRANK C. TODD.
5. The Treatment of the Acute Psychoses in Private Practice. C. EUGENE RIGGS.
6. The Psychoses of Chorea. HAROLD N. MOYER.
7. Mirror-Writing and the Inverted Image. ALBERT B. HALE and SIDNEY KUH.
8. School Medical Inspection in Chicago. WILLIAM D. BYRNE.
9. Two Different Ways in Which Yellow Fever may be Transmitted by the Culex Mosquito—Stegomyia Taeniata. CHARLES J. FINLAY.
10. Treatment of Ringworm of the Scalp in Institutions. HENRY W. STELWAGON.

1. See Philadelphia Medical Journal, page 1140, June 15, 1901.
2. See Philadelphia Medical Journal, page 1140, June 15, 1901.
3. See Philadelphia Medical Journal, page 1140, June 15, 1901.
4. See Philadelphia Medical Journal, page 1141, June 15, 1901.
7. See Philadelphia Medical Journal, page 1141, June 15, 1901.

6.—Moyer discusses the psychoses of chorea. He states that the occurrence of well-marked psychoses in the progress of Sydenham chorea (excluding chorea of advanced life) is exceptional. He reports a case which occurred in a fairly well developed girl, 15 years of age, who, so far as could be gathered from the study of the family history, did not show neurotic heredity. Choreic movements involving the upper extremities and later becoming general, developed in the spring of 1900. After the illness had existed for about three weeks, she became acutely maniacal, restless, sleepless, and constantly dancing about, and knocking against furniture and other objects. Nutrition rapidly failed and the skin became bruised in many places. Under treatment she made a complete recovery from chorea, and with it the mental symptoms disappeared. The condition recurred in the spring of 1901. The author reports a number of cases collected from literature. From the present state of knowledge on the subject, the author advances the following conclusions: "1. A well-marked alteration of the character and mentality can be noted in the majority of cases of chorea, usually preceding by some weeks the onset of the choreic movements. 2. Distinct hallucinatory phenomena are present in a considerable number of cases, which are not, however, of sufficient severity to merit being classed as a distinct psychosis. 3. The mental disturbance in chorea usually comes on after choreic movements, but it may precede them. 4. The type is usually maniacal, though it may occasionally be melancholic or present the character of an acute delirium. 5. Mental disturbances are commoner in older children; they are rarely observed before the twelfth year. 6. Chorea which are accompanied by mental disturbance later in life, are almost always accompanied by organic changes in the central nervous system. 7. The prognosis is favorable when the mental disease complicates the simple, acute chorea of Sydenham. Insanity associated with chorea in the middle and advanced life is almost invariably associated with organic diseases of the central nervous system." [F. J. K.]

8.—Byrne gives an account of school medical inspection in Chicago. In that city a corps of 50 medical inspectors is employed. This work was begun on January 8, 1900, and from that date to April 12, 1901, these medical inspectors examined 76,805 pupils. Of these 4,539 were found suffering from contagious diseases and excluded from school. During the time while school inspection has been in progress there was no marked decrease in the number

of diphtheria cases and a very decided decrease in the number of scarlet fever cases, with a lowering of the mortality of each disease. The school inspectors of Chicago do not make daily visits, but are required to respond to special calls from school principals when in their opinion local conditions demand attention. [F. J. K.]

9.—Treated editorially.

AMERICAN MEDICINE.

November 23, 1901.

1. Experimental Yellow Fever at the Inoculation Station of the Sanitary Department of Havana with a View to Producing Immunization. JOHN GUITERAS.
2. A Case of Perforating Typhoid Ulcer: Laparotomy: Recovery. WM. L. RODMAN.
3. A New Constituent of Bone. WILLIAM J. GIES.
4. Ovarian Pregnancy: Is it an Explanation of Ovarian Hematomas? N. STONE SCOTT.
5. Suggestions Concerning the Use of the Metric System in Prescription Writing. FRANCIS P. MORGAN.
6. Annular Pancreas. THEO. TIEKEN.
7. Epidemic Meningitis—The History of an Outbreak. JAMES McKENTY.

1.—John Guiteras contributes an article on experimental yellow fever at the inoculation station of the Sanitary Department of Havana. This authority states that the experiments were undertaken with the hopeful view that the results of the cases would be favorable on the following grounds: (1) The series of mild cases obtained by the Commission (referring to the United States Army Commission in their experiments with yellow fever; the continued series of mild cases resulting from these experiments without a death); (2) the control over the number of bites; that is, the subject would be bitten but once by infected mosquitoes, whereas in an infected house the subject accidentally infected would be exposed to successive bites; (3) the patient would be cared for during the period of incubation, and immediately upon the invasion of the disease; and, finally, the patient would be treated from the beginning in a mosquito-proof house, where he would be a source of danger to no one. The immune station was opened in February, 1901, when a large number of larvae of the *Aegomys laevis* (the *culex* of Finlay) was secured, and breeding jars were started in order to have a constant supply of young insects. Guiteras takes up the manner in which the mosquitoes were propagated and infected. He furnishes in tabular form the series of trials in experimental infection made in the station. Of the 42 cases included in this table, in but 8 was experimental yellow fever successfully produced. This may be partly explained on the ground that the insect to become infected must bite the patient having yellow fever on the first, second, or third day of the disease. A mosquito so infected cannot carry the disease until a period of more than 12 days has passed since the insect became infected. However, these facts were well borne in mind in the experiments, and Guiteras believes that there was a possibility of a mistake in diagnosis in the original cases from which the mosquitoes were supposed to be infected. He also suggests that the failure may be due to variations in the number of parasites found in the peripheral circulation of the infecting patient. Charts of 10 of the experimental cases are furnished, which supplies us with the history of the initial rise of the temperature of the disease. Of 24 cases with experimentally produced disease which he has collected, there were three deaths, a percentage of 12.5. He concludes with Dr. Gorgas, therefore, that "when a nonimmune is going to be exposed to yellow fever, it is better to be inoculated, and have the disease under circumstances where he can be put to bed early and be treated from the beginning, than to take it accidentally." He makes the recommendation that not more than one mosquito should be employed for more than one inoculation, and that when a group of mosquitoes infected from one case

should show a very decided virulence, their use should be abandoned. [T. L. G.]

2.—W. L. Rodman reports a case of perforating typhoid ulcer in a child of 12 years in whom laparotomy was performed. Recovery followed. The case was an unusually severe one, and the pulse and temperature were high from the onset. Gastrointestinal irritation was marked and vomiting and diarrhea were present early. The patient was admitted to the hospital June 18th, and the operation was performed on July 19th. [T. L. C.]

3.—William J. Gies presents a paper on a new constituent of bone, in which the chemistry of bone is discussed, and a statement made that the author has recently shown the presence of mucoid in bone, thus establishing a closer chemical relationship between mature bone and cartilage than has been supposed to exist, and demonstrating, further, that, as far as mucoid contents is concerned, osseous tissue is not an exception among connective tissues, as previously it seemed to be. To this substance he has given the name of *osseomucoid*, and he presents the method by which its presence in bone is determined. [T. L. C.]

4.—Scott remarks that in operation for ovarian disease hematomas are frequently found. A few of these, usually involving the entire ovary, depend upon the twisting of the pedicle of the ovarian tumor, but more frequently the hematoma is confined to one of the cysts, being located in a sessile tumor. Local disease of the arteries and general constitutional disease will account for some of these cases, but for the majority there is no satisfactory explanation. Scott advances the hypothesis that at least part of the hematomas are due to an ovarian impregnation with early death of the fetus. It is now proved that rarely an ovarian pregnancy will occur, one authentic case being that of van Tussenbroek, of Amsterdam, reported last year. Granted then that there is such a thing as ovarian pregnancy, Scott inquires why is its proven existence so rare? He believes that in many cases of ovarian conception the Graafian follicle is located superficially in the ovary immediately under the ampulla of the tube and eventually emerges into a tubo-ovarian pregnancy. He gives the report of a case examined by Professor Welch of Johns Hopkins Hospital, and concludes as follows: Hematomas of the ovary are comparatively common and we have no explanation of their occurrence. Ovarian pregnancy is a proven possibility. Continued development of the ovum in ovarian pregnancy causes changes in the organs and tissues such as to render the demonstration of its ovarian origin impossible. The most natural consequence of the early death of the ovum in ovarian pregnancy is its gradual transformation into an ovarian cystic tumor; added to this, retrograded changes obscure its origin, and a hematoma is the final result.

[W. A. N. D.]

5.—Francis P. Morgan furnishes a paper containing suggestions upon the use of the metric system and prescription writing. The author shows the advantages of the metric system, and makes a plea for its universal adoption. He presents a formula which is to be memorized, and he believes that it contains all the information necessary for the conversion of one system into the terms of the other: 1/60 gr. = 0.001 one milligram. 1/6 gr. = 0.01 one centigram. 1 gr. = 0.06 six centigrams. 15 grs. = 1.00 one gram. 1 dr. = 4.00 gr. 1 oz. = 32.00 gr. [T. L. C.]

6.—Theodore Tieken reports a case of annular pancreas which caused constriction of the duodenum with sacculization of the intestine above the narrowed portion, dilatation and hypertrophy of the pylorus and hypertrophy of the wall of the stomach. The author states that the chief points of difference between this case and those previously reported are: (1) The more extensive dilatation of the duodenum above the restriction; (2) the greater narrowing of the lumen of the bowel; (3) the more extensive development of the annular portion of the gland; (4) the absence of dilatation of the stomach, and (5) the greater hypertrophy and dilatation of the pylorus. He states the following genesis of annular pancreas; if the ventral and dorsal diverticuli

lums did not unite as they normally do, but each developed independently, there would be pancreatic tissue on either side of the intestine, and as growth proceeded, the bowel would soon be completely surrounded by glandular tissue. In the semiannular type the condition might be due to an overdevelopment of the head, which sends out processes, partially surrounding the bowel. [T. L. C.]

7.—James McKenty gives the history of an outbreak of epidemic meningitis occurring in the winter and spring of 1893 and in 1894-5-6 in North Dakota. The brief reports of 8 cases are appended. In only one case was the petechial eruption marked. In two cases the pain over the spine was markedly worse on pressure, especially over the lower cervical vertebrae. In the beginning of the epidemic in 1893, the majority of the victims were adults. During the recurrences of 1894-95, children were more frequently attacked. In his series of cases there was but one evidence of personal contagion, but he states that the house was probably infected from the time of a previous case six months before. He agrees with Osler who states: "That the disease does not seem to be directly contagious, and is probably not transmitted by clothing or excretions." Pneumonia was not often associated and when it did occur was never so extensive as to add to the gravity of the case. Many children seemed to suffer from what seemed to be a combination of the two cases during 1895-96. Joint complications did not occur in any case. Permanent mental impairment occurred in one case. [T. L. C.]

VRATCH.

August 25, 1901. (Vol. XXII, No. 34.)

1. On Combined Bromethyl-Chloroform Anesthesia. I. F. ZEMATSKI.
2. Should the Medicinal Application of Hypnotism be Restricted? P. LA. ROSENBACH.
3. The System of Rendering First Aid in Berlin. I. E. GAGEN-TORN.
4. The Medical Report of the St. Petersburg City Maternity Hospitals, for 1900. E. L. PUSHKINA.

1.—Zematski has used a combination of bromethyl and chloroform in producing anesthesia in 2000 cases and has seen it employed in 1000 more. This extensive personal experience leads him to the conclusion that this method of anesthetization is far superior to any other and merits a more general application. The superior merits of bromethyl-chloroform over pure chloroform are set forth in the following table:

Pure chloroform anesthesia.

1. First stage prolonged: minimum 8, maximum 20, average 12 minutes.

2. A prolonged oppressive sensation of gradual constriction (prolonged period of nightmare.)

3. There is always a period of excitement, occasionally amounting to a violent delirium.

4. Anesthesia progresses in the following order: (a) first a dulling of perception (the patient talks excessively, is delirious); then (b) a lowering of sensibility

Bromethyl-chloroform anesthesia.

1. First stage very brief, 45-55 seconds; in rare cases 20 seconds; maximum, also in rare cases, 2 minutes.

2. Anesthetization takes place so rapidly that the patient has no time to realize the subjective sensations. Complete absence of prolonged nightmare.

3. With proper administration excitement is absent. If present, it is either because the patient is an alcoholic or too much anesthetic has been used.

4. Anesthesia progresses in the following order: (a) first, there is a loss of sensibility to pain (analgesia); (b) loss of sensibility to touch (anesthesia), and

ly to touch (anesthesia), and only the last manifestation is that of (c) analgesia.

only as the last manifestation; (c) psychical anesthesia or general insensibility.

The method employed by the author is very simple and readily acquired. On an Eschmarch mask 8, 10, 12 or 16 drops of bromethyl, according to age, sex and condition of the patient, are dropped. The inhaler is held at first at a distance from the face. In proportion to the temperature of the room; the higher the temperature the greater the distance. After two or three whiffs, the inhaler is placed closer to the face and at the expiration of 10 seconds 20 to 30 drops of bromethyl added. Generally, from 2 to 5, rarely 10, grms. of bromethyl are used. After 1 minute, chloroform is substituted for the bromethyl. By this time the patient is already in a state of narcosis, and the effect of the chloroform is much more rapid and less likely to produce excitement. During the bromethyl anesthesia, the pupils are slightly dilated and the corneal reflex remains present for a considerable time; when chloroform is added the pupils become contracted. Contraindications to the use of bromethyl-chloroform are: (1) Atheromatous condition of the blood vessels and (2) alcoholism. In the latter the anesthetization should be preceded by an injection of morphine. In none of the cases observed by the author did any accidents occur, thus pointing to the comparative safety of the anesthetic. [A. R.]

2.—Rosenbach criticizes the medical law restricting the free use of hypnotism by physicians. He argues that the ill effects observed after hypnotism, which served as the foundation for the law, are due not to the hypnotism but the hysterical condition of the patient. If an hysterical woman, who was subjected to hypnotic suggestion, becomes worse despite the hypnotism, the latter is blamed, although it would be just as rational to blame the drugs for the conditions which they failed to ameliorate. He sees little danger in hypnotism becoming a factor in crime. As a rule, a person in a hypnotic or post-hypnotic state will not commit an act which is in striking discord with his or her established moral conceptions; and with regards to the offences which might be committed by the hypnotizer, there can never be any assurance that the victim will not remember the nature of the crime and the circumstances under which it was committed, even if a suggestion is made to forget everything that transpired during the *seance*. It is this fear that has kept and will keep the criminally inclined from utilizing hypnotism as a means of committing a crime. The author agrees with the foremost alienists in Europe that while the unscientific use of hypnotism should be prohibited, no restriction should be placed on its use by physicians for therapeutic purposes. His own experience leads him to look upon hypnotism as a most valuable aid in the treatment of cephalalgia, local spasms, fixed ideas, morbid fears, insomnia, chronic alcoholism, masturbation, psychical impotence, sexual perversion, nocturnal enuresis, and other conditions dependent on neurasthenia, hysteria or a general mental unbalance. [A. R.]

3.—Gagen-Torn describes the system of rendering first aid successfully carried out in Berlin. [A. R.]

4.—A series of interesting statistics arranged in tabular form are given. [A. R.]

ARCHIVES OF PEDIATRICS.

August, 1901. (18th Year, No. 8.)

1. A Study of 555 Cases of Summer Diarrhea Among the Outpatient Poor. CHARLES G. KERLEY.
2. A Case of Arteriosclerosis. ALLEN BAINES.
3. The Treatment of the Nasopharynx in Scarlatina. A. SEIBERT.
4. A Case of Appendicitis in an Infant Seven Weeks Old. GEORGE BLUMER and H. L. K. SHAW.
5. Nodding and Rotary Spasm of the Head with Nystagmus in Rachitic Children.

AUGUSTUS A. ESHNER.

1.—See Philadelphia Medical Journal, Vol. VII, No. 23, p. 1071.

2.—See Philadelphia Medical Journal, Vol. VII, No. 23, p. 1071.

3.—One of the greatest dangers in a case of scarlet fever is the invasion of the nasopharynx by the streptococci and their associates. A superficial disinfection of the visible pharynx may be accomplished by the use of teaspoonful doses of the following mixture, given every hour: Tincture of iodine, 2 gm.; potassium iodide, 1 gm.; water, 120 cc.; carbolic acid, 10 drops. In order to clean and disinfect the infiltrated mucous membrane in scarlet fever, Seibert irrigates the nasopharynx with a warm 1 to 5% solution of ichthyol, every 6 hours. A fountain syringe, suspended about 3 feet above the patient, is used in order to administer the douche, and about $\frac{1}{2}$ pint of the solution is allowed to flow through the nares and the nasopharynx. In some cases the obstruction caused by the swollen mucous membrane is so great that irrigation cannot be used. In such a case, the author makes a local application of a 50% solution of resorcin in alcohol. He has the baby held in the intubation position and the applicator, well saturated with the solution, is passed behind outside of the soft palate, while the tongue is held down by a teaspoon. As soon as the cotton is passed behind the palate, the muscles contract and squeeze the solution out of the cotton. The operation is repeated on the opposite side. No force was used and there is no swabbing employed in the 6 cases in which the method was used. All of the patients recovered promptly of their nasopharyngitis and not one suffered from middle ear disease.

[J. M. S.]

4.—Blumer and Shaw report the case of an infant, aged 7 weeks, who was suffering from general anasarca. The edema had begun, a week before admission, in the face and extremities. The abdominal walls were very thin and peristaltic movements of the intestines were plainly visible. There was no pain on abdominal manipulation and palpation. The only bowel movement that the child had while under observation contained blood, pus, mucus and undigested food. At autopsy it was found that acute gangrenous appendicitis with the formation of a localized abscess between the appendix and the sigmoid flexure was the cause of the symptoms. [J. M. S.]

5.—Eshner reports the case of a colored boy, aged 11 months, who had presented nodding of the head since contracting a cold 2 months previously. The movements were at times nodding and at other times rotary. When the head was at rest there was at times vertical and at other times lateral nystagmus. He also reports the case of a white girl, aged 8 months, who had presented nodding of the head for 5 months. The movements were usually to and fro, but occasionally rotary. They were aggravated by fatigue or sudden noise, but ceased during sleep. He referred to the case of an unmarried woman, aged 36 years, who presented a constant rotary movement of the head of 12 years' duration. The trouble had become worse following an attack of influenza, 5 years before Eshner saw her. The movement was aggravated by sewing, worry, excitement and periodically without obvious cause. It was sometimes worse at the menstrual period and also when the general vigor of the patient was impaired from any cause. At times, the violence of the movements became so great that it caused shaking of the body and limbs. There was no spinal tenderness and no acute pain. Both the children were rachitic. There was no history of rachitis in the adult. [J. M. S.]

September, 1901. (18th Year, No. 9.)

1. Pernicious Anemia in Infants, with a Preliminary Report of a Case.

T. M. ROTCH and MAYNARD LADD.

2. So-called Cyclic Albuminuria, with Preliminary Report of a Case. FRANK SPOONER CHURCHILL.

3. Probable Etiology of Rectal Polypi in Children.

FRANCIS HUBER.

4. Lamellar Desquamation in an Epidemic of German Measles. FREDERICK T. SIMPSON.

5. A Case of Chronic Arsenical Poisoning in an Infant of Seven Months. JOHN LOVETT MORSE.

6. Clinical Lecture. Pleural Effusion.

JAMES CARMICHAEL.

1.—See Philadelphia Medical Journal, vol. vii, No. 23, p. 1071.

2.—See Philadelphia Medical Journal, vol. vii, No. 23, p. 1071.

3.—There are two benign forms of rectal polypi met with in children, one composed of the elements of mucous membrane, soft and gelatinous in consistency, and the other, the mixed variety, supplemented by the cellular tissue beneath, the hard or fibrous polyp. Huber believes that these polypi are the local manifestations of the status lymphaticus in the intestines. In all cases of rectal polyp that have come under the author's personal inspection or which have been seen in the practice of his friends, the tonsillar ring of Waldeyer has been involved. The pathology, as far as the large intestine is concerned, is identical in status lymphaticus and in the case of polypi. [J. M. S.]

4.—Simpson reports an epidemic of infectious disease that occurred in the American School for the Deaf, at Hartford, Connecticut. There was much doubt as to the diagnosis, which lay between German measles and scarlet fever. Some of the patients, during convalescence, presented a lamellar desquamation that closely resembled the desquamation of scarlet fever. The disease was finally decided to be German measles for the following reasons: (1) the absence of albuminuria; (2) an incubation period of fifteen days or more; (3) previous occurrence of scarlet fever in 18 per cent. of the cases; (4) profuse development of rash in all cases with slight disturbance of the temperature; (5) absence of vomiting, strawberry tongue, angina and of complications, and (6) the morbilliform type of two-thirds of the cases. The author believes that the term, German measles, covers two distinct diseases, and that the "fourth disease" of Dukes was also represented by cases in the epidemic reported. The reasons for suspecting the existence of another disease than German measles are: (1) the appearance of a second rash in five patients; (2) the fact that four of the patients had already had German measles; (3) the previous occurrence of an epidemic of pink-eye, which Dukes claims may be the only symptom of German measles, and (4) the occurrence of the lamellar desquamation. [J. M. S.]

5.—See Philadelphia Medical Journal, vol. vii, No. 23, p. 1073.

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

(No. 37.)

1. Contribution to the Diagnosis and Treatment of Diverticulum of the Esophagus.

K. MAYR and A. DEHLER.

2. Contribution to the Casuistry of Blood Cysts.

A. GEBHART.

3. Experimental Investigations Upon Tuberculous Infection in Childhood. DIEUDONNE.

4. The Energy (Preparatory Activity) of the Ganglion Cells. Their Significance in Functional Disease of the Nerves. ADLER.

5. A Combined In- and Ex-tubation Apparatus.

A. RAHN.

6. The Condition of the Heart in Calsson Workers.

HORNUNG.

7. Contribution to the Knowledge of Membranous Dysmenorrhea. KOLLMAN.

8. Indications for the Increase in the Quantity of Fat in Infants' Food, by Means of Vegetable Fats in Particular. REINACH.

9. Experimental Investigations Upon the Disinfection of the Hands. TH. PAUL and O. SARWEY.

1.—Mayer and Dehler report an extraordinarily interesting case of esophageal diverticulum. The patient, a man of 39, who had frequently been obliged to eat rapidly, and who, on one occasion had had a fish bone in his throat for several days, suddenly discovered that he was unable to swallow large pieces of meat. This condition persisted and became somewhat more severe. He also noticed that after taking fluids there was a rumbling, gurgling sound in the throat. The esophageal bougie met with obstruction 18 cm. from the teeth, which could readily be overcome by pressure. The laryngoscope investigation was negative, nevertheless a diverticulum was suspected, and therefore an investigation made with Rosenheim's esophagoscope,

which showed an opening in the right posterior aspect of the esophagus, in the form of a narrow slit running transversely, 18 cm. from the teeth. Subsequent investigation showed that it was possible to enter the diverticulum with the bougie, and its length was found to be 3.5 cm. It could not be palpated externally. Subsequently it was found that it was possible to see this opening with the laryngoscope, and to observe food coming out from it when pressure was made upon the right side of the throat. Feeding with the stomach tube and electric treatment for the diverticulum were entirely without result; it was therefore determined to perform an operation, which was made from the right side of the neck, with careful blunt dissection down to the diverticulum, which was extripated, and the wall of the esophagus sewn together. As this was not likely to hold, the wound was packed with iodoform gauze and allowed to heal. For 5 days the patient received no food or liquid by the mouth; after this time milk and other liquids were permitted for 5 days, and then after 12 days, semi-solid food was given. After the 7th day the packing was removed from the wound, and no traces of esophageal contents were found. The diverticulum was 3 cm. long, had a diameter of 2 cm., and its opening easily permitted the entrance of a cherry. It was lined with squamous epithellum, which was much thicker than in the normal esophagus. There was a rich formation of papillae beneath this, then a broad sub-mucosa containing a few dilated glands, and a moderately thick layer of muscular fibres. At the fundus all the layers were much thinner, and at the extreme tip no muscular structure could be found. It appears that the diverticulum therefore was not congenital, but produced by injury, and from the thinness of the wall it is conceivable that perforation could readily have occurred. [J. S.]

2.—Gebbart reports the case of a man, 48 years of age, who had symptoms of tuberculosis of the apex of the lung. He developed a tumor in the region of the 7th rib on the left side, which was not painful, and grew rapidly after severe exertion. It contained only blood. The diagnosis of sarcoma of the ribs, was made, and an operation determined. This was performed, and showed that the tumor was merely a blood cyst, which was evacuated and packed with gauze. The patient for a time did very badly, had fever and evidence of rapid progress of the tuberculosis. He then recovered; the cyst granulated, although on 2 occasions there was a severe hemorrhage from the granulations. A second cyst developed, was excised, and found to be imbedded in scar tissue. The patient finally died of sepsis. The microscopic examination of the cystic area gave the picture of the multiple hematoma formation. This condition is most readily confused with cavernous angioma. [J. S.]

3.—See Editorial Philadelphia Medical Journal, October 19.

4.—Adler believes that all forms of morbid nervous phenomena may be explained by assuming an excess or deficiency in activity on the part of the ganglion cells. Thus, a moderate increase or diminution in the activity of the cells concerned in intelligence and emotion produce hyper- and hypaesthesia, increase or diminution of the reflex phenomena, paresis, etc. Epilepsy is due to excessive activity; myesthesia and melancholia to deficient activity; and mania to excessive activity, etc. [J. S.]

5.—Rahn has devised an ingenious apparatus which serves to insert or extract the tube in intubation of the larynx. This consists of a novel form of tube whose upper end flares like a funnel, and on whose inner side there is a small projection by which it is grasped during insertion or removal. This is grasped by an ordinary wire loop which passes through a tube moderately bent at the end. The handle by which the wire is regulated may be either in the form of an écraseur or a form resembling somewhat a pistol, which was devised by Rahn. The advantages are that the apparatus is simple, cheap, and that accidents of technique are very much less likely to occur. It is furnished in a small case to which are added a pair of grasping forceps, for the purpose of catching the thread should it be bitten off; a metal tongue-depressor; a pair of straight scissors, and the intubation apparatus with tubes of various sizes, thread and plaster. The whole occupies an exceedingly small space. [J. S.]

6.—Hornung has made some careful studies upon the hearts of laborers employed in caissons, and found that

there was a considerable increase in the size of the heart during work under pressure. The pulse varied considerably, sometimes increasing, sometimes decreasing in frequency. After prolonged work the size of the heart was sometimes diminished. After a few hours in the open air, that is, before returning to work after an interval of 16 hours, the hearts were entirely normal; due to a gradual diminution in size after returning from the caisson. Hornung at the time of the observation was suffering from perforation of the tympanum, and he observed that the symptoms in the diseased ear were very much less disagreeable than on the other side, and he therefore considers that the vertigo is not always due to pressure upon the internal ear, but to pressure upon the tympanic membrane. [J. S.]

7.—Kollman reports a case of membranous dysmenorrhea in a patient who, after four years of suffering, had a child, and was relieved for 2 years. The membranes then reappeared, proving that spontaneous cure is not possible. During the second attack the membrane was examined microscopically, and found to consist largely of round cells in the midst of which glands were imbedded, and tissue containing considerable extravasated blood. The subjective symptoms varied considerably. At times the patient suffered from severe pain, and at other times there was none at all. The degree of pain did not appear to depend upon the amount of membrane passed, in any way. Kollmann concludes, as a result of his study of this case, that membranous dysmenorrhea does not cause sterility, and is not the result of pregnancy or of abortion; and that the fibrinous membrane is not the product of the inflammatory process; the membranes are readily dysmenorrhelic products, but unless there is careful examination made of them they may be readily confused with blood coagula, or the products of croupous inflammation. He regards the true fibrinous membrane as the product of hemorrhage into the tissue followed by necrosis. The anatomical picture of the membrane is not characteristic. The pain is not due to the separation or extrusion of the membrane, and the latter is separated by a hemorrhage from the tissue beneath it. [J. S.]

8.—Reinach has made a series of experiments upon 2 children, one of 6, and one of 9 months, with Von Mering's preparation of chocolate, which is supposed to act as a substitute for fat in the nourishment of children. For one week the feces were carefully collected and estimated, and then the cacao butter given. He found that the fat was well absorbed, and that a very small proportion of it reappeared in the feces. In the second child practically the same results were obtained, and the child increased very rapidly in weight. The indications for the use of chocolate are those that seem to interfere with the use of the fat constituents of milk, and in cases where the nutrition of the children demands an excess of carbohydrates and fatty substances. Then it is useful in cases of acid dyspepsia, in cases of fat dyspepsia, in cases of chronic enteritis; in cases in which the bodily weight does not increase with normal rapidity upon the ordinary diet, and in rachitic and scrofulous children. He reports a number of cases showing how rapidly the weight increased. [J. S.]

9.—Paul and Sarwey continue their article upon the disinfection of the hands. Their technique was as follows: First, the number of bacteria upon the hands was estimated just before the disinfection and then disinfected by the method selected. The hands were then placed in an apparatus which they called their sterile chest, and in it all further manipulations were conducted. In this chest the hands were first washed in sterile water, then cultures were taken; then washed again for 10 minutes in warm sterile water, cultures again taken both from the water and from the hands; then rubbed with sand for 8 minutes, washed off with water, and cultures taken from the water, the sand and the hands. Then finally they were washed in a very dilute solution of sulphide of ammonia, and cultures taken for the last time. The cultures were taken from the hands by means of small wooden splinters or by silk threads. The former were employed only for the region under the nails. The wood and thread were then placed in tubes containing bouillon, thoroughly shaken, and cultures made from this. The tubes were kept cool in order that there might be no multiplication of the bacteria until the plates were made. The hands were washed in a basin with a cov-

er, not unlike a pewter dish. The results were as follows: In all cases numerous germs could be detected upon the hands before disinfection. After disinfection by the method of Furbringer, numerous germs could still be found. After the hands were washed for 5 minutes in water at the temperature of the body, numerous germs could be found in the water and obtained from the hands. After rubbing the hands in sand and washing them in sterile water at the temperature of the body, numerous germs could be found in the water and also obtained from the hands. After washing the hands in the diluted solutions of ammonium sulphide, numerous germs could still be obtained from the hands, the whole series of experiments indicating that Furbringer's method of sterilization is not sufficiently trustworthy to be used for surgical operations. The paper is still unfinished. [J. S.]

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

September, 1901. (Vol. IX, No. 3.)

1. Edinburgh University Graduating Address. PROF. WYLLIE.
2. Fifteen Recent Cases of Operation for Appendicitis. J. W. COTTERILL.
3. Operative Influence in Cases of Stricture of the Large Intestine. F. M. CAIRD.
4. Torsion of the Spermatic Cord with an Account of Three Cases. J. W. DOWDEN.
5. Mr. Carnegie's Gift. J. A. BERRY and D. D. BUCHAN.
6. British Medical Association: Sixty-Ninth Annual Meeting at Cheltenham.

2.—J. M. Cotterill states that the general practice is not to operate after the first attack of appendicitis. The author gives the following reasons why he does not approve of waiting: (1) A large percentage of all cases, estimated by various writers at from 25 to 40 per cent., have second attacks. In all but the mildest cases a second attack is the usual rule; (2) no one can predict that such a second attack will not be perforative nor prove fatal, in spite of treatment. Operative treatment during the acute attack is, of course, a much more serious undertaking than when done in an interval; (3) every attack adds to the extent and strength of the adhesions, and thus increases the difficulties and dangers of the operation, sometimes to a very great degree; (4) the mortality of the operation, when done in an interval, especially after a first attack when the adhesions are minimum, is comparatively trifling, say from 1 to 2 per cent. at the outside in the hands of competent surgeons. The writer lost but one case, but the patient had suffered during several years from an enormous number of attacks, and the operation was prolonged and difficult. [T. M. T.]

4.—J. W. Dowden, in his article on torsion of the spermatic cord with an account of three cases gives the treatment as follows: If the case be seen in the first few hours after the onset of symptoms, the cord should be untwisted. This is comparatively easy when the testicle has descended, but probably very difficult when undescended. The untwisting should be carried out at first in a direction from within outwards, and if this procedure increases pain, the opposite direction should be tried. As regards the after-treatment of these relieved cases, the probability is that in cases, in which a descended testicle is affected, an operation should be performed to fix the organ firmly in the scrotum. With this object the author suggests as a method to be carried out one in which a broad strip of visceral tunica vaginalis be removed from the upper attachment of the cord to the lowest point of the testicle and a corresponding portion of the parietal layer also removed, then the cut edges of the visceral and parietal layer are sewn together with catgut. Adhesions would form between the raw surfaces on the testicle and inner side of the scrotum, while the stitched edges of the visceral and parietal layers of the tunica vaginalis would hold the organ in position. In cases in which the testicle is undescended, after an acute attack has been early relieved by untwisting, the operation to be performed would be one of either bringing the testicle down into the scro-

tum, provided the vas deferens is of the looped variety and sufficiently long to allow this procedure, or what will much more probably be the case, removal of the organ. Cases in which the testicle has been affected for twelve or more hours, or in which there have been several attacks with atrophy resulting, the safest procedure is removal of the testicle, taking care in acute cases to make the section of the cord above the thrombosed area, lest it so happen that septic injection of the capillaries spreading to the veins has been a factor in the condition. [T. M. T.]

October, 1901. (Vol. IX, No. 4.)

1. The Management of the Third Stage of Labor. PROF. SIMPSON.
2. Skin-Grafting by the Wolfe-Krause Method: Report on Nine Cases. H. M. W. GRAY.
3. Wound of the External Iliac Artery treated by Ligature. J. HOGARTH PRINGLE.
4. A Case of Muscolo-Spiral Paralysis followed separation of the lower epiphysis of the humerus; recovery after operation. ROBERT PURVES.

1.—In the management of the third stage of labor, A. R. Simpson believes that the great value of the Credé method lay in doing away entirely with (1) traction on the cord, and (2) of introducing the fingers into the lacerated genital cavity. (1) In the first instance as regard the danger of pulling on the cord; he refers to the risk of the cord giving way. The strength of the cord varies greatly, resisting a strain from two pounds to over eighteen. In one-fourth of the cases tested with a weight, the average was four pounds; (2) with regard to the introduction of the hand or fingers to lay hold of the placenta, whilst every practitioner knows how to lessen the risk of septic inoculation through disinfection, he knows also that he can better secure the results of an aseptic accouchement if he can get the placenta extruded without touching even the vaginal mucosa. This is what Credé has taught him to do. [T. M. T.]

2.—H. M. Gray gives the technique he employed in skin grafting as follows: The part to which the grafts are to be applied, and the part from which they are taken are disinfected in the ordinary way. The process of disinfection should extend over three or four days, if possible, the length of time varying with the thickness of the epidermis on the parts. Where there is a granulating surface to be covered, the author thinks it best, as preliminary operation, if the surface is not already aseptic, to scrape away the granulations thoroughly and disinfect the vivified surface and parts around. The operation is preceded by a final disinfection of the parts. All antiseptics are washed away by normal salt solution. The diseased part, cicatrix, tumor, ulcer, or pathological condition, is excised if possible, care being taken where disease is present not to soil the vivified surface, either by allowing discharge to trickle over it, or by letting the scalpel come in contact with the diseased part. Both may be prevented by stitching a pad or mop over the diseased area. Bleeding is controlled by pressure with pads wrung out of warm normal saline solution, by pressure forceps, or even by touching the bleeding vessel with the finest point of a cautery. Ligature must on no account be used, except perhaps at the very edge of the vivified surface, where they may be so applied as not to interfere with the grafts. [T. M. T.]

ZEITSCHRIFT FUER ORTHOPAEDISCHE CHIRURGIE.

1901. (Volume 9, No. 2.)

6. The Operative Treatment of Congenital Luxation of the Hip. A. CODIVILLA.
7. A New Method of Reduction of Congenital Luxation of the Hip. ANGELO CACCIARI.
8. A New Method of Making Foot-prints. H. TIMMER.

9. Some New Orthopedic Apparatus. H. GRAFF.
10. Spondylitis Deformans. A. KUDRJASCHOFF.
11. The Static Relations of the Human Skeleton.
CESARE GHILLINI and SILVIO CANEVAZZI.
12. Mechanical Laws in the Formation of Scoliosis.
A. SCHANZ.

6.—Codivilla, after having operated upon 76 cases of **congenital luxation of the hip**, concludes that the bloodless operation is indicated in children from three to 12 years of age; in older children the bloody operation may be successful. In 53% of his cases the results were both good and permanent. In the others the dislocation recurred, but to a less degree than before. Plaster bandages and the Schede splint will keep the leg rotated inward; occasionally osteotomy of the femur is also necessary. If the lack of an acetabulum causes relaxation, a new acetabulum should be made by an extra-articular operation. Codivilla has devised a lever which is of use in replacing the head of the femur where it belongs, after the joint cavity has been incised. After the formation of a new acetabulum there is always danger of ankylosis. Codivilla considers that the best incision to reach the hip-joint is one made along the upper border of the tensor vaginae femoris muscle. Drainage should never be left in the wound, which should be immediately closed after operation. [M. O.]

7.—Caeiari shows that the methods of reducing **congenital dislocation of the hip** devised by Pacl in 1883, and by Lorenz in 1896, are nothing but the old method originated by Fabbri in 1840, with a few slight alterations. Ghillini does away with the different grades of deformity following the above operations by always fixing the head of the femur in the acetabulum. Plaster bandages are kept in place six months after operation. Ghillini has performed this operation upon children up to 13 years of age. In older children extension is kept up for two weeks before operation. Caeiari states that those operators are mistaken who claim to obtain recovery after operation for congenital dislocation of the hip, since recovery means a return to the perfectly normal condition. [M. O.]

8.—Timmer uses **plate glass** upon which **printers' ink** is spread in a thin layer. The patient steps upon this, then off upon a smooth piece of white paper. The **foot-prints** can be dried with talcum powder. Details show wonderfully well. The ink may be removed from the feet with soap, water, turpentine, or petroleum. This may also be used to secure thumb-prints. [M. O.]

9.—Graff describes three **new pieces of orthopedic apparatus**, giving excellent photographs of them to show their use. One huge contrivance is for flexion and extension at the hip-joint; another is for abduction and adduction at the hip-joint; and the other is an osteoclast for forcible reduction of deformities of the leg, ankle, or foot. [M. O.]

10.—Kudrjasehoff reports a case of **spondylitis deformans** in a man aged 42. Ten years ago he had rheumatism of the ankles and knees. Later the hips became affected, and now the gradually deforming process has gone from the sacrum up to the cervical vertebrae. His head is bent forward, his spine held rigid. The spinal column is curved backward and immovable. The upper cervical vertebrae are movable, causing marked crepitation. The lower cervical and the four upper dorsal vertebrae are turned to the left; the other dorsal vertebrae are turned to the right. The muscles of the back, shoulder, and neck have atrophied. No doubt remains that the case is one of spondylitis deformans, following the attack of rheumatism 10 years ago. The literature of the subject is fully cited. Photographs of numerous preparations of the spinal column show the deformity of the vertebrae. The condition has many causes and may be localized, generalized, or quite irregular and atypical. These facts account for the many names given to this disease. [M. O.]

12.—Ghillini and Canevazzi consider the question of the **static relations of the human skeleton** again. They believe that they have, in their previous works upon the subject,

shown how bony deformity occurs. They also think that they have explained the changes which produce genu valgum, a question which greatly interested the late Professor Albert. [M. O.]

12.—Schanz describes the **mechanics of scoliosis** illustrating his very technical article with diagrams. The vertebral column corresponds to an elastic upright pillar, bent by an overpowering force. Thus scoliosis, compensatory curves, and torsion of the vertebral column are explained. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

August 29, 1901. (XIV Jahrgang, No. 35).

1. The Sensory Neuroses of the Stomach. ALOIS PICK.
2. Eclampsia in a Young Girl of Sixteen.

KARL DORANTH.

3. Atypical Psoriasis. ALBRECHT BEYER.

1.—Will be abstracted when concluded.

2.—Doranth reports a case of **eclampsia** in a young girl of 16, who suddenly lost consciousness. Bromides were given, as the condition was believed to be epileptic. In her third year she had had her only previous convulsion, during teething. For two days preceding this attack she complained of headache, off and on. Five convulsions followed in quick succession, in one hour. These began with both eyes turning to the right, a twitching of the right side of the face, movements of the head, clonic and tonic spasms of the right arm, frothing at the mouth, etc. No albumin was present in the urine; its specific gravity was 1.044; and it contained 3% sugar. She was perfectly well in two days. Doranth believes this to have been a case, not of epilepsy, but of **true eclampsia in a virgin**. In all its characteristics, this case resembled the eclampsia of the pregnant woman. [M. O.]

3.—**Psoriasis** is often so atypical that it is with difficulty recognized; for another skin condition may exist upon the individual with psoriasis, such as eczema, scabies, syphilis, impetigo, etc. In fact, cases of psoriasis have been seen with all other skin diseases. The other skin condition may occur upon the site of the already existing psoriasis, as eczema, acne, furunculosis, etc.; or the psoriasis may appear over another skin disease, upon eczema, erysipelas, variola, etc. Truly atypical are those cases of psoriasis which simulate eczema, seborrhea, rupia, etc. Besides, the psoriasis eruption may be atypical in character, or in localization. After a review of the literature, Beyer quotes ten case-histories in full, to illustrate the atypical conditions to be found in psoriasis. [M. O.]

September 5, 1901. (XIV Jahrgang, No. 36).

1. The Pathology and Treatment of Hour-glass Contraction of the Stomach. KONRAD BUEDINGER.
2. Aneurysm of the Ascending Aorta with Rupture into the Superior Vena Cava. V. COMINOTTI.
3. The Sensory Neuroses of the Stomach. ALOIS PICK.

1.—Buedinger reports the case-history of a woman, aged 42, who had always had anemia and gastric symptoms. During the past two years these had become severe, and for some months prior to her admission to the hospital she could only take liquid diet on account of the pain. She was constipated, and **hour-glass contraction of the stomach** was palpable, with **gastroptosis**. Laparotomy was performed and the stomach resected. A T-shaped cicatrix was found to be the cause of the condition, with spasmodic contractions of the gastric muscle about it, forming a tumor. **Retro-colic gastroenterostomy** and **gastropepy** were performed, with excellent results. The contractions which were observed during the operation were exactly like those seen by Hofmeister and Schütz in their experiments upon dogs. The case-histories of two other cases of hour-glass contraction of the stomach follow. One recovered and one died. After a review of the literature of the stomach, Buedinger describes his **gastroplastic operation** to replace the cicatrix removed, with illustrations. This method is applicable in most cases in which gastro-anastomosis is done, if the communicating piece is not long; especially when the condition is congenital; and in cases in which, while

gastroenteroanastomosis is impossible, yet the cicatrix can be extirpated and the deepest point joined. [M. O.]

2.—Cominotti reports, with full details, the rupture into the superior vena cava of an aneurysm of the ascending aorta, in a woman of 48. A sketch of the specimen is given, with a table of 181 aneurysms which Cominotti has observed. The patient was a prostitute, had had no children or abortions, and had passed the menopause. She was perfectly well until seven months before death, when she noticed pain about the heart, radiating to the shoulder, more at night than in the day time. Dysphagia and dyspnea followed. She got better, then suddenly worse six weeks before death. Dulness was found anteriorly over the sternum and right side of the chest from the clavicle to the fourth rib. This region was very tender to pressure. Over the heart a loud, long murmur was heard during systole and diastole, most marked over the aortic area. A venous pulsation was visible over the right jugular vein. Before death the left inferior epigastric vein became markedly swollen. There was right-sided hydrothorax. The autopsy showed an aneurysm of the ascending aorta, which had compressed the superior vena cava and had eventually ruptured into it. The outlet of the thoracic duct was obstructed and dilated, as were the cisterna chyli and the mesenteric lymph-vessels. [M. O.]

3.—After reviewing the literature of the gastric neuroses, Pick divides the sensory neuroses of the stomach into two groups, the hyperesthetic, including gastralgia, and the hypesthetic. Hyperesthesia of the stomach may be due to thermal, mechanical, or chemical irritants. This condition frequently simulates gastric ulcer in its symptomatology, and the diagnosis may be extremely difficult. Its symptoms are described most completely. The condition may exist alone, or with other gastric affections. Great care must be taken in the regulation of the diet, while baths, lavage, alkalies, morphin, cocain, menthol, bismuth, etc., will help in the treatment. Gastralgia may be of four kinds, true neuralgia or that due to intoxications, pains with gastric diseases, pain due to affections of far off viscera, and pain from the disease of near by organs. The treatment of gastralgia consists of warm applications, electricity, or massage during the attack; bismuth, morphin, arsenic, quinine, silver nitrate, antipyrin, etc. may do good between attacks. Occasionally an empty stomach causes pain which disappears when food is ingested. Hypesthesia to all irritants is very hard to diagnose, also. Just as hyperesthesia is accompanied with hypersecretion, so hyposecretion occurs with hypesthesia. Bitters, electricity, gastric douches, etc. will be the treatment of this neurosis of the stomach. [M. O.]

September 12, 1901. (XIV Jahrgang, No. 37).

1. The Diagnosis of Concretio Pericardii and Tricuspid Disease. WILHELM TUERK.
2. The Method of Causing Ether Intoxication. FRIEDRICH TEWELES.
3. Ether Intoxication, an Experimental Intoxication Psychosis. OTTO LENZ.

1.—This will be abstracted when concluded.

2.—Teweles relates the results of the use of ether to produce intoxication during seven months, at the Rudolfinerhaus in Vienna. Both Gersuny and Moszkowicz operated, performing in all 157 operations, employing an inhaler similar to that in use in America. The ether was given simply long enough to produce intoxication, not enough to cause deep anesthesia. Asphyxia and other alarming symptoms were entirely absent. He concludes that the operator may begin almost as soon as the inhalation, since there is practically no stage of excitation; that but very little ether is needed; that the preparation of the patient for operation is purely psychical, his whole attention being concentrated upon the anesthesia; that its administration is very simple, and is especially applicable in private practice; that when deeper narcosis is wanted, the ether may be pushed, or chloroform, or a mixture may be substituted; and that, as no bad symptoms resulted from this method of administering ether, it is harmless. Its disadvantages are that

some sensitive patients cry out and weep; that some movements may occur upon the first incision; and that a few persons may remain unaffected by the ether. But these disadvantages are but few, compared to the advantages of this method. [M. O.]

3.—Ether, in the method of administration in use for operation at the Rudolfinerhaus in Vienna, was used by Humphry Davy in 1795 as an intoxicant. After reviewing the literature, as collected from the experiments of physiologists upon themselves and others, and from the observations of the patients after ether intoxication, Lenz reports two cases, describing the symptoms. The individual is insensible to pain though he may feel the knife; he may be maniacal or depressed; the depression may change to symptoms of poisoning; or furious delirium may occur. Besides, some people remain totally unaffected by even a large dose of ether. Lenz concludes that ether intoxication is an acute intoxication psychosis; that the result is the product of the individual reaction and the amount of the ether inhaled; that the nervous disturbance is only temporary; that the ideal ether intoxication is to have tactile sensibility kept, while sensibility to pain is benumbed; and that the use of ether to produce intoxication is contraindicated in individuals who drink freely or who are in any way neuropathic. [M. O.]

REVUE DE CHIRURGIE.

August, 1901. (21me. Année, No. 8.)

1. Radiography in Pulmonary Surgery. THEODORE TUFFIER.
2. The Pathogeny of Ranula. LEON IMBERT and EMILE JEANBRAU.
3. The Pathogeny of Flat-foot. de VLACCOS.
4. Vascular Tears in Fracture of the Clavicle. E. GALLOIS and P. PIOLLET.
5. Anuria in Uterine Cancer. PATEL.
6. Genital Tuberculosis in the Female. MARIE GOROWITZ.

1.—Tuffier believes that the diagnosis of surgical diseases of the lungs is very difficult. Out of 300 cases collected, there were 48 errors in the seat of the lesions. In nine of these the lungs were affected, yet the pleura, liver, and kidneys were diagnosed diseased. More frequent still are mistakes in the position of the lesion in the lungs. It is also difficult to determine the volume of a cavity and the number of disease foci. Exploratory puncture will help somewhat. Radiography helps even more. In 5 out of Tuffier's eight cases, radiography was positive. When radiography confirms percussion and auscultation, the lesion is surely localized. [M. O.]

2.—Imbert and Jeanbrau report a case of ranula in a woman of 23. This was successfully removed by suprahyoid operation, and examined histologically. They review the history of the subject in full, with many quotations from the literature. Ranulae containing vibratory cilia are very rare. Commonly there are no cilia. The wall of the common ranula consists of four layers: (1) cuboidal or polygonal epithellum, which may be absent; (2) embryonal tissue; (3) connective tissue, and (4) very little, deformed glandular tissue. When cilia are found, the epithelium arises from the anterior portion of the embryonal thyroglossal duct. After incision, cauterization, or excision, ranulae recur. Terrier advises ablation of the cyst and total extirpation of the submaxillary and sublingual glands whenever they are adherent. Imbert and Jeanbrau believe that the common ranula is congenital in origin, due to some unknown error of development, possibly connected with the branchial clefts. [M. O.]

3.—Flat-foot is generally accompanied by pain, whence comes its synonym, tarsalgia. de Vlaccos advances a new theory to explain the development of flat-foot. A straight line down the centre of the leg passes through very little of the os calcis and the astragalus, since they are both mainly external to such a line. The weight of the body

pressing upon the inner side of the foot will thus produce weakened and flattening of the plantar arch, and later outward rotation. This is normally prevented by the tendons of the tibialis posterior and the flexors of the toes. But under pressure the calcaneum assumes a condition of pronation, and slides to one side. The astragalus follows, ligaments give way, and flat-foot results. de Vlaceos thinks that this action is sometimes influenced by badly fitting shoes. [M. O.]

4.—Gallois and Piolet report a unique case of arterio-venous aneurism following simple, indirect fracture of the right clavicle, in a man of 25. The right subclavian artery and the right subclavian and internal jugular veins formed an irregular, hard, pulsating tumor. There was pain in the right arm upon motion. A distinct systolic murmur was audible over the tumor. Suppuration caused immediate operative interference. The tumor was laid open by resecting the clavicle. The hemorrhage was abundant, and the patient died four hours after operation. The autopsy showed that all the vessels had been ligated in the operation, and that there had been no bleeding afterward. 10 similar case-histories are quoted from the literature. The arteries were even more rarely injured than the veins. The cause of the vascular injuries in all these cases was the violence of the fracture. Experiments upon the cadaver showed the subclavian vein to be most often injured, the internal jugular vein coming next in frequency. The symptoms are the rapidly growing tumor, with the murmur, pulsation, etc. The prognosis is unfavorable. The best treatment will be freely laying open the sac, ligating the artery at a short distance below the aneurysm, and ligating all the veins when the aneurysm is opened. It will generally be necessary to resect the clavicle. [M. O.]

5.—Lesions of the kidneys and ureters are common with uterine cancer. A ureter may be compressed by the tumor itself, or by metastases in the broad ligament or lymph-glands. The ureter is then found sclerotic at the seat of the compression, dilated above it, with thinner walls. In the kidneys, cysts, sclerosis, degeneration, and atrophy are noted. Anuria results when both ureters are compressed. This may occur simultaneously, or upon one side some time after the other. Patel reports a case of uterine cancer in a woman of 75, with metastases in the broad ligament and vagina. Metrorrhagia occurred, with uremia. Total anuria preceded death. The autopsy showed compression of the right ureter, hydronephrosis of the right kidney, slight compression of the left ureter, and atrophy of the left kidney. Anuria may be the first sign of uterine cancer; it may occur suddenly with uterine cancer; or it may come on gradually. Patel believes the best treatment to be not ureterostomy, but **nephrostomy** in the lumbar region. The kidney is split in the median line, longitudinally, and the pieces are sutured to the abdominal wall, about the lumbar incision. If both kidneys are hydronephrotic, nephrostomy is to be done preferably on the right side. If one kidney is palpable, catheterization of the ureters may help to decide upon which kidney to operate. The operation is justified in all except very old, very weak patients. All symptoms improve after nephrostomy except the cachexia. The case-histories of two ureterostomies and six nephrostomies follow. [M. O.]

6.—Will be abstracted when concluded.

PRESSE MEDICALE.

August 14, 1901. (No. 65).

1. The Neuroglia in General Paralysis of the Insane. L. MARCHAND.
2. Hemorrhoids Treated by a New Forceps and Sutures. J. C. LIMA CASTRO.

1.—After relating the manifold views upon the subject of **general paralysis of the insane**, Marchand reports his own findings, histologically, in the cerebral cortex, cerebellum, medulla, and spinal column. In the latter both antero-

lateral and posterior tracts are affected. The neuroglia is found proliferated, especially in those parts of the nervous system which are normally rich in neuroglia. These regions are in contact with the cerebro-spinal fluid or the blood. It is this distribution of the neuroglial hyperplasia, early in the disease, that points to the existence of a toxin carried in the fluids of the organism, as its cause. Marchand believes that the nerve-cells are affected just as early as the neuroglia, but as we have as yet no means of staining the primitive fibrils of the nerve-cells, this cannot be shown.

2.—Lima Castro describes a **curved forceps** which has a dozen 5 mm. grooves along the upper part of its blades, permitting the passage of a needle through the tissues held by the forceps. These he employs in performing operations for hemorrhoids, by sutures. His technique is described in full, with excellent drawings. [M. O.]

August 17, 1901. (No. 66).

1. Occlusion of the Small Intestine in the New-born Infant. E. WEILL and M. PÉHU.
2. Cyto-diagnosis. XAVIER LEWKOWICZ.
3. Asepsis of the Hands in Surgery. L. LONGUET.

1.—Numerous cases of **congenital stenosis of the small intestine** in the new-born have been reported, due to an error in development. Weill and Péhu report such a case in a boy nine days old. His bowels had not moved since birth, and the abdomen was very large and tympanitic. Though he vomited constantly, the fluid vomited contained no fecal matter. The anus was well formed, but enemata brought away mucus only. There was albuminuria. Though an artificial anus was made by operative intervention, the child died. At the autopsy it was discovered that for about 15 cm. below the cecum the small intestine existed as a tiny cord only. The obliteration of the intestine was complete. The diagnosis is generally easy, the prognosis unfavorable. Though medical treatment should at first be attempted, it should very soon be abandoned in favor of laparotomy, with gastro-enterostomy when necessary. [M. O.]

2.—Lewkowicz calls attention to the fact that **cyto-diagnosis** was practiced before Widal originated the method in France in 1900. For Korszyrski and Wernicki proposed the examination of serous effusions for the cellular elements therein contained in 1896, for purposes of diagnosis. Winiarski also did some work upon the subject in the same year. Lewkowicz has found a few lymphocytes present in the cerebrospinal fluid of normal individuals. Lymphocytosis is the rule in tuberculosis. In 20% of his cases of tuberculous meningitis, polynuclear leukocytes predominated. These cases probably had an old caseous lesion which was in contact with the meninges. [M. O.]

3.—Longuet, who reviews the subject of **surgical asepsis of the hands**, concludes that care must be taken by the surgeon that he do not touch anything septic. If he must touch anything aseptic, he should put on gloves before so doing. The different gloves are described in full. For preliminary sterilization of the hands Ahlfeld's method with alcohol, Kelly's method with potassium permanganate, or the Haegler sublimate method may be used.

[M. O.]

August 21, 1901. (No. 67).

1. The Ambulatory Form of Bacterial Meningitis. A. SICARD.
2. The Treatment of Conjunctivitis. F. TERRIEN.

1.—Sicard calls acute **cerebro-spinal meningitis** which is neither tuberculous nor syphilitic, **bacterial**; for these cases may not be epidemic. Just as there are cases of "walking" typhoid fever, ambulatory cases of meningitis exist. These ambulatory cases may be fulminating in their severity; they may be simple and curable; or they may be subacute, ending eventually in death or recovery. Sicard has collected case-histories of four of the first, and three of the second and third groups, each. All these cases were reported by different observers before the Medical Society of the Paris Hospitals. These patients continued at work, in spite of their meningitis. Kernig's sign, while present in acute meningitis, is also found with meningis-

mus. But cyto-diagnosis now aids much in establishing the diagnosis. Lymphocytosis in the cerebro-spinal fluid means tuberculous, polynuclear leukocytosis, bacterial meningitis. Late in the disease the bacterial form also gives lymphocytosis. Finally bacteriological investigation confirms the diagnosis already made. [M. O.]

2.—Terrien divides conjunctivitis into the simple or non-specific, the specific, and the diphtheritic forms. Specific conjunctivitis may be catarrhal, which form is treated with boric acid, cyanide of mercury, zinc sulphide, and ammonium chloride. If severe, nitrate of silver or protargol solutions are used. In subacute conjunctivitis, due to the diplo-bacillus of Weeks, silver nitrate is best, as it is in gonorrheal conjunctivitis. Sometimes canthoplasty, ice and leeches are needed. Protargol or the biniodide of mercury are used on the eye-lids. For the non-specific varieties, due to streptococci, pneumococci, etc., the treatment is practically identical. [M. O.]

JOURNAL DES PRATICIENS.

August 10, 1901. (15me. Année, No. 32).

1. The Treatment of Phlebitis. EDGAR HIRTZ.
2. Tuberculous Rheumatism or Pseudo-Rheumatism of Biliary Origin. ANTONIN PONCET.
3. Electricity in the Treatment of Exophthalmic Goiter. DENIS COURTADE.

1.—At the beginning of a phlebitis, absolute rest is necessary for six weeks or longer. Cold moist applications should be made over the seat of the phlebitis. Later compression can be made by an elastic bandage. Later still, massage will be beneficial, with passive motion. During convalescence Hirtz advises salt baths, ichthyol ointment, etc. Constitutional treatment for gout, rheumatism, or syphilis, may do much good to the phlebitis. [M. O.]

2.—Just as there are attacks of pseudo-rheumatism due to gonorrhea, puerperal fever, scarlet fever, etc., there exists a form of rheumatism brought about by the tubercle bacillus. Poncet reports the histories of three such cases which he has observed. In the most typical case the autopsy confirmed the diagnosis. [M. O.]

3.—In exophthalmic goiter electricity is employed to act upon the cervical sympathetic nerves and the thyroid gland. Either faradic or galvanic electricity may be used, or both combined. This treatment is given for from 10 to 20 minutes daily. It should be kept up at least three months, while rest, baths, and sodium salicylate should be associated with the electricity. [M. O.]

August 17, 1901. (15me. Année, No. 33).

1. Latent Heart Disease and Sudden Death in the Army. KELSCH.
2. A Clinic Upon Therapeutics. HENRI HUCHARD.
3. Paraldehyde. S. ROQUES.

1.—Will be abstracted when concluded.

2.—Huchard describes a case of hepatic colic which was pseudo-gastric in type. He advises morphin at first, and sodium benzoate and salicylate later. When large doses of digitalis are needed to prevent asystole, Huchard uses crystallized digitalin, a solution of 1 to 1000, 50 drops twice in one day. This is not given longer. As a simple heart sedative 10 drops daily may be prescribed. In the case of a man of 80, with simple arrhythmia, digitalis should not be given. Huchard ordered one or two grams of theobromin with success. Huchard also prefers sodium iodide to potassium iodide in all cases except those due to syphilis. He has ceased giving bitters for anorexia, now prescribing the alkalies instead. [M. O.]

3.—This is a detailed account of the physiology and therapeutics of paraldehyde. Paraldehyde is especially indicated in the insomnia of alcoholics, in delirium tremens, morphinomania, and as an antidote for strychnine, etc. The dose varies from one to two or three grams. It is contraindicated in those who are taking iodides. It causes a breath like that of a drunken man, which may, however, be counteracted by giving vanilla at the same time. [M. O.]

Special Article.

REPORT OF THE COMMISSION APPOINTED TO INVESTIGATE THE CASES OF TETANUS IN ST. LOUIS FOLLOWING THE ADMINISTRATION OF DIPHTHERIA ANTITOXIN.*

By B. Meade Bolton, M. D., C. Fisch, M. D., and E. C. Walden, M. D., St. Louis.

Our original plan was to have each of us carry out his investigations entirely independent of the others, and to combine our conclusions in a single report. It was impossible, however, for us to carry on the investigation in this way, on account of the small quantities of serum in some of the bottles, and as a consequence all serum has been tested by us conjointly, and also, insofar as it was possible, independently. All material obtained by us from autopsies has been studied by each of us, and the results in every instance have tallied.

The experiments have been directed to learn:

1. Whether pathologic lesions could be demonstrated revealing the characteristic picture of tetanus.
2. Whether tetanus could be produced from the pathologic material obtained at autopsies and during life.
3. Whether the serum dated August 24 was the cause of the outbreak.
4. Whether all serum dated August 24 had the same toxic properties.
5. Whether the disease was caused by an infection or an intoxication.
6. Whether any difference could be noticed between the serum dated August 24 and the serum dated September 30.
7. What the toxic strength of the serum was.

I.

It was fortunate that our appointment occurred at a time when an outbreak was at its height. We thus had an opportunity to see a number of patients, *intra vitam*, and so convince ourselves from the clinical observation, of the correctness of the diagnosis made. We saw, altogether, about ten patients, and, with one exception, could fully confirm the diagnosis. The exception was a case of Dr. Friedman, in which the only symptom pointing to tetanus was an incomplete trismus, evidently due to an enormous swelling of all the regional glands. The case, we hear, recovered.

An instructive series of three cases of tetanus was seen in the family of Mr. Goldstein, in which, according to the age and size of the patients, a gradual increase in the severity of the symptoms was observed. All of the three patients were, as we were informed, injected with the same amount of serum. All three cases are at present on the road to recovery. The incubation period in these cases, coming under our personal knowledge, varied from five to seven days, death ensuing in the fatal cases three to five days later, taking for granted that the infection or intoxication took its origin from the injections of the diphtheria antitoxin made in all of the cases. In no case were any wounds or other interruptions of the continuity of the epithelial surface of the body observed except those caused by the entrance of the canula, and these points were without inflammatory reaction in all of the cases.

Of the official autopsies made on a number of the patients that succumbed to the disease, we attended five (Jacob Centurio, Adele and Mamie Keenan, Emma Ernst and — Baker). These autopsies were made at a comparatively short time after death, so that no post-mortem changes could have interfered with the thorough examination. Only in the case of the Ernst child, embalming fluid had already been injected, and the investigation was, therefore, confined to the brain and the spinal cord alone. The reports of the findings are already in your hands. We emphasize here that only in two cases, Jacob

*From the St. Louis Medical Review.

Centurio and Mamie Keenan, changes other than of a tetanic nature were found. In the first case there was ample microscopic evidence of a simultaneous scarlatinal infection, characteristic desquamation, desquamative nephritis, fatty myocarditis, etc., while in the second case lesions of the kidney (fatty infiltration of the tubular epithelium) and of the liver (extensive fatty changes) were apparent, and most likely due to the action of the diphtheria toxin. With the exception of these two cases no microscopic pathologic changes could be found, aside from a very general and uniform engorgement of all the viscera, sometimes of the lungs, and always of the central nervous system. This engorgement was always pronounced in the venous system; in some cases extensive capillary injection and even the formation of petechial hemorrhages could be observed. In no instance was there any evidence of inflammatory processes in the meninges. A careful search for wounds revealed nothing but the sites of the injections, which, however, sometimes could only be detected with difficulty or not at all.

At each autopsy, pieces of the different organs (except in the Ernst case), were removed for microscopic examination, and in every case pieces of the hemispheres, basal ganglia, pons, medulla and cervical cord, were transferred immediately into alcohol or 10 per cent. formol. The microscopic examination has not revealed anything more than the macroscopic inspection. With the exception of the two cases mentioned above, where the macroscopically detected lesions due to other diseases were simply confirmed by the microscope, no anomalies but a very general and pronounced hyperemia of the organs were found. In one case the area of skin surrounding the site of injection was removed, and examined microscopically and bacteriologically; the microscope showed only intense hyperemia of all of the vessels of the skin, subcutaneous tissue and abdominal muscles, while the aerobic and anaerobic tubes inoculated with material from this specimen remained sterile. It must be mentioned, however, that the attending physician in this case had injected into the same place before death a solution of bichlorid of mercury.

The interest of the microscopic examination centered in the material taken from the cord and medulla. Numerous sections were made from the material of every case, and mainly stained after the Nissl method. Some were prepared according to the Weigert formula, but in the latter no changes could be seen. The Nissl specimens showed in all of the sections about the same condition in about the same degree of intensity. Numerous ganglion cells, and especially the large motor cells of the anterior horns, exhibited a beautiful picture of the so-called chromatolysis, swelling of the nucleolus, obliteration of the processes, etc. It seemed, however, that the changes did not have that degree of intensity that is the outcome of inoculation experiments in animals, or in the ordinary cases of human traumatic tetanus. Besides the pathologic nerve cell a greater number of normal cells were found. The pictures obtained otherwise corresponded perfectly to those published in Barker, "The Nervous System," pages 304 and 305. It is to be noted here that the changes described could not have been post-mortem alterations, because some of the autopsies were made too soon after death for such changes to have occurred.

If the whole of this is considered, it is seen that in all of the post-mortems made, nothing was discovered that could justify the assumption that the death of these patients was due to some other pathologic process. Even in Jacob Centurio and in Mamie Keenan, the scarlatinal and diphtheritic lesions were not such as to be looked upon as necessarily fatal. On the other hand, these investigations do not give any direct and incontrovertible evidence that the cause of the death was tetanus, although the clinical evidence alone was certainly sufficient to remove any doubt.

II.

To produce this direct proof we attempted to produce in animals the disease by means of incorporating into them material removed from the patients during life and after death. From the beginning the prognosis for a favorable result was bad, for two reasons. The human organism

belongs to that category of animal beings which absorb with great rapidity the tetanus toxin produced at the focus of infection or artificially introduced. In a short time after a given quantity of such a toxin is in some way introduced, it is completely combined with the susceptible cells, and it is the general experience that at the height of the tetanic process no free toxin is found in the human body. The second reason was, that most of the patients had received copious administrations of tetanus antitoxins before death, so that whatever quantity of the toxin was present in the fluids of the body of the patient must have been neutralized and made inaccessible to demonstration by this antitoxin.

That, in fact, a surplus of antitoxin was present was demonstrated in the case of Isaac Stein, from whom during life some cerebro-spinal fluid and blood were removed for therapeutic purposes. We injected some of this cerebro-spinal fluid, mixed with a fatal dose of the tetanus toxin, into a mouse, and found that the animal remained perfectly well, while another mouse injected only with the fatal dose of the toxic serum died within three days with typical symptoms of tetanus. Thus it was demonstrated that the patient died of tetanus in spite of the fact that his blood contained a large amount of antitoxin.

A number of animals were, nevertheless, injected with as large amounts of this material as was compatible with their size and weight. In no case have we obtained a positive result. Some of our animals died of secondary infection, or rather from infections with organisms introduced together with the pathologic material, as cultures made from the latter showed. In some cases, the presence of saprophytic bacteria having invaded it after death.

Especial attention may be called here to the experiments in which the site of injection was exposed and triturated. Here, too, no tetanus developed. It must, however, be mentioned, that this fact gives very little evidence against the presence of the tetanus-bacillus or spores, as it is well-known that these bacilli disappear very soon after the infection, unless they are accompanied by pus forming bacteria, which did not occur in our cases.

III.

The investigation of the third point, stated above, was pursued by experiments upon animals, chiefly by inoculation of mice and guinea pigs with the material placed in our hands by the coroner. In order to demonstrate whether we had to deal with a tetanus infection or intoxication, animals were inoculated with the suspected serum, and another series were inoculated with a mixture of the toxic serum and a protective dose of tetanus antitoxin. The animals receiving the tetanus antitoxin together with the toxic serum, recovered, while those receiving the toxic serum alone died with typical symptoms of tetanus. This point having been demonstrated, the samples of the serum delivered to us by the coroner were examined. Seventy-four animals have been used in this investigation.

It will be seen that seven animals inoculated with the serum dated August 24, died with the characteristic symptoms of tetanus. Nine animals were not affected, and three animals died of causes other than tetanus. In every instance the animals used were injected subcutaneously, with the observance of all necessary antiseptic precautions. Daily notes were taken of the condition of all the animals used.

IV.

It will also be seen from the appended tables,* that, while some of the serum dated August 24 was toxic, other samples labelled August 24 were found to be perfectly harmless.

V.

The result of our experiments has demonstrated unquestionably that none of the serum examined by us contained the organism of tetanus, either in the active or in the resting stage (spores.) On the other hand, our experiments have shown that those samples of serum which caused tetanus contained the tetanus toxin preformed.

*The tables in the original report are omitted here for lack of space. The conclusions, however, are plainly stated in the text of the report. [EDITOR, PHILADELPHIA MEDICAL JOURNAL.]

The following facts lead us to this conclusion:

1. Seventeen animals inoculated with different amounts of cerebro-spinal fluid, bloodserum, or suspensions made from the tissues at the point of inoculation, did not develop tetanus.

2. Culture tubes inoculated with thirty (30) different samples of the City Diphtheria Antitoxin dated August 24 and September 30, remained sterile. These tubes were subjected to aerobic as well as anaerobic conditions.

3. One cubic centimeter of the toxic serum heated to 50° centigrade for 45 minutes, was injected into a mouse without causing any toxic symptoms. One cubic centimeter of the same serum, unheated, killed a full-grown guinea pig within three days. As is well known, the spores of the tetanus bacillus resist a temperature of 80° for over one hour, while the toxin is destroyed when exposed to the temperature used in the experiment, for the time stated.

4. Suspensions from the tissues at the site of the injection in animals which had died of tetanus after injection of the toxic serum, failed to produce any symptoms of tetanus when injected into other animals.

5. In no case was there suppuration or inflammation at the point of inoculation, which tends to show that the serum contained no micro-organisms of any kind.

6. Small amounts of the toxic serum did not kill animals when injected, although these animals showed typical symptoms of the disease, and subsequently recovered.

VI.

As some of the serum dated August 24, and all of the serum dated September 30, tested, proved toxic to our animals, while other portions of the serum of August 24 proved nontoxic, it was our task to determine whether the three portions of the serum differed also in other respects. The result of our experiments in this direction proved that the toxic serum dated August 24 and the serum dated September 30, were identical, and that the non-toxic serum dated August 24 could easily be differentiated from it by other properties than its harmlessness. This conclusion was reached from the following experiment:

1. There was a distinct difference in the appearance of the toxic sera, on the one hand, and the non-toxic serum on the other. The toxic sera were more opaque than the non-toxic.

2. The absolute weight of the two toxic sera and the non-toxic serum differed. The toxic sera were found to be heavier than the non-toxic serum.

3. The same difference between the toxic sera, on the one hand, and the non-toxic serum on the other, was observed in the specific gravity; the toxic sera agreeing in this factor, and the non-toxic serum showing a difference.

4. The same difference between the non-toxic serum and the toxic sera was also apparent in the reaction. In order to determine the reaction of the three portions of serum, we have titrated a number of portions of all the samples with both litmus and phenolphthalein. All three sera reacted acid toward phenolphthalein, and alkaline toward litmus.

5. The amount of chlorine in the toxic sera was found to be greater than the amount present in the non-toxic serum.

6. The lutein band in the green portion of the spectrum in the non-toxic serum was more apparent than in the two toxic sera, the latter resembling each other very closely in this particular.

7. The lowering of the freezing point below the freezing point of distilled water (molecular concentration) was greater in the toxic sera than in the non-toxic.

8. The effect of the toxic serum of August 24 and the serum of September 30 upon animals was the same.

9. Tests of the antitoxic potency of the three samples of serum, the toxic and non-toxic serum of August 24, and the toxic serum of September 30, were made. The results of these experiments show that the toxic serum of September 10 and August 24 contain the same number of diphtheria antitoxin units, while the non-toxic serum of August 24 contains a smaller number of said units.

VII.

In order to determine the toxic strength of the serum which we had found contained the tetanus toxin, a num-

ber of animals were inoculated with varying quantities of this serum. Thus it was found that .1 of a cubic centimeter contained the minimal fatal dose for a guinea pig 300 gms. weight. From this very interesting deductions can be drawn as to the smallest amount of tetanus toxin fatal to a human being. If we consider 25 kilos the average weight of the children that died from tetanus, and that 10 c.c. of the serum proved fatal in all cases except in those in which tetanus antitoxin was administered early enough, an approximate computation can be made. That the dose of 10 c.c. of the serum contained not much more or less than the single fatal dose of tetanus toxin, is illustrated by the gradual increase in the severity of the symptoms in the three Goldstein cases. While the youngest child, 3½ years old, exhibited the typical picture of tetanus, the middle one, 11 years old, showed the symptoms less aggravated, and the oldest child, 14 years old, showed only incomplete trismus.

If, then, we reduce the amount of toxin necessary to kill a guinea pig, and on the other hand that necessary to prove fatal to a human being of 50 pounds weight, we find the relation of their susceptibility is 1 to 0.83, or if we take the horse, with double the susceptibility of the guinea pig, we obtain for the human being a susceptibility of about half that of the horse.

CONCLUSIONS.

As the result of our investigations we draw the following conclusions:

The diphtheria antitoxin prepared by the Health Department of the City of St. Louis, and dated September 30, and some of the serum dated August 24, was the cause of the recent deaths from tetanus in the cases where this tetanus was used.

This antitoxin was sterile, but contained the toxin of the tetanus bacillus in considerable amount.

There were two different sera issued under the date of August 24. One portion not containing the tetanus toxin and characterized by other properties, while the other contained the tetanus and was identical with the serum bearing the date of September 30.

The most important result we have arrived at is the positive demonstration that the toxic serum dated August 24 and that dated September 30 are identical. From this we conclude that the serum of September 30 was issued without having been tested by the proper methods, and that a part of it was filled into bottles bearing the date of August 24, and were furnished with labels having previously been stamped with this date. We are justified in drawing this conclusion from two observations. First, that the serum of September 30 was issued before there was time to have performed the simple tests necessary to determine the antitoxic potency of the serum. Second, in the same way, serum dated October 23 came into our possession on November 1. This serum had been issued to physicians by the Health Department, and by them returned to the coroner. It is obvious from this that no animal experiments could have been made with this antitoxin. As this was the case with the serum of October 23, it is the natural inference that the serum of September 30 was issued in the same way.

We must deny any possibility of latent tetanus having existed in the horse "Jim" from August 24 to September 30, as no well authenticated cases have been reported in which the incubation period extended over seven days. In experiments directed to test this point. The period of incubation cannot be determined from clinical observation, from the nature of the case.

It therefore follows from this that the serum drawn on August 24 was free from tetanus, but that the serum of September 30 was drawn during the period of incubation, and had it been tested upon animals it must necessarily have revealed its toxic properties.

From the foregoing facts we are forced to conclude that the diphtheria antitoxin prepared by the City Health Department has been issued before it was possible to have obtained results from the absolutely necessary tests. Had these tests been performed, the results upon animals would have been such that the serum would not have been dispensed, and the cases of tetanus forming the basis of this report could not have resulted.

Original Articles.

SPLANCHNOPTOSIS.

Factors: A. Relaxed Abdominal Walls (including Pelvic and thoracic diaphragm);

B. With Consequent Distalward Moving of Viscera;

C. Gastro-Duodenal Dilatation, (with report of two operations for its relief and a rubber air pad as a supporter).

By BYRON ROBINSON, B. S., M. D.,

of Chicago.

The year 1885 was an eventful one in the pathology and treatment of relaxed abdominal walls, and consequent splanchnoptosis. This was the period in which Glenard's labors became known. But Glenard was not the only one working on the subject of splanchnoptosis. Czerney and Keher, of Heidelberg, were presenting cases of visceral ptosis in their clinics in 1884, and as a pupil I gained some views of the subject. However, during a whole year's study in Berlin, in 1885, with distinguished surgeons, the subject was not once discussed. Subsequently, in a year's course of study with noted German specialists, Professor Schröder showed

many subjects of splanchnoptosis. Dr. Landau, who wrote "Wander Niere" (wandering kidneys), and "Wander Leber" (wandering liver), gave extensive courses and discussed relaxed abdominal walls and consequent splanchnoptosis, with interest. In fact, among Germans the term "Hängebauch" (hanging belly) has been common for twenty-five years. Dr. August Martin presented instructive views on the subject in his excellent gynecologic course to physicians. During the past fifteen years I pursued the study of splanchnology among hundreds of gynecologic patients, both medical and surgical, and in the personal abdominal inspection of 500 adult autopsies. In this paper I will present essentials of the knowledge gained in that experience. The abdominal wall consists of oblique, perpendicular and transverse muscular layers woven in a powerful fascial band.

All abdominal muscles are fixed on bony parts, as the costal iliac and pubic crests, as well as the vertebral column, while the diaphragm is inserted into the ribs and vertebral column with its vault fixed by the pericardium. The abdominal wall is covered externally by skin and internally by peritoneum—both powerful and elastic membranes. Certain weak, yielding, muscular and fascial lines exist in the abdominal walls, viz.: (1) Musculi recti abdominales arise from the pubic crest and become inserted into the ribs and os sternum. The two recti muscles which lie parallel to each other are the ones which preserve the delicate visceral poise. Slight extra.intra-abdominal pressure produces diastasis of the muscles. In splanchnoptosis, the recti show (a) diastasis, (b) elongation, and (c) separation of the fibres, (d) extensive thinning and flattening, and (e) atrophy.

(2) The fascial lines which yield in splanchnoptosis are (a) the linea alba, which I have noted three inches wide, the fascial fibres are elongated and separated, making the abdominal wall very thin and lax in the median line, (b) the lineae semilunares which also become quite thin and lax, the fascial fibres elongate and separate, (c) the fibres of the linea transversae, inscriptiones tendinae or the abdominal ribs, which elongate and separate.

The physiologic action of the abdominal wall is a combined one, as the varied direction of its muscular fibres indicate. We may indicate its physiologic action in certain directions. 1. The abdominal wall acts as a circular band, to fix and support the abdominal viscera as the neuro-vascular visceral pedicles are not intended for mechanical visceral support. 2. The abdominal wall is a highly elastic apparatus. It distends and contracts fitting the abdominal contents. The skin and peritoneum are exceedingly elastic. Observe how the skin and peritoneum will return without a fold to the normal state after distention from gestation, ascites or tumors, etc. 3. The physical function of the abdominal wall is aided by its capacity of contraction and of extension in respiration, defecation, urination, expulsion of uterine contents; in laughing and coughing. In short it is the function of the abdominal wall to contract and dilate in the volume changes of the abdominal contents, as well as the volume changes in the thorax. 4. The physiological function of the abdominal wall is to keep up a vig-

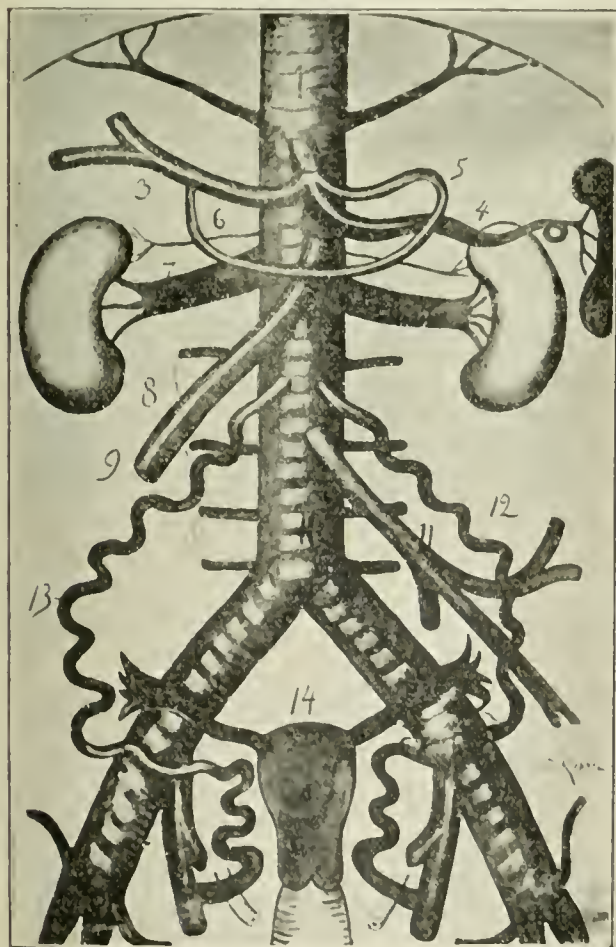


FIG. 1.—The abdominal aorta and its branches. The vessels affected in splanchnoptosis are: 1, the splenic; 2, the renal; 3, the superior mesenteric (9); 4, the inferior mesenteric (11), and 5, the spiral segment (12 and 13) of the utero-ovarian artery (Author's circle); 6, the gastric; 7, the hepatic.

ilant guard, a vigorous but delicate elastic regulation of abdominal visceral contents. The elastic spanning of the abdominal walls maintains a delicate visceral poise.

Relaxed abdominal walls arise in various forms



FIG. 2.—A profile view to illustrate how the transverse segment of the duodenum is clamped by the superior mesenteric artery vein and nerve in splanchnoptosis. Note the excessive distalward movement of the collective loops of the enteron. The more the loops of enteron pass into the pelvis the more acute becomes the mesenterico aortic (vertebral) angle. This illustrates the 3rd factor in splanchnoptosis.

D—Duodenum. C—Colon.

in different subjects. Not all thin abdominal walls are relaxed, neither are all relaxed abdominal walls thin. The elements, the fascial, elastic and muscular fibres must be separated and elongated to constitute relaxed abdominal walls, which are best observed in the erect attitude. The causes of relaxed abdominal walls lie in the elements of the wall itself, viz.: fascia, muscle, peritoneum, skin and elastic fibres. The fine tonus of the wall, its delicate elasticity may be lost. Its fascia and muscular fibres are separated and elongated. It is flaccid and hangs too far distalward and the unsupported viscera follow it. There seems to be a limited life for the abdominal walls, as there is for the utero-ovarian vascular circle of the genitals. For the abdominal walls begin, as a widely applicable rule, to relax at about 35, and continue to relax or atrophy to the end of life. There can be no doubt that the elastic fibres

elongate and separate, perhaps also atrophy, for the abdominal wall is not only relaxed but is thinned out. It may be that at a time of malnutrition the abdominal walls become relaxed, never subsequently recovering their normal state. Relaxed abdominal walls frequently follow continuous fevers, gestation, ascites or any factor which increases intra-abdominal pressure. The most frequent supposed cause of relaxed abdominal wall is rapidly repeated gestation. In every gestation physiologic diastasis of the muscoli recti abdominales occurs. It is not infrequent to find the recti muscles three inches apart at the end of gestation. But relaxed abdominal walls are not confined to women, as the testimony of the 311 recorded autopsies of men proved, there being frequent splanchnoptosis in these cases.

The pelvic and abdominal viscera are liable to frequent dislocation. In 500 adult autopsies I found local peritoneal adhesions in over 80 per cent. In other words, more adult subjects have dislocated viscera from peritoneal adhesions than normally situated ones. The neuro-vascular visceral pedicle, the mesentery, becomes elongated and glides distalward on the dorsal abdominal wall. The distalward dislocation of the dorsal attachments of the mesentery allows (a) elongation of the mesentery, (b) an excessive range of visceral motion, (c) the abdominal and the pelvic organs pass distalward and crowd into the pelvis, (d) Splanchnoptosis compromises circulation and deranges secretion, (e) disorders of peristalsis, (f) traumatizes nerve periphery, (g) it impairs nourishment, (h) it produces especially indigestion, (i) it invites constipation. Splanchnoptosis accompanies a defective nervous system of congenital origin. As it increases every decade, after 35 years of age it is liable to cause stenosis or partial obstruction of the tractus intestinalis from traction of one part and elongation of the remaining parts of the mesenteries. It compromises canalization. The effects of splanchnoptosis (Glenard's disease of 1884), on individual abdominal organs, are varied and numerous.

The tractus intestinalis is affected chiefly by: (a) compromising of circulation, blood and lymph supply, i. e., congestion and decongestion, (b) trauma of nerve centers, strands and nerve periphery, (c) complication from loss of peristalsis and atony of bowel muscle, (d) gastro-intestinal catarrh and indigestion from excessive, deficient and disproportionate secretions. Also dragging on the abdominal brain, an independent nerve center producing nausea, neurosis, headache, reflexes, and deranges secretion and motion on other viscera. (c) Dilatation of the stomach and duodenum, caused by the superior mesenteric artery, vein and nerve, obstructing the duodenum at this point where they cross the transverse segment. The stomach is especially liable to dilatation from the above causes, where the prolapse of the enteron, enteroptosis is sufficiently advanced to allow the enteronic loops to pass distalward into the lesser pelvis and particularly when the subject lies on the back, for then the superior mesenteric artery, vein and nerve are put on a stretch and they constrict vigorously the transverse portion of the duodenum. (f) the enteronic loops

being dislocated (enteroptosis) into the pelvis, peristalsis, secretion, circulation and nerve periphery are compromised, followed by catarrh, constipation and indigestion. (g) the colon, especially the colon transversum, may lie in the lesser pelvis, producing similar compromising circumstances as in the enteron. (h) The appendages (liver, pancreas, and spleen) of the tractus intestinalis, in ptosis are compromised in circulation, secretion and nerve periphery.

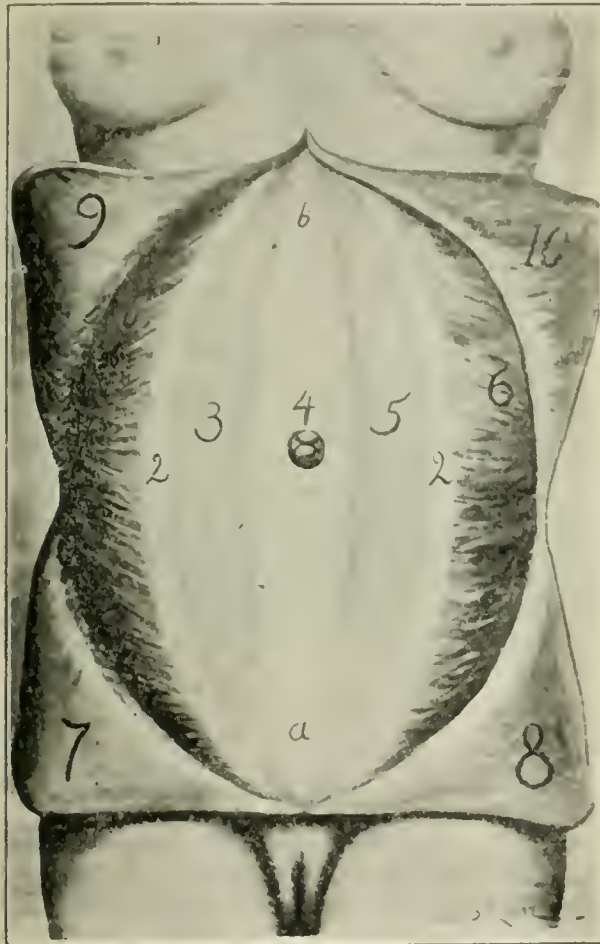


FIG. 3 represents elongation of separation of the fascial and muscular fibres of the abdominal wall—the incipient factor in splanchnoptosis. This cut is taken from an elderly female subject. 4 and a, b, is the separated and elongated linea alba. 3 and 5 are the diastatic musculi recti abdominales. 2, 2, are the separated and elongated linea semilunares. 6, abdominal muscles.

In splanchnoptosis the *genital tract* suffers, especially in circulation and nerve periphery as well as secretion. Uteroptosis may arise to such an excessive degree of mobility that the uterus may be pushed above the umbilicus and in any portion of the great pelvis.

The *urinary tract* suffers in splanchnoptosis, chiefly from dislocation of the kidney (right) nephroptosis. From several hundred autopsic inspections and living abdominal sections, I can say that in many subjects the kidney (right) has motion and range of 4 inches, 2 inches proximalward and 2 inches distalward. Large numbers of subjects have a right kidney range of 3 inches, $1\frac{1}{2}$ inches proximal-

ward and $1\frac{1}{2}$ inches distalward. The mobility of the right kidney is of extreme importance in gynecology, as its symptoms mimic or simulate genital disturbances. In my practice 60 per cent. of multipara have a movable kidney, proved by examination in the horizontal and erect positions. The mobility of the right kidney is due to (a) the longer right renal artery, (b) the liver through the diaphragm forces the right kidney distalward, (c) muscular trauma of the diaphragm, quadratus lumborum and tight lacing, (d) absorption of pararenal fat, (e) the abdominal cavity of woman is funnel-shaped, with the large end of the funnel distalward, and hence the kidney receives less support below than it does in man, (f) subinvolution attacks the "Wolffian body." (g) The erect attitude. By continual relaxation of the abdominal walls its physiological and anatomic functions are impaired. The physiological regulation and chief anatomic support of the viscera are unbalanced, and the delicate visceral poise is lost. The abdominal viscera move distalward, become prolapsed following the relaxed abdominal walls. The condition of relaxed abdominal walls is followed by splanchnoptosis. Of the three great systems of the abdominal viscera, the tractus genitalis, tractus urinarius and the tractus intestinalis, the last suffers the most severely. Relaxed abdominal walls are followed by dislocated viscera. A viscus is dislocated when it is permanently out of position. In general a dislocated viscus suffers from trauma of its nerve periphery and its blood, and lymph vascular system is compromised. Also the nourishment of a dislocated viscus is defective, irregular. Dislocated or prolapsed viscera are the segments of vicious circles. Relaxed abdominal walls are followed by partial hernia, especially in the pouches of the most yielding parts, as the linea alba, supraumbilical and the lineae semilunares or the various defective rings.

In the following scheme are noted not only the three great factors in splanchnoptosis, but other detailed factors:

SPLANCHNOPTOSIS.	1. Relaxed abdominal walls	<ul style="list-style-type: none"> a, separation and elongation of fascial fibres. b, separation and elongation of muscle fibres. c, damaged elastic fibres. d, Diastasis of recti-abdominales. e, Defective pelvic floor. f, Defective diaphragm. 	
	2. Elongations of mesenteries with distal movement of viscera and mesenterial insertions.	<ul style="list-style-type: none"> a, Tractus intestinalis. b, Liver, spleen, and pancreas. c, Tractus urinarius. d, Tractus genitalis 	<ul style="list-style-type: none"> Gastrium Enteron Colon (appendages) Liver, spleen and pancreas. Kidney Ureter Bladder Urethra Uterus Oviducts Ovaries Vagina
	3. Gastro-duodena dilatation	Compression of the transverse segment of the duodenum by the superior mesenteric artery, vein and nerve.	

PROGRESSIVE FACTORS IN SPLANCHNOPTOSIS.	Vessels	Arteries Veins Lymphatics	Dislocated Lumen compressed. Dilatation. Contraction. Anemia. Congestion. Disordered circulation. Malnutrition.
	Glands		Excessive secretion Deficient secretion Disproportionate secretion.
	Respiration		Accelerated Slowed Irregular Disordered, deficient Oxygenation
	Visceral Function		Exacerbated Inhibited Irregular.
	Nerves		Traumatized (pain) Disordered motion Disordered sensation Muscular incoordination.

Results of Relaxed Abdominal Walls on the Tractus Intestinalis.

In splanchnoptosis the most damaging influence rests on the tractus intestinalis. The normal situation of the tractus intestinalis with its appendages (liver, pancreas, and spleen) is changed, disordered. The circular band apparatus of the abdominal wall

is relaxed. The long-neuro-vascular visceral pedicle allows the segments of the tractus intestinalis and its appendages to follow the relaxed abdominal wall, and hence move out of their normal range, compromising blood and lymph circulation and traumatizing nerve periphery. There is at once a disproportionate action between traumatized nerve periphery and separated, elongated fascial and muscular fibres of the abdominal wall. Muscular tone and nerve energy become deranged. Since the abdominal wall becomes relaxed, the segments of the tractus intestinalis become dislocated permanently from a normal position. Since the neuro-vascular visceral pedicles are not elastic, and not for the purpose of mechanical support, the viscera will pass distalward, i. e., in the direction of least resistance. The spacious abdominal cavity allows the viscera to shift and glide from weight according to the position of the patient. The mesenteries of course elongate when their essential support, the abdominal wall, yields. The visceral supports or visceral fixation apparatus are (a) the abdominal wall, (b) the pelvic diaphragm, and (c) the thoracic diaphragm. Any yielding of any one of these segments a, b, or c, increases the abdominal space and creates a disordered relation between viscera and supports. It may be a neurosis, malassimilation from disordered circulation (lymph and blood), or it may be disordered visceral motion (peristalsis) from the trauma and infection of the ganglia myenterica (Auerbach's ganglia) or disordered secretion from disordered action of the Billroth-Meissner plexuses, from trauma and infection. Constipation may occur. The form of the abdomen shows that the tractus intestinalis is dislocated distalward. In aged and spare persons the actual form of the bowel segments and the peristaltic movements may be observed through the thin abdominal wall. The tractus intestinalis in splanchnoptosis is manyfoldly dislocated. On account of the fact that while the subject of relaxed abdominal walls does not manifest the disease while lying on the back because the abdomen is flat, the autopsist does not observe the splanchnoptosis. It is the clinician who is impressed with the splanchnoptosis, when the subject is in the erect attitude manifesting the "hanging belly," but the clinician loses his usefulness because he scarcely ever sees the autopsy. It is the clinical and autopsic observation that brings out the required data. The great segments of the tractus intestinalis, gastrum, enteron, and colon, become disordered, deranged in relation, changed in situation. The flexures of the tractus intestinalis become more flexed, rigid supports become elongated, secondary supports are put on stretch and the lumen of the tractus intestinalis is stenosed and compromised in numerous places. Canalization is compromised. The rigid ligaments as the ligamentum hepato-duodenale, ligamentum costo-colicum will not yield as much as the adjacent slacker and weaker ligaments, hence the hepatic and splenic flexures become more and more flexed, stenosed. Food passes them with

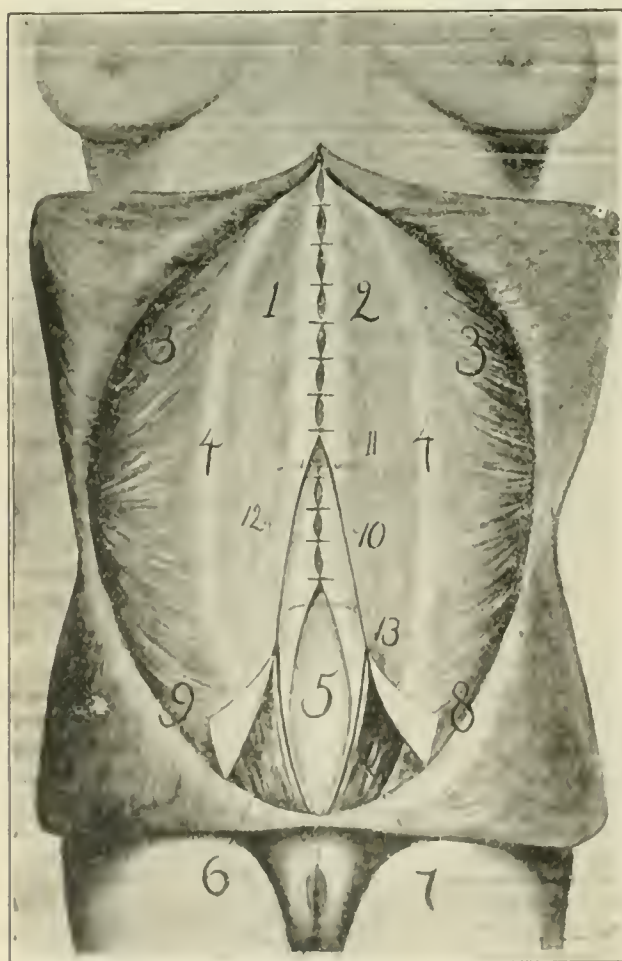


FIG. 4 represents the surgical procedure which encloses the musculi recti abdominales in a single sheath. 1 and 2 represent the anterior sheaths of the recti partially united in the middle lines. 10 and 12 represent the posterior sheaths of the recti partially united in the middle line. 5, the linea alba. 8 and 9 the recti sheaths lifted up to show the recti muscles. This operation I have employed for 5 years.

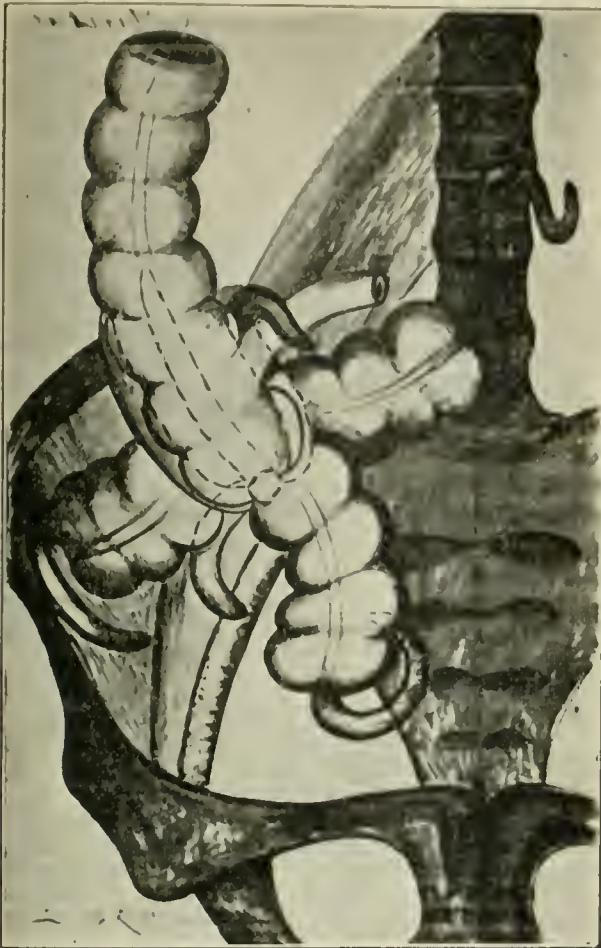


FIG. 5 represents the appendix and cecum in its relation to the psoas muscle as a standard for position and peritoneal adhesions from trauma of the psoas muscle. In splanchnoptosis the fixation apparatus of the cecum and appendix is elongated and allows these organs to assume a potential position. Whence the appendix might rupture in dangerous area of the peritoneum as the enteric or diaphragmatic area. The appendix lying on the vertebral column is in the potential position.

difficulty. For example, there are 5 points to consider in regard to the fixation apparatus of the duodenum, viz.: 1. The duodenum is as a whole fixed. It has lost its peritoneal mesentery on both surfaces of the mesoduodenum and its middle mesenteric layer (*membrana mesenterii propria*) is fixed or coalesced to the dorsal wall. It is also fixed by the *musculus suspensorius duodeni*, and the strong ligamentous band from the left crus of the diaphragm. Also the head and body of the pancreas aids in fixing the duodenum.

2. The pylorus or proximal end of the duodenum is fixed to the vertebral column, to the liver, kidney and stomach.

3. The flexura duodeno jejunalis or distal end of the duodenum is especially fixed by *musculus suspensorius duodeni* and the strong fibrous and ligamentous band from the left crus of the diaphragm.

4. The duodenum being fixed, it can not move distalward, while all the other abdominal organs glide distalward during splanchnoptosis. Hence, the transverse segment of the duodenum becomes compressed by the superior mesenteric artery, vein and nerve, inducing gastro-duodenal dilatation. The

compression of the duodenum is due to the mesenterico-aortic (vertebral) angle becoming more and more acute as the splanchnoptosis progresses, and finally, when the enteron lies mainly in the pelvis,

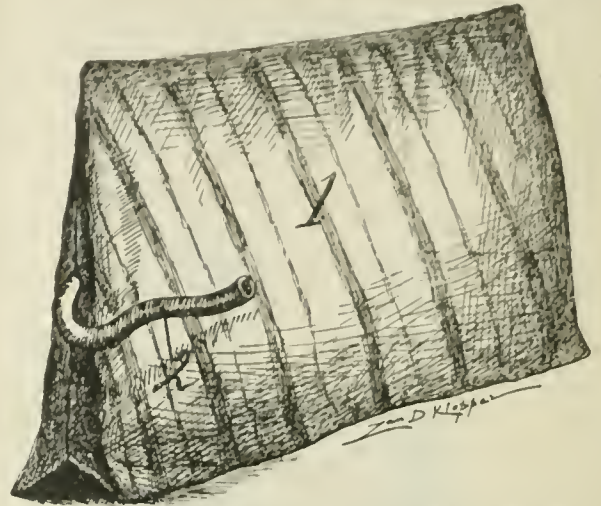


FIG. 6.—Author's rubber air pad for visceral ptosis half distended. It is to be placed inside an abdominal supporter. 1. side of rubber pad; 2. the rubber tube through which the rubber pad can be distended with air. (This rubber air pad is manufactured by John Drake & Co., of Chicago.)

the mesenterico-vertebral angle is very acute, allowing only a small space for the duodenum. The passing distalward of the stomach stenoses the fixed pylorus, and the passing distalward of the enteron makes more and more acute the flexura duodeno-jejunalis, because the distal end of the duodenum especially is quite rigidly fixed. The ileo-cecal sphincter and angle are not so much stenosed, as both colon and distal ileum move distalward together, retaining the normal angle or relations. The duodenum may be deranged only the mobile right kidney through the *ligamentum duodeno-renale*. The dragging of the dislocated kidney aids to kink or stenose the duodenum, the retention of foods in the stomach, and thus enhances gastric fermentation, catarrh and dilatation.

The Flexura Coli Hepatica.

The flexura coli hepatica suffers in splanchnoptosis, because as the stomach passes distalward it forces the colon transversum before it and hence makes more and more acute the hepatic flexure. I have seen the transverse colon in the pelvis and 9 inches of it as an inguinal hernia. It would at first appear impossible for the food to pass such colonic angles, but it should be remembered the peristalsis is continued by means of the activity of local segments. However, since the hepatic flexure is generally an obtuse or right angle, its flexure is seldom drawn so tightly by the *ligamentum hepatocolicum* as to produce very vigorous stenosis. Besides, in splanchnoptosis the liver yields through its mesohepar and follows to some extent the distalward movements of the hepatic flexure, relieving its angle from acute bending.

The Flexura Coli Lienalis.

The flexura coli lienalis forms normally an acute angle. It is the remnant of the *ligamentum recto-lienalis* of the lower mammals and quadrumana. It is a distinct, direct apparatus fixing the colon to the costal wall. In splanchnoptosis the splenic flexure

is dragged on and its angle made more acute. The spleen also participates in the general splanchnoptosis passing distalward, gliding anterior to the colon, as shown in the autopsies, as far as the pelvic floor. This increases the acuteness of the colonic flexure, obstructing the fecal current. The stomach also forces the middle of the transverse colon distalward, which stenoses the hepatic and splenic colonic flexures in direct degree to the extent of the gastropptosis.

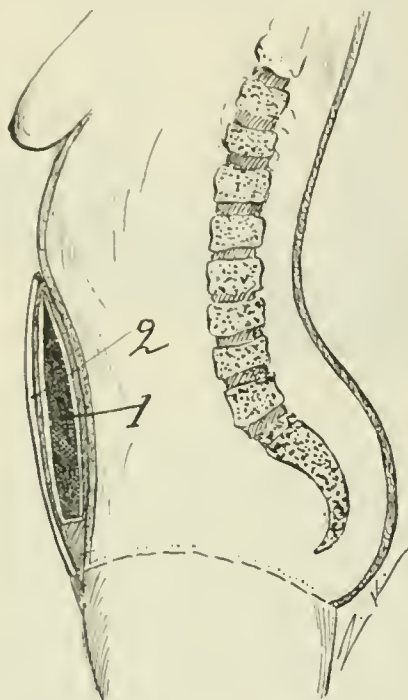


FIG. 7.—Profile view to illustrate the pressure of the rubber air pad on the abdomen. 1, distended rubber pad; 2, wall of abdominal supporter over rubber pad.

Also the colon transversum in extensive distalward movements is often forced into a V-shaped condition, with acute bends becoming adherent by plastic peritoneal adhesions, due to bacteria or their products passing through the colonic mucosa, myocolon to the serosa, resulting in peritoneal exudates and organized peritoneal adhesions. All dislocation of the viscera compromises them, especially if it be by a peritoneal adhesion. All dislocation of viscera compromises peristalsis, fecal blood and lymph circulation and traumatizes nerve periphery. Besides, splanchnoptosis is a general term. The tractus intestinalis and its appendages, the tractus urinarius and the tractus genitalis, all share in the distalward movement due to relaxed walls, so that splanchnoptosis of the tractus intestinalis is made worse by the nephroptosis (especially on the right side), hepatoptosis, splenoptosis and genital ptosis. The enteroptosis is especially responsible for the gastro-duodenal dilatation, because the duodenum cannot pass distalward from a definite fixation apparatus, and the superior mesenteric artery, vein and nerve—the constricting arm—compresses the transverse duodenum tighter the more the enteronic loops pass distalward into the pelvis. Again, the distalward dislocation of the colon favors fecal accumulation, which favors migration of germs or their products through mucosa muscularis into the peritoneum, inducing plastic peritoneal exudates

and organized peritoneal adhesions. The peritoneal adhesions compromise all anatomy and function of the segments of the tractus intestinalis. Again, a tractus intestinalis made defective by dislocation and fecal accumulation becomes an easy prey to *muscular trauma*. Muscular trauma of the psoas, for example, makes over 70 per cent. of the peritoneal adhesions on the right side (adjacent to the appendix, cecum, and distal ilium), and over 80 per cent. on the left side (in the mesosigmoid). Other abdominal muscles produce equal damage by trauma of their segments of the tractus intestinalis, according to the power of the muscle. Now, the less drained and more defective, the more damage arises in the tractus intestinalis from muscular trauma.

The fecal accumulations are most damaging when collected in the most dependent colonic segments, as the cecum, middle or transverse colon and sigmoid; besides it favors hernia, invagination and volvulus. Doubtless it is the stenosed and superior flexed splenic flexures of the colon which produces the dull pain and fecal accumulation with dullness or percussion. The multiple stenosing of various segments of the tractus intestinalis (and perhaps the ductus hepaticus) in splanchnoptosis, is of a temporary character, because on change of the erect to the horizontal position the stenosis of the tractus intestinalis is damaging from the point of circulation, nourishment and assimilation.

It induces trauma on secretory, sensory and motor nerves, it produces irregular congestion and decongestion, its muscularis is impaired by irregular local contraction and dislocation. Dislocation of the tractus intestinalis indicates absorption of deleterious products. The relaxed abdominal walls having lost their power of contraction, the fecal current is defectively driven distalward. From loss of tone in the diaphragm, abdominal wall and pelvic floor, through overstretching, defecation is difficult and hence fecal and gas accumulations are distressing. Discomfort almost always attends the patient with any considerable degree of splanchnoptosis from traumatized nerves, or from distension with gas or food, from incapacity of the abdominal walls to hold the viscera in the normal position. If a subject with distinct relaxed abdominal walls be examined per vaginam or per rectum, stagnated fecal accumulation will be found in the sigmoid and if the cecum assume the pelvic position (female 20 per cent., males 10 per cent.), it may also be found filled with feces. The abdominal wall (thoracic and pelvic diaphragm) having lost their tone, defecation is not only difficult but defective. Besides, long retained feces in the colon induce catarrh of the colonic mucosa, resulting in the absorption of toxic substances. *Meteorism* arises in splanchnoptosis from excessive, deficient or disproportionate secretion and consequent fermentation, from stenosing of the tractus intestinalis, from loss of power in the abdominal walls, from catarrh due to constipation, from expansion of gas due to rise of the temperature after toxic absorption. Such subjects have a foul-smelling breath from the gases being absorbed by the veins in the tractus intestinalis and becoming exhaled through the lungs. Meteorism induces pain and discomfort from pres-

sure and dislocated viscera. The results of splachnoptosis are constipation, catarrh of the different segments of the tractus intestinalis, icterus through pressure, and stenosing of the ductus hepaticus. Also the nephroptosis induces stenosing of the duodenum and ureter by kinking and rotation.

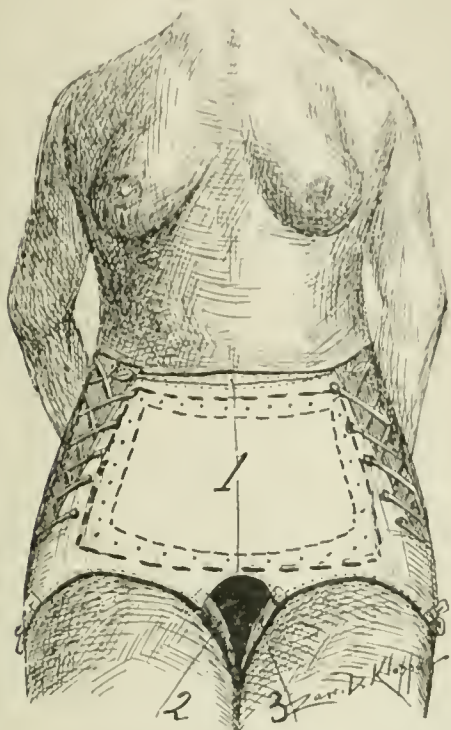


FIG. 8.—The rubber air pad is fitted to the abdomen inside the abdominal supporter. 2, 3 are rubber tubes to fix the abdominal supporter.

Patients subject to splachnoptosis suffer frequently from discolored skin and irregular kidney secretion, also from nausea, vomiting, irregular and obscure pains, with continual weakness.

The Circulation in Splachnoptosis (compromised).

In operating on the deep glands of the neck, where the large veins are isolated, it is very plain that respiration governs to a certain extent the venous circulation. Now, the diaphragm, pelvic and thoracic, as well as the anterior abdominal walls, when in proper tone normally influence the circulation in the abdominal veins. If the abdominal walls are relaxed, it becomes evident in difficult defecation and in the same manner the venous circulation of the abdomen suffers from lack of pressure. With relaxed abdominal walls the abdominal veins (and the entire system) are congested and stenosis results. As a sample of the evil effects of relaxed abdominal walls and consequent splachnoptosis, in repeated pregnancy there is heart weakness, because the veins of the abdomen are too constantly overfilled with excessive blood, robbing the heart of its required amount. Since receiving instruction from Prof. Schröder, some fifteen years ago, I continued the study and investigation of this subject. In relaxed abdominal walls one sees the distended veins of the extremities, the extensive and prominent veins of the vulva, as well as the large hemorrhoidal nodes. Besides the frequent and free uterine hemorrhages occur. In post mortems I

have carefully noted that subjects with splachnoptosis possess a plexus pampiniformis with straightened-out irregularly dilated veins. Spiral and uniform calibered veins are normal. In advanced splachnoptosis the pelvic veins, especially of the genitals and rectum, are widely and irregularly dilated, holding enormous quantities of blood. This causes hyperemia, congestion and stasis of the pelvic organs, resulting in hemorrhage, malnutrition, and pathologic changes in the genitals. The liver suffers likewise from congestion, hyperemia and blood stasis, for it drains the tractus intestinalis (spleen and pancreas) and the liver, by its dislocated position, compromises the blood current, especially in the portal and hepatic veins, besides, the dislocated liver drags or compresses the inferior vena cava, stenosing it. If the liver be dislocated to any considerable extent, which is frequent in gynecologic patients, the definite relations of the portal vein are disturbed, the liver veins and the inferior vena cava are dislocated or compromised, as the vena cava lies on the rigid dorsal wall. Venous circulation is of more physiologic and complex delicate nature than arterial, which is more mechanical, and is easily compromised by relaxed abdominal walls, by position, by disturbed respiration, by stenosing of venous lumen and by splachnoptosis. The veins of the abdominal wall are dilated and compromised as is noted by the enlargement, conspicuously observed in the inferior and superior epigastric veins. Continuous hyperemia, congestion and stenosis in the dislocated viscera produces pathologic changes in the organs themselves, impairing sensation, motion, secretion and nutrition. We thus have a vicious circle which might be called the visceral disease. Relaxed abdominal walls and consequent splachnoptosis disturbs a wide area of complicated functions. They distort an extensive and delicate mechanism, resulting in impaired respiration, circulation, sensation, motion and secretion and in the end result in malnutrition and neurosis.

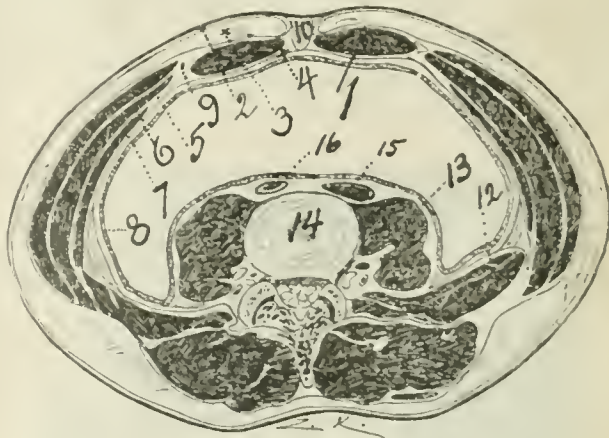


FIG. 9 represents a normal transverse segment of the abdominal wall. About the umbilicus. 1, rectus; 2, skin; 3, fascia; 4, fascia; 5, external oblique; 6, transversalis; 7, peritoneum; 8, linea semilunaris; 9, linea alba; 10, spinal muscles; 11, quadratus lumborum; 12, psoas muscle; 13, vena cava, and 16, aorta.

The Respiration in Splachnoptosis (irregular).

The prominent symptoms of the respiration in splachnoptosis are shortness of breath, irregular long respiration, difficult breathing and asthmatic breathing with cardiac palpitation. The relaxed ab-

dominal muscles, the respiration muscles, have lost their power and perfect muscular relaxation is not possible. Complete respiration is muscular relaxation and contraction. In the erect attitude the dislocated liver drags on the diaphragm through its coronary ligaments, and through the vena cava. Besides, the liver is in turn dragged on by the tractus intestinalis through its two ligaments attached to the liver, viz., ligamentum hepato-colicum and ligamentum hepato-cavo-duodenale, resulting in disturbance of a respiratory organ—the diaphragm. The irregular respiration—a frequent symptom of relaxed abdominal walls and consequent splanchnoptosis—is another link in the vicious circle, because it imperfectly and irregularly oxidizes the blood, disturbing nutrition.

(To be Continued.)

A CASE OF PISTOL SHOT WOUND OF THE STOMACH, LIVER, AND TRANSVERSE COLON, IN A PREGNANT WOMAN. RECOVERY AND DELIVERY AT TERM.

By ANDREW B. GLONINGER, M. D.,
of Lebanon, Pa.

Surgeon to the Good Samaritan Hospital.

Whilst I do not wish to pose as an authority on gun shot wounds, my experience with this class of cases has been considerable, and I have been so impressed with the value of drainage in wounds of this character that I have become a firm believer in that mode of procedure.

Apropos of the articles recently published in *The Philadelphia Medical Journal* by Dr. John B. Roberts and Dr. G. W. Penn, the following case should prove interesting:

On September 30th, 1895, I was called to see Kate F., who had been shot by her husband at close range with a 38 calibre revolver. The woman was young and robust, of the phlegmatic type, characteristic of the Pennsylvania German, and consequently showed slight evidence of shock, her respiration and pulse being only slightly above the normal. The physician in attendance was industriously employed in probing the wound and had succeeded in forcing a passage between the abdominal muscles and the fascia. After considerable parlying he desisted from his efforts and agreed to have the patient removed to the Good Samaritan Hospital of this city.



Pistol Shot Wound.

I found the wound to be about one inch to the left of the median line, and two inches below the ensiform cartilage. I made an incision in the median line and found that the missile had passed through the lower portion of the stomach (allowing a considerable quantity of partly digested food to escape into the abdominal cavity,) transverse colon and lower lobe of the liver. A thorough search of the abdominal cavity failed to discover its further passage or whereabouts. The edges of the six orifices made by the bullet were trimmed back to a distance of a quarter of an inch so as to remove all bruised and devitalized tissue, the edges brought together with Lembert sutures using fine catgut, torn vessels were ligated with gut, the abdominal cavity thoroughly flushed, a large drainage tube introduced, and the incision closed in the usual manner.

The patient's temperature an hour after the operation was 98.3°, pulse 84. She vomited a considerable quantity of clotted blood shortly after the operation, and complained of much pain which was controlled by hypodermics of morphia. A high enema was given on the following day. She voided a normal quantity of urine during the first twenty-four hours, slept fairly well, and was given nutritive enemata every four hours. The abdominal cavity was flushed out at frequent intervals.

On the third day she was allowed to take a little cracked ice, later on a little brandy, the nutritive enemata being continued. On the fourth day she was given two ounces of peptonized milk and had a normal bowel movement. On the fifth day she was given three ounces of malted milk and the drainage tube becoming clogged, a little extra pressure by elevating the water bag caused the expulsion of a quantity of broken down tissue through the drainage tube. On the seventh day the sutures were removed and the liquid coming clear from the abdominal cavity, the drainage tube was removed. The bowels were kept open by the use of small doses of calomel and an occasional high enema. The temperature rose on the twelfth day to 102.4°, due to a suture abscess which was opened and drained. A light diet was continued up to the fourteenth day, when the temperature reached the normal point. From this time the patient made an uninterrupted recovery.

About four months subsequent to the receipt of the injury the patient was delivered of a healthy female child. The successful termination of this operation was particularly gratifying from the fact that it saved three lives, the patient, the child, and the husband, who instead of being sent to the penitentiary for twelve years would doubtless have been hanged.

In November, 1899, I located the bullet with the use of the X-Ray in the left innominate bone.

My assistants at the operation were Dr. John Beattie, of this city, and Dr. Charles Schmehl, at present resident physician at the Warren Insane Asylum.

THE PRESENT STATUS OF THE BOITINI OPERATION AS A METHOD OF TREATMENT IN OBSTRUCTIVE HYPERTROPHY OF THE PROSTATE GLAND, DERIVED FROM A SUMMARY OF EIGHT HUNDRED AND EIGHTY-EIGHT OPERATIONS BY FORTY-EIGHT OPERATORS.

By ORVILLE HORWITZ, B. S., M. D.,

of Philadelphia.

Clinical Professor of Genito-Urinary Diseases, Jefferson Medical College; Surgeon to the Philadelphia Hospital, Jefferson Medical College Hospital and State Hospital for the Insane.

(Continued from 918).

I am indebted to Mr. M. R. Dinkelspiel, of the Jefferson Medical College, for the great amount of work so ably performed in compiling and tabulating the cases in the following table:

No.	Author and Operator.	Reference.	No. of opera- tions.	Deaths	Un- improved.	Im- proved.	Cured	Remarks
						Improved and cured (See remarks.)		
1	Bottini.	L'Iscuria prostatica. Florenz. L. Nicolai, 1900, p. 194, cited by Freudenberg (l. c.)	435	17	16	402		
2	Bottini.	Verhandlungen des X. Intern. med. Kongresses, Berlin, 1900, part 7, p. 165.	43		11		32	Centralblatt für die Krankheiten der Harn- und Sexual-Organ, 1900, No. 11.
3	A. Freudenberg.	Centralblatt für die Krankhei- ten der Harn- und Sexual-Or- gane, No. 11, 1900.	61	6	8	16	31	Two deaths doubtfully due to operation
4	O. Simon.	Centralblatt für die Krankhei- ten der Harn- und Sexual-Or- gane, 1898, No. 9, p. 429.	8	2	1	1	4	One death due to uremia, and one to pyelonephritis.
5	Alfonso Hanc.	Wiener Med. Presse, No. 31, July 31, 1898, vol. 39, p. 1295.	5		1	2	2	The opinions of Stockmann (l. c.), Freu- denberg (l. c.) and others vary as to the clas- sification of the results in Hanc's cases. The cases herein tabulated as improved closely approach a cure.
6	Willy Meyer. First reported Bottini-Operation in America.	N. Y. Medical Record, May 12, 1900.	21	4	2	9	9	Of the 16 per cent mortality, 8% was due directly to operation. 8% no. directly due to operation.
7	Casper.	Personal communication to Freudenberg. See Centralblatt für die Krankheiten der Harn- und Sexual-Organ, No. 11, 1900, p. 516.	13	2		7	4	
8	Lohnstein.	Personal communication to Stockmann (l. c.)	12	1		5	6	In addition references to these cases will be found in Monats-Bericht von Casper, Lohnstein, 1898, p. 633.
9	König.	Centralblatt für die Krankhei- ten der Harn- und Sexual-Or- gane, Bd. XII., Heft 1 und 2.	19	2	2	4	11	One death attributed to faulty operative technique.
10	Leonard Freeman.	Phila. Med. Journal, Dec. 23, 1899, vol. X, p. 1210	8			3	5	One case, operated on for carcinoma of the prostate gland.
11	Rochet.	Annales des mal. génito-urin. 1898, p. 70.	2			2		Later reported in Lyon Médicale 1898, p. 26, that out of 2 cases of the author, one resulted favorably.
12	A. J. Downs.	Phila. Medical Journal, Dec. 21, 1898	1				1	
13	Ramon Gultéras.	Journal of the Am. Med. Ass. July 1, 1899.	20	2	2	14	2	One death, doubtfully due to operation.
14	König, A.	La Clinica Chirurgica, 1898.	1			1		
15	Weber and Torek.	Med. News 1898, vol. I, p. 72.	1			1		
16	Morton, Henry H.	Med. Record, Sept. 17, 1898.	5				5	Stockmann (l. c.) considers all 5 cases as only "improved", but Freudenberg (l. c.) believes at least one cured, there being 6-7 micturitions daily and 1 dram of residual urine.
17	Nicolich.	France Med., Dec. 23, 1898. Reported at the French Uro- logical Association, III. Session	5			2	3	
18	H. H. Young.	Transactions of the Medical Society of Virginia, 1899.	5			2	3	
19	Roth.	Pesther Med. Chir. Presse, 1899, No. 18-21.	2			1	1	
20	Lennander.	Centralblatt für Chirurgie 1897, No. 22.	1		2	1	1	Willy Meyer, N. Y. Med. Record, Jan. 14, 1899, p. 46, estimates one cure, and 3 little or not improved.
21	Cauterman and De Keers- maecker.	Annales et Bull. de la Soc. de Med. D'Anvers, June 1900, p. 91.	1				1	

No.	Author and Operator.	Reference.	No. of opera- tion.	Deaths.	Un- improved.	Im- proved.	Cured.	Remarks.
22	R. de la Harpe. Clinic of Prof. Burkhardt.	Centralblatt f. d. Krankh. der Harn- und Sex.-Organe, Bd. XII., Heft 3.	22	4.5%	18.2%	77.3%		
23	Floderus.	Deutsche Zeitschrift für Chir- urgie, 1897, p. 110.	3			1	2	This is Stockmann's classification of Floderus's results.
24	Stockmann.	Deutsche Med. Wochenschrift.	7	1	1	4	1	One death doubtfully attributed to opera- tion.
25	Lewis.	Phila. Med. Journal, Dec. 10, 1898.	3			1	2	
26	Rydygler.	Wien. Klin. Wochenschrift, 1898, No. 10, 1899, No. 1.	2	1		1		
27	Bangs.	Medical Record, Dec. 30, 1899.	2		2			
28	Kreissl.	Chicago Med. Recorder, July 1898, Chicago Clinic, No. 5, 1899, Med. News, 1899, p. 483.	5	1		1	3	One death doubtfully attributed to opera- tion.
29	Alexander.	Med. Record, Dec. 30, 1899.	1		1			
30	R. and F. Rörlg.		4					A just deduction of results cannot be esti- mated in these cases, as is also claimed by Freudenberg (l. c.)
31	Ceccherelli.	Quoted by Ramon Guitéras (l. c.)	4		1	3		
32	Jaffé.	Centralblatt f. Chirurgie, 1900, Supplement of Surgical Con- gress, p. 116.	2		2			
33	Sanesi.	Gazz. degli ospedali e delle clin., No. 15, (see Centralblatt f. d. Krankh. d. Harn- und Sex.- Org., 1899, p. 218.)	3				3	
34	Marlachess.	Ass. Franç. d'Urologie, III. session.	4		1		3	
35	Kümmell.	Berliner Klinik, August 1895 Heft 86 Münch. Med. Wochen- schrift 1900, p. 403.	11	1			10	Personal communications to Freudenberg (l. c.) and Stockmann (l. c.) justified both of these authorities, in the absence of further particulars, in 13 cases to consider only a part of results; Freudenberg in 10 cases and Stockmann in 12 cases.
36	Hübner.	From the Clinic of Mikulicz, Deutsche Med. Woch., 1899.	1			1		
37	Henle.	From same clinic. Allg. med. Central-Zeit., 1899, p. 895.	1			1		
38	Rovsing.	Personal communications to Stockmann, quoted by Freuden- berg (l. c.). Ref. No. 3.	6		3	3		
39	Scharff.	Ibid	6	2	2	2		
40	Kutner.	Ibid	3			2	1	
41	Casper.	Ibid	13	2		7	4	
42	Viertel.	Ibid	10		1		9	See also. Allg. med. Central-Zeit., 1898, p. 890.
43	Wossldlo.	Deutsche Prax., 1898, No. 11 and 15.	2		1	1		See also. Willy Meyer, Med. Record, June 11, 1899, cases 12-16.
44	Van Stockum.	Geneeskundige Bladen, 1898, p. 87.	3		1		2	See also. Centralblatt f. Chirurgie, 1900, supplement to No. 28, containing transactions of congress.
45	Horwitz.	Philadelphia Med. Journal, June 15 1901, p. 1171.	33		1	10	22	
46	v. Frisch.	Wiener Klin. Wochenschrift, 1898, No. 48.	10	1	3	2	4	
47	R. H. Loux.	To be reported later.	6	1		2	3	
48	Granville Gowan.	New York Med. Journal, Aug. 1, 1900.	6	1	1	1	3	
49	Bangs.	N. Y. Med. Journal.	42	3	20%	20%	60%	Five of these operations were performed by Dr. Bang's assistants Dr. Pedersen and Dr. Squier.
50	Horwitz.	l. c.	3			1	2	

An analysis of these statistics gives the following results: Of 888 operations death resulted in 51 cases, making a mortality of 5.7 per cent. In 88 cases no benefit was derived from the operation, so that ten per cent. of the cases were unimproved, making 84.3 per cent. either cured or improved by the operation.

On examining the table it will be found that 435 of the cases, which were operated upon either by Bottini or his assistants, are classified under the heading "Cured and Improved," the surgeons who reported the results of the operations having failed to make any special distinction between the two results. If, then, we reject from the statistics, when considering the percentage of cures, the 435 cases referred to as not sufficiently explicit, as to cure and improvement, there will remain 453 cases of which we have definite information concerning the actual number of cures that resulted from the operation. Out of this number 214 cases of cures are recorded, giving a percentage of 47.2 per cent.

The results obtained in 888 operations may be summarized as follows:

Improved and cured, 84.3 %.

Unimproved, 10 %.

Deaths, 5.7 %.

Of 453 cases of which we have accurate information, the percentage of cures was 47.2 per cent.

It is fair to assume that the 888 individuals who submitted to the Bottini operation did so because they had arrived at that period when surgical interference was the only thing that offered any hope of relief. They were not selected as specially suited for the method of treatment employed. All were operated upon without discrimination. Every known condition, configuration, and kind of prostatic hypertrophy, frequently associated with one or more of the numerous complications and pathological changes which follow a prostatic hypertrophy, made up the number. The ages of the individuals varied from those who were entering upon the decline of life up to those who were far advanced in years.

When these cases were under the surveillance of the respective surgeons in attendance, the Bottini method was yet on trial, and its employment was still in abeyance, being largely experimental. But the results of these operations have been to place this process upon a firm basis, its advocates claiming that it is reliable and most satisfactory as well as the safest in the hands of the skilled surgeon, for the relief of senile hypertrophy of the prostate gland.

The fact that out of 888 unselected cases 715 of the number were either cured or improved, the mortality being only 5.7 per cent., confirms this statement. The value of the methods of treatment is brought more forcibly to our attention when we compare the mortality of the Bottini operation with that of other radical measures in vogue for the relief of hypertrophy of the prostate. The mortality of partial, perineal or suprapubic prostatectomy is given as 14.3 per cent. Unfortunately, the employment of this operation is limited to only special forms of prostatic overgrowths. The mortality of the

complete removal of the gland by means of either the perineal or suprapubic route is variously estimated to be between 18 and 25 per cent, whilst that of the Bottini ranges from 4.5 to 7.3 per cent., varying in the hands of different operators, giving an average of about 5 per cent. From the results obtained from the list of cases tabulated, I think we are justified in drawing the conclusions that follow:

1. There is less fear on the part of the patient to submit to the operation than there is to any other surgical procedure so far suggested for the relief of prostatic hypertrophy.

2. The principal advantages to be derived from the method of treatment are: A short time only is required to perform the operation, which is attended with little shock and usually slight loss of blood, convalescence is rapid, and the mortality is lower than that by any other radical measure.

3. Cures result in the large majority of cases, especially if the operation is undertaken early. Marked improvement may be looked for in a vast number of cases, where otherwise individuals would be condemned to suffer, as the danger attending any of the other radical methods of treatment would be too great to warrant their employment.

4. Failures occur in but a comparatively small percentage of cases, want of success being due to the pathological changes and complications which have taken place. Especially is this true in those instances where an incurable cystitis exists.

5. The operation is contraindicated when a valve-like formation exists, or where there is a greatly increased overgrowth of the three lobes, associated with tumor formation, giving rise to a pouch, above and below the neck of the bladder.

6. It may be employed with benefit, and safety, as a palliative measure in cases of prostatic hypertrophy of long standing, associated with cystitis, when the general health will be improved and constipation, which is usually associated with this condition, relieved, mitigating the prostatic spasm of the urethra, and rendering the insertion of the catheter easy and painless.

7. Pyelitis, when present, adds greatly to the danger of the operation, but is not always a contraindication to its employment.

8. The character of the growth has but little bearing on the result of the operation.

9. The operation may be employed as a safe and satisfactory means of causing a suprapubic fistula to close, which so frequently follows a suprapubic cystotomy when the prostate gland is hypertrophied.

10. In suitable cases it is not only the best radical measure thus far devised for the relief of prostatic hypertrophy, but is attended by the smallest mortality.

11. The operation is especially indicated in the beginning of obstructive symptoms due to hypertrophy of the prostate gland and may be regarded as a prophylactic method of treatment.

12. The operation is capable of producing a symptomatic cure in a great number of cases of various conditions and configurations of the prostate gland due to hypertrophy, as is shown by the disappearance of prostatic spasm, the restoration

of the function of the bladder to its normal condition, and the improvement of general health.

13. When operating early, before the prostate has become much enlarged, the safest method to pursue is to perform a preliminary perineal cystotomy, introducing the "perineal galvano-cautery incisor" of Chetwood, so as to make the incision in the prostate.

14. In some instances a prolonged preparatory treatment is necessary before the operation can be safely undertaken.

15. In cases of prostatic obstruction, which have existed for a lengthened period, where there is chronic cystitis, the physical condition of the patient being below par, both local and constitutional treatment must be persisted in for months after the operation before the great benefit derived from the procedure can be insured, which treatment would be ineffectual unless the obstruction had first been removed.

THE EARLY RECOGNITION AND MANAGEMENT OF ARTERIAL DEGENERATION.*

By LOUIS FAUGERES BISHOP, A. M., M. D.,

of New York.

The conditions that most occupy the attention of those practitioners, who take care of the health of a class of patients to whom they act in the capacity of family physician are not always diseases to which definite names are given, nor which can figure in the health reports of a community.

Such a condition is arterial degeneration, which in its latter development is often known as Bright's disease, heart disease, paralysis, gout, senility, and by many other names according to the processes that develop alongside of it, or are caused by it. In its last development arterial degeneration can go on to extraordinary deformity of the blood vessels and I have brought with me the specimens of such a case because in its last stages it presented some symptoms that are often premonitory.

A popular belief is that the chief danger of arterial degeneration is rupture of a blood vessel. The term apoplexy though originally, of course, meaning to fall suddenly, has been so far diverted from its original significance that a hemorrhage into the lungs is often spoken of as apoplexy of the lungs. The fact is that the rupture of a blood vessel is comparatively one of the least common evils of arterial degeneration. It rarely does serious damage in any part of the body except the brain, and in the brain it forms a small minority of the accidents that lead to paralysis. Far greater is the danger of the establishment of secondary disease of the heart and kidneys or the interference with the circulation in the brain even to the extent of thrombosis. If apoplexy were the only danger to be feared from chronic intoxication or over-work and worry the chances might often be worth taking. The same thing is true of aneurism, the cause of which is probably nearly always specific and very frequently associated with the history of physical toil. The form of arterial degeneration of most interest to the general practitioner, who has the care of the health of indi-

viduals over long periods of time, is that which affects the smaller arteries. It is these arteries which first give the signs of disordered function by offering an unhealthy resistance to the circulation of the blood and causing tension. The early recognition of this tension and its treatment by appropriate methods is well worth careful study. It is this tension that inevitably leads to organic changes of these smaller arteries and finally to cardiac and nephritic disease. There is, however, a stage preceding even the development of tension when under certain circumstances from an irregular action of the vaso-constrictors a tendency to tension may be detected. This irregular action of the blood vessels is most evident when involving circulation of the brain. It is shown by temporary loss of consciousness, attacks of dizziness, temporary affections of the motor areas causing clumsiness of an arm or a leg or slight evanescent aphasic symptoms. In this early stage there may be disordered action of the coronary arteries of the heart leading to temporary irregularities of action or of mild attacks of the nature of angina. In fact all the symptoms that are so familiar in cases of advanced arterial sclerosis may be imitated in a shadowy manner by the functional degenerations of the arteries that forebode organic disease. All clinical workers are perfectly familiar with these cases in the advanced stage and with the difficulty of obtaining permanent improvement. For that reason it is profitable to study the early recognition of the tendency to this condition and the management of the individual to prevent its further development. It is a disease that belongs to the most useful and successful members of the community. The slothful, colorless individual, who never accomplishes anything good or bad is in no danger of this form of arterial degeneration early in life. The most typical cases for the early recognition of this disease are seen in young men,—generally successful men, who are laboring under great mental tension and who combine their work with a certain amount of dissipation.

This study is purely a clinical one, and in practice it is extremely difficult to say when degeneration has become sufficiently advanced for gross or even microscopical demonstration. Degeneration frequently first manifests itself as a tendency, and this tendency is known by disordered function. Degeneration at first is fatty, later connective tissue is formed, and finally calcification occurs. In practice calcification, when advanced, is easily detected in the moderate sized superficial arteries. In considering the causes of degeneration of the blood vessels heredity must be acknowledged to be a powerful factor. Arterial degeneration is the natural accompaniment of advancing age, and its onset is attended with a certain amount of regularity in families. This, however, is not inevitable and the life of the blood vessels will depend for most upon the use that is made of them. Men may not all be agreed as to the wisest conduct of life. Most serious are those conditions which are well described as the chronic intoxications, that is, in which they are the poisonous or products of disease prevailing the system for a long time. Among those alcoholic poisoning, gout, syphilis, the retention products of Bright's disease

* Read before the New York Academy of Medicine, June 6th, 1901.

and chronic blood poisoning can be classed. The second series of causes are those that have to do with function, and it is upon these causes of arterial degeneration that we wish particularly to dwell. It is among men who live under a constant strain in which tension of the brain and nerves leads to tension in the arterial system and finally to functional disorders of the circulation that we may look for premature degeneration apart from the causes which have been classed as the chronic intoxications.

Fothergill, writing many years ago, in "The Heart and its Diseases," has the following very suggestive paragraph concerning tension:

"This condition is slowly developed, and up to this point the individual is often the type of health and vigor to look at. The high blood pressure gives vigor and activity to the body generally; the brain, perched at the top of the organism, is well supplied with blood, and its action is energetic and sustained. The complexion is often ruddy, showing a full vascular system; the walk is firm, showing that the muscles are well fed; the appetite and digestive processes are excellent; indeed, the individual presents the appearance of a well-nourished, active, energetic being, who never has to consult a doctor. The hard brain-workers of society, are commonly men who are in this first stage of lithiasis, and who in time will furnish the cardio-vascular changes which are the associates of the gouty heart. It does not follow, however, that there are not other persons than the stalwart and ruddy who are in this first stage, and who possess a high arterial tension. Slightly built individuals, of the nervous diathesis, may be rather pallid even, and yet have a sustained high blood pressure in their arteries, and be characterized by energy. The contrast betwixt the ruddy-complexioned persons of the gouty diathesis, and the pallid persons of the nervous diathesis, each being in the early stage of the gouty heart, is considerable; yet comparison soon brings out the points which they present in common."

The management of arterial degeneration where the tendency is distinctly recognized must consist more in hygienic measures than in the administration of drugs. If the cause be one of the chronic intoxications it is plainly necessary to make an attempt to remove the cause. Syphilis will be the cause more often than even those who are alert will believe at the time. For that reason, and from the fact that the iodides are particularly beneficial wherever there is a tendency to high arterial tension, they will find a place in the treatment of all these cases. Alcohol must by all means be limited in amount. Unfortunately there are but few individuals who having once become habituated to the use of alcohol will on the advice of a physician abandon its use. It is better therefore to lay down certain rules that are within the reach of attainment. Limit the alcohol to meal times, and reduce its quantity as much as possible. There are two drugs that are distinctly contra-indicated in early cases of arterial degeneration, and these are iron and digitalis. Digitalis is a prince among drugs when failure of circulation threatens a drowning out of life by pathologic effusions. Iron remains supreme in the treatment of the anemias and debilitating diseases

of youth. However in the early stages of arterial degeneration digitalis will hasten the development of high arterial tension and an excess of iron will act on the blood vessels as an astringent. The persistent use of alkalies to smooth the irritated blood vessels, the abundant use of water, the use of bitter tonics in small doses about complete the list of drugs that need to be considered as having a direct bearing upon arterial degeneration. The rest is the management of the physical and mental condition that predispose to arterial disease.

An interesting type of individual who comes under the care of the physician, particularly in large cities, is the man between youth and middle age, who by native ability and strenuous exertion has become successful in business and is carrying a weight of responsibility disproportionate to his antecedent training. Such a person is apt to fall into a condition of neurasthenia with disturbances of circulation strongly suggesting early arterial degeneration. One cannot say there is arterial tension, but the palpation of the pulse gives the impression of an unstable pressure showing that the arterial tone is unstable. The patient complains of momentary loss of power to fix the attention so that he suddenly for a few seconds seems to lose his grasp of things. He has a sense of pressure at the back of the head, and is decidedly apprehensive about himself. He presents the appearance of health, and indeed his color may be particularly good. In such a case the use of the bromides is of the greatest value. Bromides have the power of controlling this condition that has happily been described as chorea of the blood vessels. It is seen most strikingly in women at the menopause, but is also an early symptom of a tendency to arterial degeneration. In older people this tendency is shown by irregularity of the circulation of the brain as manifested by slight hemiplegic symptoms as described above. The use of the iodide of soda in small but persistent doses and the administration of nitro-glycerine for part of the time are of the greatest value in this type.

I received a note the other day from a patient who had these symptoms in a marked degree over a year ago. She has taken a tooth of a grain of nitro-glycerine three times a day for one week out of each month. She has been free from symptoms so that I have not had occasion to see her. It is particularly important that persons in whom the tendency to arterial degeneration is recognized readjust their lives to avoid heavy responsibility. If the individual is carrying unnecessary burdens in the way of assumed responsibilities they should be abandoned. If a business man has attained a reasonable degree of fortune he should adjust his affairs so that half of his time should be devoted to country life and the pursuit of pleasure. Every man cannot become a devotee of sport, but any one can become interested in a country place or some other out-of-door hobby.

Sansom points out the mental symptoms of commencing arterial sclerosis after middle life. He says that such a patient becomes fanciful, interspersive, low spirited, and moody, but shows no obvious signs of disease other than those of dyspepsia.

The effect of arterial degeneration upon the organs of special sense is sometimes striking. The

rupture of a small blood vessel in the eye in an individual who is past middle life, and who is suffering from the strain of over-work, that is work out of proportion to his strength, is a sign the significance of which should not be neglected. The oculists tell us that these small conjunctival hemorrhages are not important or dangerous. It is true that they often precede more serious manifestations of arterial disease by a long time, but nevertheless I have in mind an instance in which sudden death attributable to a large cerebral hemorrhage followed this occurrence. People of the temperament to be the subject to arterial degeneration are not easy to frighten or to arouse to a sense of their danger. They are generally of a sanguine type, not given to introspection or care of their health. A superficial hemorrhage being apparent will more often arouse such people to the sense of their danger, and for that reason it should not be made too light of by a physician. In the same person a really serious disorder of circulation of the brain leading to temporary loss of power or attacks of dizziness might not excite nearly so much apprehension. In dealing with degeneration of the arteries we are dealing with a condition that is essentially chronic, and for that reason one that should interest exceedingly a large class of those who care for the sick. The cry of the nurse, the medical student, and the hospital intern is for acute disease, so-called interesting cases and rare conditions. It is hard to arouse their interest in the phenomena of old age or earlier degeneration, but to the physician whose practice consists in caring for families,—both young and old—these phenomena will ever be of such importance that they cannot fail to be interesting. The problem that in the long run Ad The early Recognition and Managements etc. — is propounded to the family physician is how to attain a long life and a healthy one, and the answer is bound up in the regulation of those conditions that tend to hasten or delay arterial degeneration.

As in suspected myocarditis it is difficult to decide between cases in which the heart is functionally disordered and in which there is organic change, so with disease of the blood vessels functional degeneration will often resemble closely structural degenerative changes.

The analogy between degenerative disease of the vessels and degenerative disease of the heart is emphasized when the evolution of the circulatory system is remembered, and the fact that the heart is only a differentiation of a portion of the circulatory tube. Thus, as in myocarditis attention is directed to the coronary vessels, so in arterial disease the office of the vasa-vasorum must be remembered. Probably when the vessels of the vessels are involved the process goes on with much greater rapidity than when the disease takes another form, and it is perfectly philosophic to explain irregularities in the action of the muscles of the vessels by deficiencies in blood supply.

This problem of the early recognition of arterial degeneration is one well worthy of the exercise of the most careful judgment. Particularly

must a hasty conclusion be avoided from a single symptom.

There are not a few cases where arterial degeneration has undoubtedly started, and yet a change in the mode of life and proper treatment has brought about an arrest of the condition. Such instances are sometimes seen in young medical men, who over a period of time work under great strain and anxiety, but afterwards attain to a sounder philosophy of life and more easy circumstances. This would account for the albuminurias of over-worked young men. The relation between neurasthenia which is undoubtedly a condition of mal-nutrition of the nervous system and arterial degeneration which in its beginning is mal-nutrition of the arteries, there are several points of analogy. The first is a giving out of the nervous system and the other of the circulatory system. No doubt many a man is saved from arterial degeneration by the development of a neurasthenia that checks his tendency to over-work or limits his capacity for dissipation. Arterial degeneration is the penalty of chronic intoxication whether the intoxication is of over-work, the intoxication of alcohol, the intoxication of a too rich diet, the intoxication of syphilis. Its early recognition by the physician at a time when it can be checked and the circulation preserved and its proper management is well worthy of the attention of medical practitioners.

A CASE OF POISONING WITH OIL OF CEDAR.

By J. T. CLEGG, M. D.,

of Siloam Springs, Ark.

A. M., age 34, married, mother of two children, the youngest living a year old, never miscarried. Now pregnant in the fourth month of gestation. Was found in convulsions at 8.45 P. M., May 8th, 1901. I saw her thirty minutes later. She was comatose and having violent epileptiform convulsions recurring about every ten minutes. Pulse during the intervals between the convulsions was full and slow. Respiration was hurried and irregular, face was flushed and extremities cold, pupils slightly dilated, not reacting to light. Abdomen tympanitic. There was an odor of an essential oil on her breath. A glass was shown me that smelt strongly of oil of cedar. I gave at once 1/10 grain apomorphia hydrochlorate hypodermically, emesis occurring ten minutes later, the contents of the stomach exhaling the same odor. The stomach was then washed out as quickly and thoroughly as possible. A quart or over of a solution of bicarbonate of soda was left in the stomach thirty minutes when apomorphia was again administered, resulting in ejecting the soda solution that still smelt of the oil. After this, however, the convulsions ceased to recur. At one o'clock A. M. she was resting quietly. Although there had been involuntary discharge of urine during the convulsions, a large quantity of limpid urine was drawn from the bladder. At 8 A. M. she was restless and uneasy, but showed some indications of returning consciousness. Pulse and temperature normal, respiration remaining irregular. There were frequent, but voluntary discharges of large quantities of limpid urine. The bowels had moved once during the night, the feces having the odor of the oil. At 6 P. M., May 9th, she was still very restless but sufficiently conscious to complain of a general muscular soreness, doubtless the result of the muscular spasms of the night before. She is taking egg albumin, but no other food. 8 A. M., May 10th, she has almost regained consciousness, pulse, respiration and temperature normal, kidneys are not acting so copiously, abdominal tympany has disappeared, but she has passed a restless night and is suffering from a general muscular soreness and an indefinable uneasiness. She is taking egg

albumin in cold water. May 11th, 8 A. M. has had a comfortable night and feels fairly well, takes milk in small quantities. From this time on recovery was uninterrupted except by a tenderness over the stomach with complete anorexia and other symptoms that led me to think perhaps there might be an abrasion or even an ulcer of the stomach. About a teaspoonful of the cedar oil was taken, doubtless for the purpose of causing an abortion. Abortion did not occur and so far as I was able to observe there was no direct influence on the uterus in any way. The oil of cedar is the volatile oil of the leaves or spines of the *Juniperus Virginiana*, *Virginia* or *Red Cedar*. It is not official and is mentioned briefly in the last edition of the United States Dispensatory as having properties similar to those of the oil of savin and of having been used for the purpose of producing abortion and as having been known to cause death. It is sold as a popular ingredient of many domestic liniments, and as an insecticide. It is often sold to the public; many persons use it for the purpose of driving away flees, gnats, mosquitoes, etc. This case proves it to be a very active and dangerous poison, for not over 90 minims could have been swallowed not longer than thirty minutes before violent convulsions set in, which doubtless would have proven fatal, but for prompt interference. Moreover it was taken just after a full meal and much of it must have become diluted with the contents of the stomach, and this facilitated its evacuation by vomiting. Yet in spite of this fact alarming symptoms continued several hours, and the patient made a very slow convalescence. So far as I am informed but few cases of poisoning from this substance are recorded. But poisoning by oil of savin, which it resembles, shows gastro-intestinal inflammation with ulceration of the mucous lining of stomach and bowels. The indications for treatment of these cases are of course obvious; speedy evacuation of the stomach by emesis and the stomach pump, in addition to which I washed out the stomach with the sodium salt, hoping that the alkali would combine with the oil and thus facilitate its complete removal. I chose a bicarbonate, thinking that by setting free, by normal acid combination and reaction, a quantity of carbolic acid gas in the stomach, the stomach could be distended so that its surface could be more effectually freed from oil, some of which no doubt would have lodged in the mucous folds of the stomach.

ARCHIVES DE MEDECINE DES ENFANTS.

September, 1901. (Volume IV. No. 9.)

1. The Peritoneal Complications of Vulvo-vaginitis. JULES COMBY.
2. The Causes of Deaf-Mutism. A. CASTEX.
3. Maxillary Sinusitis in the New-born. A. CASTEX.
4. The Treatment of Croup. PECHADRE.

1.—Comby gives the case-histories of eight girls between the ages of 4 and 12, in whom peritonitis occurred as a complication of vulvo-vaginitis. In two cases the peritonitis occurred after scarlet fever, in one case after typhoid, and in one case after pleurisy. But in all case the peritonitis followed a vulvo-vaginitis, and gonococci were generally found in the discharges. Comby believes that the ordinary microbes of suppuration do not tend to cause peritonitis as a complication of vulvo-vaginitis. Peritonitis occurs suddenly, with vomiting, pain, tympany, constipation, pollakiuria, fever, cyanosis of the extremities, etc., lasting from two to eight days. Relapse is unusual. Most cases are generalized, though rarely localized or pelvic peritonitis may develop. As a rule the prognosis is favorable. Appendicitis and tuberculous peritonitis must be distinguished from gonococcal peritonitis. The treatment is primarily local, ice, morphin, normal salt injections and stimulants when necessary. For the vulvo-vaginitis Comby uses hydrogen peroxide, 1 to 12, or potassium permanganate, 1 to 1000. [M. O.]

2.—Castex, in an interesting article, gives details upon the study of the deaf and dumb. A minute history of each child is taken, a thorough physical and functional examination made, and the peculiarities of each individual are noted.

After a review of their characteristics, complicating conditions, measurements, etc., Castex discusses the causes of deaf-mutism. He concludes that this condition is as often found congenitally as it is acquired. The causes of congenital deaf-mutism are consanguinity of the parents, tuberculosis, syphilis, alcoholism, lead poisoning, or accidents occurring during pregnancy. Deaf-mutes rarely have deaf and dumb children. The causes of acquired deaf-mutism are meningitis, convulsions, brain fever, etc. Autopsy shows the majority of the cases to have labyrinthine, cerebral, or bulbar lesions. In the treatment of deaf and dumb children, gymnastics, bathing, and thyroid extract will aid the work of the instructors. The acoustic examination shows how much each child can hear, which is of value in his special instruction. The instruction of the deaf and dumb in asylums should be made obligatory. [M. O.]

3.—Castex reports a case of severe maxillary sinusitis in an infant five weeks old, upon which he operated. There was a purulent discharge from the right nostril, with abscess of the right lower eye-lid, and that side of the arch of the palate seemed somewhat raised. Pressure increased the amount of pus exuding through the right nostril. An external incision was made, the maxillary sinus evacuated, irrigated, and drainage left in. Bacteriological examination gave a pure culture of staphylococci. The child recovered rapidly. Not only was there maxillary sinusitis, but peristitis of the bones surrounding the sinus also. [M. O.]

4.—Péchadre reports two cases of diphtheria in which he performed paracentesis of the trachea, introducing oxygen through the trocar afterward. One case died and one recovered. Alcohol and antitoxin were administered in both cases. Péchadre hopes that more cases, treated in this manner, will be successful. [M. O.]

A Case of Congenital Ophthalmoplegia.—Felix Lagrange reports the case of a child of three, with double congenital ophthalmoplegia. She squinted at birth, and showed facial paralyses. The strabismus has been stationary since. There is double facial paralysis, more marked on the left side, and the eye-lids fail to close. The facial paralyses have improved as the child has grown. Refraction is normal. There is slight congestion of the optic papillae. On the right side there is complete paralysis of the right externus muscle, with paralysis of the superior facial nerve; on the left, are complete paralysis of the right externus muscle, almost complete paralysis of the superior facial, and paresis of the inferior facial nerves. There is diminished contractibility to the faradic current, but no degeneration. The origin of the facial paralyses is certainly central. Therefore it seems most probable that the cause of the paralyses of the right external muscles is also central. There is one common lesion, probably. The double origin of the facial nerve is clearly shown by this case. (*Bulletin Medical*, June 12, 1901, No. 46). [M. O.]

Experimental Data on Tubercular Toxins and Antitoxins.

—L. Ia. Frenkel and O. I. Bronstein (*Meditsinskoje Obozrenie*, May, 1901) experimented with the various derivatives of the tubercle bacillus, following largely the methods of Maragliano. Their conclusions are as follows: By means of simple mechanical processes there may be obtained from cultures of the tubercle bacilli, besides Koch's glycerin tuberculin, derivatives, such as tubercular toxins, fluid and solid; watery tuberculin and its sediment; fat-free bacilli, and a few others. (2) Many of these products possess a marked toxicity and may be subjected to accurate dosage. (3) All these substances when injected into animals in sufficiently large doses cause death, accompanied by typical phenomena. (4) By the gradual introduction of these derivatives, beginning with small doses up to the maximum dose, active immunity may be produced in animals. (5) The serum of immunized animals possesses marked anti-toxic properties, bearing a specific relation to each of the derivatives. [A. R.]

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended November 22, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	San Francisco.	Nov. 3-10.	1	
ILLINOIS:	Chicago.	Nov. 9-16.	1	
INDIANA:	Evansville.	Nov. 9-16.	2	
KANSAS:	Wichita.	Nov. 9-16.	5	
KENTUCKY:	Lexington.	Nov. 9-16.	2	
LOUISIANA:	New Orleans.	Nov. 9-16.	4	1
MASSACHUSETTS:	Boston.	Nov. 9-16.	28	3
MICHIGAN:	Grand Rapids.	Nov. 9-16.	1	
NEBRASKA:	Omaha.	Nov. 9-16.	4	
NEW JERSEY:	Camden.	Nov. 9-16.	1	
	Newark.	Nov. 9-16.	18	1
	Passaic.	Nov. 9-16.	3	
NEW YORK:	New York.	Nov. 9-16.	8	3
OHIO:	Cincinnati.	Nov. 8-15.	1	
PENNSYLVANIA:	Zanesville.	Sept. 3-Oct. 3.	1	
	Lebanon.	Nov. 3-17.	6	
	Norristown.	Nov. 9-16.	16	
	Philadelphia.	Nov. 9-16.	50	12
RHODE ISLAND:	Newport.	Nov. 9-16.	2	
VERMONT:	Burlington.	Nov. 9-16.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Oct. 26-Nov. 2.	2	
BELGIUM:	Ghent.	Oct. 19-Nov. 2.	7	
BRAZIL:	Rio de Janeiro.	Oct. 12-19.	50	
CANADA:	Quebec.	Nov. 9-16.	41	
	St. John.	Nov. 9-16.	4	
COLOMBIA:	Cartagena.	Oct. 19-Nov. 2.	7	
	Panama.	Oct. 29-Nov. 5.	100	
FRANCE:	Paris.	Oct. 19-Nov. 2.	9	
GREAT BRITAIN:	Glasgow.	Nov. 1-8.	1	
	Liverpool.	Oct. 19-26.	1	
	London.	Oct. 26-Nov. 2.	164	14
INDIA:	Madras.	Oct. 12-18.	1	
ITALY:	Naples.	Oct. 26-Nov. 2.	28	1
NOVA SCOTIA:	Halifax.	Nov. 9-16.	6	
RUSSIA:	Moscow.	Oct. 19-26.	2	
	Odessa.	Oct. 26-Nov. 2.	2	
	Warsaw.	Oct. 12-19.	2	
SPAIN:	Corunna.	Oct. 26-Nov. 2.	1	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Oct. 13-20.	3	
MEXICO:	Vera Cruz.	Nov. 2-9.	24	10
WEST INDIES:	Curacao.	Oct. 26-Nov. 2.	2	1

CHOLERA.

INDIA:	Bombay.	Oct. 18-22.	4	
	Karachi.	Oct. 12-18.	60	
STRAITS SETTLEMENTS:	Singapore.	Sept. 28-Oct. 5.	2	

PLAGUE—United States.

CALIFORNIA:	San Francisco.	Nov. 4.	1	1
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PLAGUE—Insular.

PHILIPPINE ISLANDS:	Mantla.	Sept. 14.	3	
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PLAGUE—Foreign.

AFRICA:	Cape Colony.	Oct. 12-19.	4	
BRAZIL:	Rio de Janeiro.	Oct. 13-20.	15	
CHINA:	Hongkong.	Oct. 7.	3	2
GREAT BRITAIN:	Glasgow.	Nov. 8.	3	2
	Liverpool.	Oct. 19-26.	5	2
INDIA:	Bombay.	Oct. 15-22.	179	
	Karachi.	Oct. 13-23.	23	15
MAURITIUS:		Oct. 24.	71	37

Cerebellar Tumors.—At a recent meeting of the Medical Society of the Paris Hospitals, (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 20, 1901, No. 21), Henri Huchard and P. Bergougnan report the case of a patient, aged 22, in whom cerebellar tubercles were found. Hemiplegia occurred suddenly two months ago. Occipital headache, vertigo and vomiting have persisted since. She feels "drawn" over to the right. There is no paralysis, sensibility is increased, and the left patellar reflex is exaggerated. Titubation was marked. Her sight was unaffected. General convulsions occurred, with divergent strabismus and death. At the autopsy, tubercles were found in the right lobe of the cerebellum and in both occipital

lobes of the brain. There was slight meningitis. Pierre Merklen reports a case of cerebellar tubercle in a man of 18. The first symptom was intermittent, severe occipital headache; with effort this became intense. So severe was the headache that he groaned aloud, and the muscles of his neck, contracted tensely, remained immobile during the paroxysm. In five months titubation was noted. Nothing relieved the pain. Trephining was done, but ventricular dropsy followed, with hernia of the lateral ventricle through the trephine opening. Lumbar puncture was repeatedly performed, 500 to 1000 g. of fluid being withdrawn at a time. Death occurred four months after operation. The autopsy revealed a solitary tubercle of the left lobe of the cerebellum. Merklen considers this severe occipital headache, either provoked or increased by effort, with stiffening of the muscles of the neck, an excellent sign of cerebellar tumor. In another case it decided him to suggest operation, which was followed by recovery after evacuation of a cerebellar cyst. Triboulet lays most stress upon the eye symptoms in tumors of the cerebellum. Early optic neuritis occurs from pressure. Comby believes that this severe headache only accompanies large tumors of the cerebellum. [M. O.]

The Etiology of Appendicitis.—Lilpaevski (*St. Petersburg Dissertation, Vrach*, vol. xxii, No. 22) performed a number of experiments on rabbits to determine the possible causes of appendicitis. In the first series (eight experiments) he introduced mechanical and chemical irritants into the appendix. The result was a slight inflammation, somewhat intensified when the irritant was very strong. The inflammation never spread beyond the appendix. In the second series (twenty-two experiments) cultures of streptococcus and coll communis were injected into the appendicular artery and also introduced into the lumen of the appendix. The first mode of inoculation was followed by no visible changes, but when the streptococcus was introduced into the lumen of the appendix a violent inflammation set in, the entire thickness of the appendix became infiltrated with the offending organism, and peritonitis followed. When the lumen was narrowed or closed by a ligature gangrene was the result. The introduction of the colon bacillus was followed by inflammation and the formation of granulation tissue in the serous coat of the appendix. These changes were greatly intensified, resulting even in death from peritonitis, if in addition a mechanical or chemical irritant was used. The opinion is expressed that in man appendicitis depends, not on a single factor, but on a combination of several. [A. R.]

Orthostatic Albuminuria.—At a meeting of the Medical Society of the Paris Hospitals (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 20, 1901, No. 21), Méry and Touchard report two cases of orthostatic albuminuria in young girls. Regular examinations of the urine for albumen was made, as well as several cryoscopic examinations. The albumen varied from 2 to 8 g. to the liter of urine excreted. This only occurred when the patients stood up. As long as they remained in bed, there was no albumen in the urine. In one case the night urine was always more than that passed by day. Albumen was no longer found in the urine passed 40 minutes after lying down. The most albumen was found at 11 A. M., before lunch. They believe that true renal albuminuria may become orthostatic. Achard and Loeper report another similar case. Her sister and mother also have albuminuria. They believe that albuminuria may be orthostatic before becoming or after having been permanent. [M. O.]

A Case of Trichosis Lumbalis with Concealed Spina Bifida.—In the *Centralblatt fuer Chirurgie*, (June 1, 1901, No. 22), Dr. Kellner, of the Eppendorf Hospital in Hamburg, reports the third case of trichosis lumbalis, an idiot boy of 14, who was brought to the Hamburg Asylum at Alsterdorf. Over the fourth and fifth lumbar vertebrae and upper part of the sacrum was a thick growth of hair, 45 cm. in circumference, 13 cm. in diameter. The hairs were 30 cm. long, blond and thin. They were noticed at birth, and grew with the hair on the child's head. They were often cut short. A Röntgen photograph showed a cleft in the fifth lumbar vertebra, proving the existence of spina bifida. Photographs show the condition off well. [M. O.]

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See Advertising Page 8.

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Two Ways of Transmitting Yellow Fever.—We are indebted to Dr. Charles J. Finlay, of Havana, for the discovery of the transmission of yellow fever through the inoculations of contaminated mosquitoes, and more recently (*Journal of the American Medical Association*, Nov. 23, 1901) this author has directed our attention to two different ways in which yellow fever may be conveyed by these insects. Finlay's first observation of mosquito transmission, which was made in 1881, was subsequently confirmed by the Yellow Fever Commission, presided over by Dr. Reed, in August and November of 1900.

Dr. Reed and his colleagues demonstrated that mosquitoes of a distinct species—*stegomyia taeniatata*—infected with the blood of yellow fever patients in whom the disease had not existed for more than three days, were capable of transmitting this disease after a lapse of twelve, sixteen or more days, in a large majority of the cases, while bites from these insects, five, six, eight, and ten days after their contamination were unsuccessful in the production of yellow fever in non-immunes. This method of propagating yellow fever, as pointed out by Dr. Reed and his colleagues, seems analogous to that of malaria, in which disease the parasite undergoes a series of transformations in the mosquito and is finally present in its salivary secretions, the medium through which infection occurs. Yellow fever, as malaria, may also be transmitted by direct injection of infected blood into a susceptible individual. Finlay states that he has been informed of "a recent experiment by Dr. Carroll, of Camp Columbia, showing that the blood of a mild experimental case of yellow fever, kept over night and a part of the next day (some fourteen hours) and injected into a non-immune, has produced a mild but characteristic attack of the disease." Finlay, after most careful clinical study, leads us to infer that the specific germs may be conveyed from the sick to the healthy in two ways. (1) During the first few days after the insect has bitten the patient, the germs contained in the blood remain attached to the parts constituting the sucking apparatus and may induce direct infection; (2) after a lapse of a longer period the germs are introduced through

the agency of the saliva in which they are contained.

We quote from Finlay's most interesting article what appears to be a valuable suggestion from the standpoint of prophylaxis, and one which is indeed worthy of early and more extended investigation: "The direct infection through the bite of recently contaminated mosquitoes, as far as I can judge from personal experience, produces much milder pathogenic effects, the fever is much less prone to develop albuminuria and the period of incubation is often prolonged. I believe that after this mode of infection has been duly verified, and with certain improvements, including the employment of home-bred insects and the proper adjustment of the number of these necessary to secure visible pathogenic effects, it will be found to constitute the only method which may be safely used, upon a large scale, for the purpose of conferring immunity."

Our Foreign-born Insane.—We print elsewhere a clipping from the *Boston Herald* that gives food for thought both to physicians and to statesmen. According to that newspaper the number of alien insane, at present confined in asylums in this country, is far in excess of the proportion which the foreign-born population of the United States bears to the native-born. In the country at large (by the census of 1890) the proportion of native-born to foreign-born citizens was 84 to 16, while the proportion of native-born insane to foreign-born was 65 to 35. In other words, the alien insane in our asylums are more than twice as numerous as they apparently should be.

The *Boston Herald* very properly calls attention to the immense expense which these alien insane impose upon the taxpayers of this country. It is estimated that this excess of foreign-born lunatics entails an expense of not less than \$10,000,000 a year. In New York State alone the item is \$1,000,000, and the necessary buildings have cost \$3,000,000. This feature of the case is not to be ignored, but it is really not so important as some other disadvantages which will readily suggest themselves to the medical mind.

First in importance among these is the great risk

involved in engrafting a deteriorated population upon our native stock. The American people are often accused of being "nervous" or "neurotic"—disposed to nervous diseases, such as neurasthenia and insanity. But the above figures tell a different tale. They show that our native-born population is twice as good as the foreign-born races which we are admitting to mingle with it. This is a most significant fact—one that has its encouraging features at the same time that it clearly indicates a danger.

This danger is that by our lax immigration laws we are admitting too many of the degenerate classes whose descendants in the future will be a charge upon and a source of responsibility to the State.

Congress already has under consideration a law extending the time within which an emigrant may be returned to his native country if he develops insanity. This time, which is now one year, is to be extended to two. This is none too short. It is proposed also to institute a more searching inquiry into the personal and family history of immigrants in order to exclude the degenerate and insane. Certainly it is but just and fair that a country which gives a free entrance to all, should at least protect itself as far as practicable from an invasion by the invalid and degenerate classes.

Humanity Versus Statistics.—In discussing such a subject, however, as that of the preceding comment, it is well to reflect that there are other considerations than those supplied merely by figures. These latter may not lie, but they are woefully lacking in sentiment; and to be lacking in sentiment is sometimes equivalent to viewing things in a false light. From an economic standpoint it is well to reflect that this country has drawn largely from the lower classes of other countries, and it has done this for its own advantage. These people have come here to do their share in developing resources and making wealth. If they have contributed to our insane and invalid classes, they have also added to our brawn and our prosperity. To separate the strong from the weak is not always possible in a free country—the problem is one that is not concerned with the importation of live-stock or slaves, but with the introduction of men, women, and children in family units. The query arises whether on the whole we have not gained a greater advantage than we have lost. The laboring classes naturally contribute a large proportion of the indigent insane in any country. The problem of hereditary insanity is not so easy that it can be solved offhand in our immigration laws. Some harm may be done as well as good in the attempt. The indefinable thread of degeneracy is inextricably interwoven with the warp and woof of social and industrial life.

Tetanus in Camden.—The Board of Health in Camden has investigated the cases of lockjaw following vaccination in that city, and reports that samples of the vaccine virus under suspicion have been tested by the State bacteriologist. These samples were found pure and free from the germs of tetanus. The Board attributes the disease to infection by the patients themselves through carelessness in handling the sores. It points out that tetanus has recently occurred in Camden in cases of wounds other than those of vaccination, and believes that the atmospheric conditions, characterized by prolonged drought and dust, are responsible for so much tetanus in the city. The samples were tested on animals, and in no instance caused tetanus. The facts that different kinds of virus were used for vaccinating, and that the same kinds were extensively used in Philadelphia without causing lockjaw, point very clearly to the conclusion that the vaccination virus was not the cause of the trouble. The epidemic—for it deserves to be called by that name—has been a most unusual one. We do not recall ever to have heard of such an extensive complication anywhere else in the history of vaccination. It is true, however, that epidemics of tetanus in other circumstances have been observed both in man and in animals, showing that the germs of the disease are sometimes exceedingly virulent in certain localities. Some years ago Mr. Jonathan Hutchinson reported such an epidemic in a flock of ewes after lambing; and in the human subject military surgeons have noted an epidemic influence. In India the disease is sometimes rife in obstetrical practice.

The conclusions of the Camden Board of Health seem to be justified. Local conditions must be largely at fault. This sad experience does not in any way militate against the practice of vaccination, but merely indicates with utmost emphasis the necessity of strict antisepsis in the care of vaccination wounds just as of any other seemingly trifling injuries.

Concretio Pericardii.—It is a pleasure to come upon an article so interesting and instructive as the one written by Wilhelm Türk, one of Neusser's assistants, upon the clinical resemblance between adherent pericardium and tricuspid disease, which recently appeared in the *Wiener klinische Wochenschrift* (XIV. Jahrgang, Nos. 37, 39 and 40). He gives the history of a man of 54, with orthopnea, cyanosis, edema, precordial pain, venous pulse, a systolic murmur loudest along the left sternal border, the absence of any pause between the heart sounds, pulsating liver, etc., in whom the diagnosis rested between mitral disease, myocarditis, and ad-

herent pericardium. After a profound study of the case, Türk decided that the condition was probably mitral disease. The autopsy showed concretio pericardii. This led him to look up his cases of adherent pericardium, six of which he reports in detail. The text-books mention many so-called signs of adherent pericardium, a systolic inraction of the precordial region, failure of the boundary between the heart and lungs to change with respiration, immobility of the apex with change of position, pulsus paradoxus, the metallic character of the heart sounds, a constant reduplication of the second sound at the apex, and a systolic wave in the cervical veins with rapid collapse during diastole. Some inraction in the precordial region is noted in normal individuals, but when the lower sternum, the precordial and apiceal regions, including the costal cartilages, are all drawn in with the heart beat, not only is the pericardium adherent to the epicardium, but to the sternum also, a result both of internal and external pericarditis. This condition is rarely seen, and even then the inraction is not marked. The reduplicated apiceal second sound and the systolic impulse in the cervical veins are the result of inraction of the thorax wall, from any cause whatever. Nor are the other so-called signs of adherent pericardium only found with pericardial adhesions. In forming his diagnosis, Türk lays most stress upon the general clinical symptoms. For experience has shown that adherent pericardium commonly occurs in patients who have had a general *serositis*, formerly called *perivisceritis* by Bamberger, a condition accompanied by widespread portal congestion. The symptoms only become severe and striking after the pericardium has been obliterated, when the muscle of the right heart becomes insufficient. Of the six cases reported, all but one occurred in young subjects, ranging in age from 11 to 28 years, four of them being tubercular. In all cases there was marked cardiac insufficiency, with some valvular condition and congestion, but without any cause to explain a degenerative myocarditis. The right heart was in every case found much dilated and hypertrophied, and the muscle showed degeneration. In fact all the symptoms pointed to tricuspid disease. The liver was always most congested, while many signs of a general *serositis* were found, such as adhesions, effusions, etc., in the serous cavities of the body. Hydrothorax and ascites may occur, but generally appear late in the disease, while adhesions may already have existed in the pleura or peritoneum. Late in the illness, when cyanosis, congestion, etc., are marked, and all the other serous cavities contain fluid, the main symptom of concretio pericardii is the absence of hydropericardium. At that

time the purely local cardiac symptoms aid in forming the diagnosis. When adhesions exist upon the under surface of the diaphragm, with or without perihepatitis, they are noted upon forced inspiration. Türk has seen more cases of tricuspid disease than of adherent pericardium. In either case, the cause of the congestion is the same, primary weakness of the wall of the right heart. Should there be no marked venous pulse, the case of adherent pericardium may resemble a simple case of mitral stenosis. From Türk's long and valuable article, the fact remains plainly before the reader, that the differential diagnosis between organic disease of the tricuspid valve and adherent pericardium is exceedingly difficult, even for the specialist in heart conditions.

Comfort from the Sins of Others.—Americans who have studied in Europe are prone to lament the lack of government supervision of medicine in this country, and the opportunity thus given for all sects to practice their nefarious methods adding to the woes of the sick, and filling our graveyards with the earthly remains of those who have died all too young. Occasionally, however, something leaks out that serves to remind us that, even in much educated Germany, the common people love to have the attendance of those who through ignorance and assurance promise cure where cure is impossible, or exalt the importance of their own instinctive knowledge by deriding the ability of the educated medical profession.

An interesting example of this is given by Zaggl in a recent number of the *Münchener medicinische Wochenschrift*. A boy had his foot crushed under the wheel of a wagon laden with sand. The wound was extensively lacerated, the bones were comminuted and a considerable amount of earth was ground into the tissues. When called to the case, Zaggl, in view of his knowledge of the course of wounds contaminated with dirt in that region, believed that tetanus was almost unavoidable, and strongly urged amputation. To this the parents refused to accede and called in a local wound quack, a man of 77, and so ignorant that he was unable to read or write, even in Germany. This man made extensive promises, treated the case with various balsams and oils, which he admitted he obtained from the local apothecary, and, finally, when tetanus had fully developed and the outcome was inevitable, abandoned the case in order that a regularly educated physician might have all the odium attached to the death. In spite of all this the courts, with their usual lucidity in medical matters, decided that as the quack had not caused the tetanus, he could not be punished for his bad treatment, although it was altogether likely that had a regular

physician been accused of the same conduct he would have been severely punished. The absurdity of the whole matter was, that the court contended that because Dr. Zaggl, when first called, had suggested the strong possibility of tetanus, therefore, its subsequent development showed that the dirt in the wound, and not the quack was to blame. We think it would be difficult, even in this country, to persuade any physician to testify that tetanus could be produced otherwise than by inoculation with the tetanus bacillus, or its occurrence in a wound, and that the fault in the quack was not so much the result of his active intervention, although this apparently produced suppuration and local gangrene, as it was in his neglecting reasonable precautions to prevent the occurrence of the disease, such as amputation or inoculation with antitetanic serum, both measures so well recognized by this time that their neglect is criminal. After all, the case shows that perhaps we are not much worse off than our older cousins on the other side of the Atlantic, if this is any satisfaction.

Dr. Hollopeter's valuable and suggestive paper on "Hypodermoclysis in Children," published in this number of the *Journal*, opens up a new and interesting line of investigation and a useful means of treatment. The therapeutics of infancy and childhood have generally been more or less shrouded in mystery, and to many physicians the treatment of children has been a veritable *bête noir*. The suggestions made by the author are timely and worthy of widespread application. We would add that to those who lack the courage or facilities for performing hypodermoclysis in these young patients, the use of saline injections *per rectum* in the management of the conditions mentioned is often of the utmost advantage.

The cry in California now is "Burn Chinatown!" This celestial abode is the center of pestilence, crime and vice, and the people in their wrath cry out to raze it to the ground. The Californians should reflect that their present troubles are not confined to Chinatown. As long as they have a Governor and a State Board of Health that hoodwink public vision and mislead public opinion in the matter of the plague, they will burn down their infected cities in vain. These would soon rise again from their ashes. It is their present State Government that the Californians need to eradicate—a government which has deliberately closed its eyes, ostrich-like, to the dangers at hand. A great State cannot

fight disease by burning down the houses of its citizens—modern science prescribes other methods.

With the passing of the football season the nerves of some estimable people will regain their equilibrium. The casualties reported from the whole country for this season have been many and grave, and even the best friends of the game hereabouts may rejoice that a rather unpropitious season is ended. We are not among those who believe that sport (in the Anglo-American sense of that term) can ever be entirely divested of physical danger, but we often wish sincerely that some one had invented or would invent a somewhat less strenuous kind of football.

Current Comment.

THE ALIEN INSANE.

A matter that is receiving more and more attention from those who are acquainted with the conditions prevailing in institutions for the insane, for idiots and epileptics, is the disproportion of the alien-born to the native-born who are imposed upon the charitable care of the government. The statistics of the last census bearing on this subject are not yet available, but those of the census of 1890 revealed a state of things that suggested the need of some defensive measures. They showed that, while the proportion of native-born citizens to foreign-born in the whole population was 84 to 16, the proportion of the insane of the two classes cared for in public institutions was, respectively, 65 to 35. That is to say, the proportion of foreign-born insane in our public institutions was more than double what it should be in consideration of the proportion of the foreign-born to the whole population. In the State of New York a similar disproportion is noted. While the foreign-born population of the state is but 25 per cent. of the whole, the number of the foreign-born insane in the state institutions is 50 per cent. of all. Here in Massachusetts, according to the census of 1895, the proportion of the native-born to the foreign-born population is 69.41 to 30.59, while the proportion of native-born insane in the state institutions to the foreign-born insane is 60.40 to 39.60. It appears, therefore, that, while the foreign-born population here supply much more than their proper share of such wards of the state, the disproportion is not so great as in New York, or as in the country as a whole.—*The Boston Herald*.

DESTROY CHINATOWN.

The Annual Report of the San Francisco Board of Health contains the following paragraph: "Chinatown, as it is at present, can not be rendered sanitary except by total obliteration. It should be depopulated, its buildings leveled by fire and its tunnels and cellars laid bare. Its occupants should be colonized on some distant portion of the peninsula, where every building should be constructed under strict municipal regulation, and where every violation of the sanitary laws could be at once detected. The day has passed when a progressive city like San Francisco should feel compelled to tolerate in its midst a foreign community, perpetuated in filth, for the curiosity of tourists, the cupidty of lawyers and adoration of artists." The Board of Health of San Francisco has made an honorable record in its fight against the plague and the unprincipled commercial interests backed by the state government. That it has had to make this fight is due to the existence of Chinatown which perpetuates a state of heathen barbarism in the central business section of an American city. It is a wonder that it has been tolerated so long; as it exists it is a pestilent nuisance endangering the health not only of the

city but of the State of California and the whole United States. Its abolition ought not to be expensive; its proprietors obtain their present income by maintaining it as a nuisance, and with it redeemed and put to decent business uses they ought to be well repaid for any loss by an enhanced value of their real estate. So long as they permit it to be continued in its present condition, it would be only decent justice to mulct them by heavy fines for keeping up a disease-breeding nuisance.

—*Journal of the American Medical Association.*

AS OTHERS SEE US.

The eccentric playwright, George Bernard Shaw, has been indulging in medical controversy. In a characteristic letter to the *British Medical Journal* he thus pays his respects to the profession: "Unfortunately medical practice has as yet been so lightly touched by the scientific spirit that the average doctor is still, not only in his patient's view but in his own, a dealer in cures and preventive charms. But that is an additional reason for bringing to bear on it the criticism of an independent branch of science. A great deal of what is called scientific opinion to-day is nothing but medical opinion; and a great deal of medical opinion is simply energetic trade-unionism, and very superstitious trade-unionism at that."

—*The Literary Digest.*

A DIET OF GROUND ROCK!

The report of the Connecticut Experiment Station just issued contains (page 165) a somewhat startling arraignment of the alum baking powders with which the country is flooded. Of the fifteen brands analyzed, about every imaginable adulteration was discovered, varying from sulphuric acid (22 per cent.) to ground rock! The latter form of adulteration is characterized by the report as "a particularly reprehensible adulteration, because very likely to prove injurious to health," which may well be believed, considering that it was found in one sample to so large an extent as over 25 per cent. Of this baking powder the report says:

"This preparation contains more than 25 per cent. of a ground rock, insoluble in strong acids and consisting chiefly of silicates of magnesia. Prof. S. L. Penfield, of Yale University, kindly examined this material and found it to be a mixture of pulverized talc and tremolite, a species of hornblende, which is extensively mined in northern New York, perhaps elsewhere, and is much used as a filler in the paper manufacture. The tremolite appears under the microscope in sharp needle-like splinters, which makes it a dangerous admixture in food."

Correspondence.

THE THEORY OF RELATIVE LEUKOCYTOSIS.

By ROBERT N. WILLSON, M. D., of Philadelphia.

To the Editor of the *Philadelphia Medical Journal*:

I have noticed in your columns in an article by Drs. Deaver and Moore (Nov. 23, 1901) a statement crediting to me the theory of "relative leukocytosis" as determined by the differential count. I feel warranted in assuming as much owing to the fact that I laid stress upon this method of diagnosis recently (*American Medicine*, 9, 17-21, 1901), in a reply to a previous article by Dr. Deaver (*Philadelphia Medical Journal*, 6, 1, 1901) which I have reason to know came to his attention. My only object in writing now is to place the credit where it belongs and to correct the statement that it has not yet been verified. Clinical and experimental verification of this most valuable advance in the study of the blood can be found in so many articles by

eminent students that it seems almost ridiculous to name them. Among such, however, may be suggested:

Rüder, *Beiträge zur Kenntniss der Leukocyten*, 1892.

Cabot, *Clinical Blood Examination* (Chapter on Leukocytosis).

Sahlb, *Lehrbuch der Untersuchungs-Methoden*, 1899, p. 646.

Chantemisse and Ray, *Presse Medicale*, July 1, 1899.

Musser, *Medical Diagnosis*, 1900, p. 409.

Stassano, *La Semaine Medicale*, July 17, 1901.

Stengel, *Textbook of Pathology*, p. 324.

v. Goetschl, *Vergleichende Analyse des Blutes gesund. u. septisch-infectierter Schafe*, etc. Dissertation, Dorpat, 1883.

Grätz, *Klinisch-exper. Blutuntersuchungen. Zeitschr. für klin. Med.*, 1893, B. 22.

Kanthak, *Acute Leukocytosis pro. by Bact. Products. British Medical Journal*, 1892.

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It is possible that the statement with regard to the increase in the relative number of the polymorphonuclear cells in the absence of an increase in the total number of leukocytes is original with me, although I had not previously considered this true. Nor do I yet feel convinced in regard to the matter. But this renders the statement none the less accurate, and I would again recommend, on the ground of personal experience and advantage derived therefrom, the employment of the differential count in all cases in which a condition of the acute or chronic type is suspected of being caused by pus producing organisms. As previously stated "there will seldom be found (even) a chronic suppuration without a relative increase of the polymorphonuclear leukocytes."

I shall take the opportunity at an early day of publishing a series of cases that will demonstrate the value and accuracy of this principle, which has long since shed the name of theory.

Cabot evidently was also thinking along this line when he defined leukocytosis, as long ago as 1897, as "An increase in the number of leukocytes in the peripheral blood over the number normal in the individual case, this increase never involving a diminution in the polymorphonuclear varieties, but generally a marked absolute and relative gain over the number previously present." (*Clinical Examination of the Blood*). He evidently had not reached the point where he felt convinced of the invariability of the change in the relative number of polymorphonuclear cells in the absence of a general leukocytosis. I do not believe that he had not noticed its occurrence.

I may say here that I have held this theory for a number of years, and had proved it by clinical blood study prior to the appearance of an article on the subject. The credit of its publication, however, I have never claimed and it may not belong to me.

As time passes by, more and more will be learned through the recognition of the special roles, played by the different forms of leukocytes. At present, however, our understanding of these conditions and functions is far from complete. One thing seems certain, that the polymorphonuclear cells are vitally interested in the resistance of systemic infections of all sorts, and I believe that this principle will be found beneath and behind much of the fuller understanding that is yet to be developed.

ABOUT THE PURITY OF VACCINE MATERIAL.

By CHARLES W. DULLES, M. D., of Philadelphia.

To the Editor of the *Philadelphia Medical Journal*:

In the series of articles published in the *Philadelphia Medical Journal* of November 23 in regard to smallpox and vaccination I have not observed any mention of a matter

which has seemed to me of great importance for the information of medical men and for honest dealing with those who trust their health and lives to them. I mean the actual testing in a bacteriological way of the materials furnished by the manufacturers. My own experience with vaccination during the last few months has furnished no illustration of what I would call a bad arm; that is, I have seen no extensive inflammations nor any patient that had a large ulcer or diffuse cellulitis. But I have seen some quite angry looking local lesions, and by no means all of my primary vaccinations have presented the course which I used to see in former days when the demand for vaccination material was only what is ordinary. A short time ago, because I did not know that anybody else had taken this step, I determined to make a bacteriological investigation of the form of virus which I had been using and expected to use in the future. For this purpose I went to the office of a purveyor of glycerinated lymph and purchased a case of capillary tubes. This I took at once to the Philadelphia Clinical Laboratory for examination. Of this examination I received the following report, dated November 25.

Examination of Vaccine Virus.

Tube 1.—Sterilized with formaldehyde gas, and handled with sterile forceps. The contents of this tube was put in 5 c. c. of bouillon. From this inoculated bouillon, plates and other cultures were made as follows:

1. A set of Petri plates, consisting of three, were made upon agar-agar. The first tube was inoculated with three wire loops of the bouillon containing the virus; the second tube was inoculated in the same manner from the first tube, and the third from the second. These plates were incubated over night.
2. A similar set of plates was made and grown at room temperature.
3. Anaerobic cultures were made in gelatine, and the oxygen of the air was excluded by Buchner's method. One set of these cultures was incubated; the other was grown at room temperature.

Result. The first set of plates, after incubation for twenty four hours:

Plate 1. 71 colonies.
" 2. 21 "
" 3. 15 "

After 48 hours:

Plate 1. 120 colonies.
" 2. 21 "
" 3. 15 "

The second set of plates grown at room temperature:

After 24 hours no colonies visible.

After 48 hours or more each of these three plates contained from 50 to 100 colonies.

Anaerobic cultures. Both those incubated and grown at room temperature were quite negative and remained so from Nov. 19 to Nov. 25.

Character of growth on plates. The greater number of the colonies were arborescent in form and suggested the ordinary saprophytes found in air. There were, however, on most of the plates very tiny colonies which may belong to the cocci. These were few in number.

I am now engaged in a further investigation—which requires considerable time—in regard to the specific character of the micro-organisms to be found in vaccine material which I have heretofore used under the impression that it was germ free.

As I have reason to believe that the mode of preparing glycerinated virus, is not known to all medical men, I would say that it consists in scraping with a blunt scalpel the vaccine lesions upon the udders of previously inoculated heifers, carrying away epiderm and contents of the lesions and anything that is attached to them, and rubbing this mixed material up into a pulp to which glycerine is added, the mixture being set away and examined bacteriologically

from day to day until it is regarded as proper for employment. So far as I have been able to learn, this point is supposed by most medical men to be a point at which a bacteriological investigation discloses the presence of no micro-organism: it being believed that prolonged contact with glycerine is fatal to the life of micro-organisms and that these disappear progressively from the glycerinated mixture, as taught by Dr. Copeman, of London, who devised the method of "glycerinizing" vaccine virus. The most exact recent expression of opinion on this subject that I have, is contained in a letter from a distinguished bacteriologist of this city, who, after a conversation had with me, wrote that the routine method at present is to test the material, "every two or three weeks until its bacteriological condition justifies its use upon human beings. Presumably no firm puts on the market glycerinated lymph until that point is reached, but you must understand that this is an assumption. It is my impression from what I have seen of the action of glycerinated lymph that the majority of it is when sold free from danger."

It would be hard to understand how any person with a proper sense of responsibility could furnish vaccination material that had not been subjected to tests sufficient to indicate its absolute freedom from dangerous ingredients; but, when it is known that the process of glycerinization requires fully four weeks before it accomplishes the destruction of the micro-organisms gathered up in the pulp derived from the heifer, and when the demand for vaccine material is enormously increased in a short time, it is conceivable that some purveyors of lymph might find a way to justify to themselves the distribution of virus which had not been subjected to the long continued action of glycerine which is indispensable to entire safety.

This thought led me to make the investigation here reported; and I think its result ought to be made public at once. I cannot but think that some of the curious lesions I have seen, in spite of the most exact and scrupulous method of asepsis which I have observed in doing the operation and in the subsequent management of each case, may have been due to the fact that I have at times used material which was not pure. Furthermore I cannot avoid the thought that something in the preparation of vaccine material may account for the fact that in my most recent operations the percentage of "takes" has fallen decidedly below what I secured two months ago.

It seems to me that it will be a great pity if the medical profession fails to learn a great deal from its experiences and observations in the last few months and the coming months of this winter; and I therefore make this contribution to the facts from which our opinion must be formed.

The Agglutination of the Colon Bacillus by Typhoid Serum.—E. Sacquépée (*Presse Medicale*, June 8, 1901) reports the results obtained by experiments with colon bacilli and the blood serum of typhoid fever patients. The agglutination test was tried when colon bacilli and serum came from one individual, in ten cases. It was not constant, and varied in intensity. The agglutination was never so marked as with the typhoid bacilli. When the colon bacilli and the typhoid serum come from one individual, but at different times of the disease, agglutination occurs again, if it did occur in the former test; and does not occur if it did not appear formerly. Upon colon bacilli from other individuals, the action of typhoid serum is also variable. Whence Sacquépée concludes that agglutination of the colon bacilli by the serum of the typhoid individual from whom they come is frequent; that all the colonies of colon bacilli secured at different periods of the disease do not react alike to the serum; that colon bacilli from other typhoid individuals may be agglutinated by the serum; and that the agglutination of the colon bacilli in typhoid fever seems to show an added infection or intoxication, due to the colon bacilli. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Resolutions Passed by the Board of Managers of the Hospital of the University of Pennsylvania, Wednesday, November 27, 1901.—Whereas, the Board of Managers of the Hospital of the University of Pennsylvania has been bereft by death of its distinguished president, William Fisher Norris, M. D. Resolved: That the Board has lost a colleague who, as one of the founders of our splendid hospital, gave of his knowledge, experience, time and private means in the erection of the building, and when the structure was an accomplished fact, continued as a member of its Board of Managers his earnest and unceasing efforts in assuring its equipment, maintenance, extension and improvement. Resolved: That as President of the Board for the last nine years, his successful administration, beset with difficulties, has been marked by foresight, patience, and a conscientious attention to duty. Resolved: That we mourn a friend who, while he excited our admiration by his wisdom and energy, endeared himself to us by his gentleness and courtesy. Resolved: That a copy of these resolutions be sent to his bereaved family with the expression of our respectful and affectionate sympathy.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, December 9, Section on Medicine, College of Physicians; Tuesday evening, December 10, Pediatric Society; Wednesday evening, December 11, County Medical Society; and Thursday evening, December 12, Pathological Society.

Municipal Hospital.—City Solicitor Kinsey has decided that the city has the right to remove the present Municipal Hospital to another site within the city limits, in what would be deemed not to be a built-up portion of the city, but not in a built-up portion thereof.

Charitable Bequests.—Bequests aggregating over \$100,000 to charitable institutions, contained in the will of Thomas Elkinton, who died in September, are now operative through the death of the widow, Rebecca E. Elkinton. From this the Jefferson, Orthopedic, Polyclinic, University, and Pennsylvania Hospitals are each bequeathed \$5000.

Smallpox in Philadelphia.—During the seven days ending November 30, there were reported 116 new cases and fourteen deaths. The nearest approach to this record is sixty-nine cases three weeks ago, and it is surpassed only by the statistics of the smallpox epidemic of 1876. Since January 1 there have been 768 cases of smallpox in the city and 111 deaths. Of the 657 persons who survived, 259 are still ill and 398 have recovered entirely. The cases reported during the week were confined to the northwestern and northeastern parts of the city. Down-town is almost free of the disease and West Philadelphia has only two cases. The Philadelphia Almshouse has been closed to visitors.

New Castle County Medical Society.—A medical society has been formed by the physicians in New Castle County, Pa.

Two Men Dead from Anthrax.—As a result of the death of Miles Jenkins, a teamster in the employ of the Union Tanning Company, at Hills Grove, Pa., all teamsters employed by the company have quit work. Jenkins' death was due to anthrax, the disease first appearing on his neck in the form of a small pimple. It spread rapidly and he died in agony. This is the second death from the disease among the teamsters, and the others have concluded to find work elsewhere rather than run the risk of contracting the disease.

New Vaccine Company.—A charter has been secured in Lancaster by the Pennsylvania Vaccine Company, with a capital of \$10,000.

Harrisburg Academy of Medicine.—Dr. William Osler, of Johns Hopkins University, delivered the address at the sixth anniversary of the Harrisburg Academy of Medicine, November 22. Dr. Osler complimented the Harrisburg medical profession upon the organization of their academy and its library. Eighty members of the profession were

present, including some from Carlisle, Mechanicsburg, Northumberland, Ashland, Middletown, Millersburg, Sunbury and other places.

Smallpox in the State.—On November 29th two nurses in the State Hospital for the Insane, at Norristown, were removed to the Municipal Hospital with smallpox. For the last three weeks visitors have not been allowed to enter the hospital, and the employees who resided there were not allowed to leave the institution. There are 2500 patients and about 500 attendants and workmen in the asylum. The disease still exists in Plymouth and Tunkhannock, and new cases are continually being found in Manayunk. Signs have been posted outside of Pittston, warning peddlers that a rigid smallpox quarantine has been established, and cars passing through the suburbs of Wilkes-Barre are fumigated and disinfected before entering the city.

University of Pennsylvania.—The professorship of ophthalmology in the Department of Medicine is vacant. Individuals desiring to be considered candidates for the position may send notice to the Rev. Jesse Y. Burk, Secretary of the Board of Trustees, University of Pennsylvania, 400 Chestnut street, Philadelphia, before December 28, 1901.

Pennsylvania State Board of Health.—The following resolutions were adopted at the meeting held at Harrisburg, November 21, 1901: Resolved, That in view of the very natural public apprehension in regard to the possibility of tetanus following vaccination, this Board desires to state its conviction, founded upon a careful study of the history of vaccination, that it has yet to be demonstrated that vaccine virus ever contains or becomes contaminated with the germ of tetanus. When such occurrences take place, it is because, owing to carelessness, usually on the part of the person vaccinated, the germs of tetanus gain access to the wound on the arm as they may to any other wound, abrasion or scratch upon the surface. Resolved, That there is no reason for dreading, or abstaining from vaccination, because of recent cases. This is demonstrated by the fact that more than half a million persons have been vaccinated in the city of Philadelphia within the past few months without the occurrence of a single case of tetanus. Resolved, That, inasmuch as new cases of smallpox are being reported to the Board daily from all parts of the State, the present would be a most unfortunate time to interrupt general vaccination. Resolved, that this Board condemns, in the strongest possible terms, the use of any material or medicament administered by the mouth as a substitute for vaccination, and that any physician furnishing a certificate of successful vaccination based upon the administration of any such substance or remedy, lays himself open to prosecution for violation of a State law. Resolved, That this Board reaffirms its previous declaration of confidence in the value of vaccination as a preventive or modifier of the severity of smallpox, and its belief that the possibilities of serious results following its performance must be looked upon as infinitesimal in comparison with the inestimable advantages derived.

NEW YORK AND NEW JERSEY.

The Official Report of the Camden Board of Health, concerning the cases of tetanus which occurred in patients who had been vaccinated, states that samples of the different vaccines employed have been tested for tetanus germs by the State Bacteriologist and have been found entirely free from tetanus germs; that the history of each case shows vaccination was practiced in a correct and cleanly manner in every instance, infection resulting from neglect on the part of the patients; that one case of tetanus occurred from gunshot wound, during the same period, in a boy who had not been vaccinated; that indisputable evidence that the tetanus germs were not introduced at the time of vaccination is that acute tetanus occurs in from 5 to 9 days after the introduction of the germs, whereas in every case tetanus occurred in from three to four weeks after vaccination; that further proof of the purity of the virus exists in the reports of the physicians in Cooper Hospital, who tested on animals samples of all vaccines employed in Camden, no animal developing tetanus; that during the past five weeks, there have been vaccinated in Philadelphia a very large number of people with the same virus without a case of tetanus; that the tetanus cases in Camden are explained by the atmospheric and telluric con-

ditions which have prevailed in Camden during the past six weeks, a long period of dry weather with high winds, so that tetanus germs have been distributed in the atmosphere. It is noticeable in all cases that the wound had been exposed by the scab being knocked off or removed, or else the arm had been injured and infection resulted; frequently children scratched the vaccinated area with dirty fingers and nails and infected the wound; that vaccination should be regarded as a surgical operation, should be performed in an aseptic manner, and in every instance the physician should be consulted for advice if any unusual inflammation develops; and that it is the unanimous opinion of the Board of Health, as well as of their committee of experts, that, inasmuch as vaccination is harmless, it should be insisted upon by physicians as an absolutely necessary procedure for the prevention of smallpox. Tetanus, or any other infection, can never occur if the vaccination is properly protected from contact with the atmosphere or with soiled clothing, bandages, etc.

Smallpox in New Jersey.—Four cases have been found in Hoboken, and 16 are in the Hospital for Contagious Diseases in Jersey City. Scattered cases have also been reported in the country near New York, with one case in Gloucester.

German Hospital, New York.—On Saturday, December 7, the new buildings of the German Hospital, at Seventy-seventh street and Lexington avenue, were formally opened to the public. These buildings contain well equipped wards and rooms for private patients, with electric lighting, bells, and telephone connections in every room. An ice manufacturing plant is also included in the building.

WESTERN STATES.

Drug Adulteration and Substitution.—Attention is called to the fact that not only have phenacetin, sulfonal, trional, and aristol been found adulterated with acetanilid, caustic soda, etc., but, in some cases, acetanilid has even been substituted for these preparations. Such adulterated drugs have been bought in the drug stores of Detroit, and the medical profession is warned that these counterfeit preparations are on sale.

The Arizona Board of Medical Examiners announces that its next meeting will be held at Phoenix, January 6, 1902. Applicants must present diplomas from a recognized medical college. These examinations are written and require two days. Communications should be addressed to William Duffield, acting secretary, Phoenix, A. T.

Smallpox in Wisconsin.—A severe epidemic of smallpox has developed in and near Potter, a small village ten miles east of Hayton. Twelve cases have been reported so far. Two schoolhouses and Freund's cheese factory have been closed and many families are under quarantine. The disease is supposed to have been spread at a dance held some time ago at Potter. Some of those present were recovering from the contagion at the time. There are hundreds of cases of smallpox in Calumet county, and there is grave danger of the disease spreading further.

Parents of Antitoxin Victims Sue St. Louis.—Seven families, whose children died of tetanus following the administration of diphtheria antitoxin issued by the city, and four whose children were stricken with tetanus and recovered, have announced their intention of suing the city. The verdict of Coroner Funkhauser, in which the deaths were charged to negligence on the part of the Health Department, is made the basis of the proposed suits.

CANADA.

(From our Special Correspondent).

New Immigration Board.—The United States Government has appointed an Immigration Board at Montreal for the inspection of immigrants destined for that country. Dr. James Barclay has also been appointed medical officer, and after immigrants have been inspected by the Board they will be examined medically by Dr. Barclay. Aliens arriving at Canadian ports who are judged inadmissible will be returned to their native countries at the expense of the steamship company transporting them. The jurisdiction of this board extends from the city of Quebec to Niagara Falls; it will convene daily, and will watch especially for cases of trachoma, as many such patients reach the United States through Canada.

Montreal Maternity Hospital.—The Directresses of the

Montreal Maternity Hospital decided to rebuild, at the annual meeting of the Board held a few weeks ago. The site has already been purchased, 16,000 square feet of land, for which the sum of \$10,000 has been paid. The building will be constructed on the most approved plan, to accommodate forty-five patients, and will be erected at from \$30,000 to \$40,000, exclusive of equipment. The reports presented were of a very satisfactory character, showing that the institution is prosperous. The number of patients treated, the great majority being married women, was practically the same as for the previous year. The site for the new building is larger than that of the Sloan Maternity in New York City. During the year there had been 229 confinements.

Montreal General Hospital.—Dr. von Eberts, who read the medical report of the Montreal General Hospital at the regular quarterly meeting last week, showed that during the quarter 720 patients were treated in the public wards, 64 died, 32 within three days of admission. This makes the mortality 4.65%. In the dispensary there were 7638 visits, a decrease of 3405 as compared with the corresponding quarter of last year. During the early part of the quarter the number of typhoid fever cases filled the wards. At present there are twenty-four patients with this disease in the hospital.

Resignation of the Dean of McGill University Medical School.—Dr. Robert Craik, who has been Dean of the Medical Faculty and professor of hygiene and public health since 1889, has resigned. Dr. Craik has been connected with McGill during his whole professional life, and has seen the Medical School develop from thirty to over five hundred students. He matriculated in 1850 and was graduated M. D., C. M., in 1854. Two years later he received an appointment in the Anatomical Department, and has been associated with the teaching of medicine ever since. The honorary degree of LL.D. was conferred upon him in 1895. Synchronous with his resignation comes the announcement of his appointment as Governor of the University, a compliment rare in the history of McGill, only conferred upon one member of the teaching faculty. Dr. Girdwood, professor of chemistry, senior professor, is likely to be appointed Dean, although the name of Dr. T. G. Roddick, M. P., is also mentioned.

An Unusual Suit Against a Doctor is at present being tried in Montreal, a patient claiming damages against Dr. J. P. Gadbois for illegal detention. Dr. Gadbois, who has paid particular attention to the treatment of dipsomaniacs, states that the man was brought to him by a Sister of Charity who told him that he had been drinking very heavily. He alleges that he only employed methods recognized and used in these cases, but the appellant claims abusive treatment and illegal detention.

Smallpox in Canada.—Smallpox continues to increase in several sections of the Dominion. There have been over 50 cases at St. John, N. B.; Ottawa has had 80 odd cases, and the City Council of that city has rescinded the order for compulsory vaccination, although new cases are appearing daily. There are several centers in the province of Quebec, and the provincial Board of Health has had to issue special orders with regard to the outbreaks. Montreal has eleven cases in its Civil Hospital, and large corporations are complying with the order of the Board of Health compelling general vaccination of their employees. Several centers exist throughout the province of Ontario, and the Medical Health Officer of Toronto is watching for cases, none at present existing there. Manitoba has had a number of cases, as has Winnipeg. In British Columbia, fear is entertained on account of several outbreaks just below the boundary line, and special quarantine officers are guarding the frontier. Two cases of tetanus are reported from Impure lymph, one in Quebec and Nova Scotia. The Quebec Board of Health recommends glycerinated vaccine only.

The National Sanitarium Association wants to control the consumption sanitarium business in Ontario. A short time ago the Medical Health Officer of Toronto recommended to the local Board of Health that the time was opportune to recommend to Council that a by-law be submitted to the people, at the coming municipal elections in January, to raise \$50,000 to purchase a site not more than forty miles from Toronto, comprising at least fifty acres of land. Now the National Association comes forward again,

stating that they are going to build this institution for Toronto's consumption population. A conference is to be held between the Medical Health Officer, Dr. Sheard, and the officers of the Association, and as this class of patients is now debarred from all the city hospitals, it is to be hoped that a consumption sanitarium will soon be established.

Royal Victoria Hospital.—Dr. C. B. Kean, who was surgeon to the Strathcona Horse in South Africa, has been appointed surgical pathologist to the Royal Victoria Hospital, Montreal, and will have charge of the surgical dispensary. Dr. Kean resigned as senior house surgeon of this institution when he went to South Africa.

Vancouver City Hospital.—The growth of Vancouver has been so great in the last few years that it has outgrown its hospital accommodation, and the present institution is entirely inadequate to accommodate the population. The City Council is seriously considering the question of erecting a new, up-to-date hospital. The great difficulty hitherto has been to secure a proper site, but the offer by the C. P. R., of five acres of land in a good situation, has been accepted and early in 1902 the building of the hospital will begin. It will cost in the neighborhood of \$100,000.

Child Insurance.—The Montreal Board of Health has taken a most decided stand against child insurance, and will recommend that in the future no insurance be allowed on a child's life until it is 10 years of age. They came to this decision from the rapid increase in infant mortality in Montreal. It was shown that many infants were insured, and in some cases these were neglected when ill, in order that the parents might collect on their policies. It hardly seems possible that parents could do such a thing, but the same charge has often been made in England. It is reported that the Montreal statistics are so conclusive that it is probable the Canadian Parliament will forbid child insurance entirely.

MISCELLANY.

Bubonic Plague.—From Honolulu comes the news of an outbreak of bubonic plague. According to information received, Honolulu will be quarantined against the world before the end of another week. Twenty-three cases of plague are known to exist, that number of patients being at the Kalihi retention camp. It is reported on good authority, that two Japanese died and were cremated midnight, November 24. Every effort has been made to suppress news of the alarming state of affairs. Fourteen of the known cases are Japanese and nine are Chinese. The utmost precautions have failed to prevent the spread of the plague, and Honolulu is threatened by such another epidemic as that of 1898, which cost 112 lives and \$7,000,000.—The British steamer Monmouth, which arrived at Norfolk, Va., November 20, direct from Cape Town, South Africa, reports the existence of over 800 cases of bubonic plague in the vicinity of Cape Town. Up to the time she sailed over 380 deaths from the plague had occurred.—Cases are also reported in Asuncion, Paraguay, and Rio de Janeiro, Brazil.

Obituary.—Dr. J. C. Scarborough, at Prescott, Ariz., November 22—Dr. M. P. Roach, at Rozellville, Wis., November 25, aged 36 years—Dr. Robert E. Edes, at Boston, Mass., November 27, aged 32 years—Dr. James F. Alexander, at Atlanta, Ga., November 14, aged 77 years—Dr. Levi L. Todd, at Indianapolis, Ind., November 16, aged 71 years—Dr. Zachary Taylor Harvey, at Council Grove, Kan., November 15, aged 49 years—Dr. Richard M. Phillips, at Topeka, Kan., November 15, aged 74 years—Dr. Charles R. Stephens, at Victor, Cal., November 14—Dr. Wilford J. Bates, at Sibley's Corners, Mich., November 16—Dr. D. H. Parker, at Medon, Tenn., November 14, aged 60 years—Dr. Mortimer Bainbridge Ruggles, at Long Island, N. Y., November 15, aged 22 years—Dr. Alexander N. Simpson, at Creede, Colo., November 16—Dr. Charles L. Hormanson, at Onancock, Va., November 16, aged 43 years—Dr. Guy Coulter, at Columbus, Ohio, aged 40 years—Dr. L. A. Schaefer, at Schuyler, Neb., November 15—Dr. Andrew J. Stoner, at Decatur, Ill., November 13, aged 76 years—Dr. John G. C. Swaving, at Pottsville, Pa., November 26, aged 80 years—Dr. Magruder Muncaster, at Rockville, Md., November 28, aged 42 years—Dr. Robert McLearn, at Fredericton, N. B., November 29, aged 47 years—Dr. Charles J. Essig, at Wallingford, Pa., December 2, aged 74 years.

GREAT BRITAIN, ETC.

Smallpox Epidemic in London.—At a meeting of the London Metropolitan Asylums' Board last Saturday, the chairman stated that London was probably in for a heavy epidemic of smallpox. Since August 10 there have been 864 cases notified and 141 deaths from the disease. During the past fortnight 262 fresh cases have been reported. Statistics already published show that since the present outbreak of smallpox 116 persons have died of the disease, while there were fifty-seven doubtful cases, 233 have recovered and there are 420 cases under treatment. Sixty per cent. of persons who had not been vaccinated died and 20 per cent. of those who had been inoculated. The first case was reported on May 20.

Cancer Hospital, Brompton.—A window in memory of the late Dr. William Marsden, founder of the Cancer Hospital, was unveiled in the chapel of the hospital on November 16th by the Bishop of London. This charity was founded fifty years ago.

Sunlight an Old Remedy.—Professor Finsen, of Copenhagen, has received much praise for cures effected by sunlight; but an English scientist points out that this method of curing diseases was known and practiced in England centuries ago. John Gaddesden, who wrote the famous medical treatise, "Rosa Medicinæ," who died in 1361, treated the son of King Edward I. for smallpox by wrapping him in scarlet cloth and placing him in a bed and room with scarlet hangings, and the patient recovered, never showing any trace of smallpox. There is also evidence that other physicians believed in the virtues of phototherapy and adopted it to cure certain forms of skin disease.

Charing Cross Hospital.—It has been decided to add an ophthalmic department to the Charing Cross Hospital.

Noma.—From London comes the report of Dr. W. H. Allebin, in which the statement occurs that, out of 1300 patients admitted to the Hospital for Sick Children in Great Ormond street, but six cases of noma have been seen during the past 13 years.

20,798 Free Meals are provided daily for underfed school children in London.

A Bequest.—Mrs. George Field donated \$5000 to the North London Hospital for Consumption, in memory of her late husband.

Dr. Lazarus Barlow, of the Westminster Hospital, London, who has been seriously ill with blood poisoning following a recent post-mortem examination, is now reported to be gradually improving.

Norfolk holds the record for the lowest marriage-rate, and **Sussex** for the lowest birth-rate in England.

Obituary.—On September 28 in Adelaide, South Australia, Dr. Edward Wills Way died, aged 55 years. He was a graduate of the University of Edinburgh, formerly demonstrator of anatomy in the University of Edinburgh, but for many years past lecturer on obstetrics and diseases of women and children in the University of Adelaide.—W. G. M. Manley, retired Surgeon General of the Army Medical Department, died in Cheltenham, November 16, in his 70th year.—At Ventnor, Isle of Wight, Dr. J. M. Williamson died November 12, aged 52 years. He was a graduate of Edinburgh University.—John Palmer Way, former assistant surgeon of the Royal Navy, a graduate of St. Thomas' Hospital and surgeon to the Royal Portsmouth Hospital, died November 16, in his 63rd year.—On November 19, Dr. Henry Sutherland died, who was for many years lecturer on insanity at the Westminster Hospital.—Colonel G. H. Fetherston, late principal medical officer of the Victorian Military Forces, recently died in Melbourne, Australia, aged 72 years.

CONTINENTAL EUROPE.

PARIS LETTER.

(From Our Special Correspondent, Dr. Edmund L. Gros).

At the meeting of the French Academy of Medicine, October 22, Prof. Poncet related the history of a patient of 49 years, with enlarged ganglia and repeated colds, who entered the hospital with what was diagnosed acute articular rheumatism. Salicylic acid gave no relief. After a few months he left and for a year felt well, his knee remaining swollen, though painless. At that time severe articular

pains reappeared. Dr. Poncet withdrew some of the synovial fluid and injected it into a guinea-pig. This inoculation revealed tubercle bacilli. The sero-diagnosis performed by Dr. Courmont was also positive. Unmistakable signs of pulmonary tuberculosis developed later.

Prof. Dieulafoy reported a most interesting case, which weakens the doctrine of cerebral localization and touches the question of surgical intervention in intra-cranial lesions. The patient was a man of 40. He was brought to the hospital comatose, temperature 40°C., with ten successive attacks of partial epilepsy. The attacks began in the right arm, spread to the right leg, and the mouth and face, were drawn to the right. A history of syphilis 10 years before indicated the nature of the lesion and the epilepsy seemed to indicate the motor region affected. The diagnosis of *gumma* of the lower two-thirds of the motor centers was made, and mercuric biniiodide injected in large doses. In spite of this and potassium iodide the attacks recurred over 50 times in 24 hours, and the man died. The autopsy showed that the motor regions were absolutely intact. A *gumma* the size of a small egg was discovered in the external part of the frontal lobe. Prof. Dieulafoy considers that this case shakes the doctrine of cerebral localization. Prof. Pitres, of Bordeaux, expressed surprise that Prof. Dieulafoy should incriminate the theory of cerebral localization on account of this case, since it is generally admitted that exact localization can only be made from a distinct monoplegia or hemiplegia, and not from Jacksonian epilepsy. In the case cited by Prof. Dieulafoy the frontal lesion was near the motor regions. Dr. Lucas-Championnière agreed with Prof. Pitres. In operating, he insists upon a large cranial opening, for this should be mainly exploratory; often the lesion will be found some distance from the point apparently indicated.

In discussing rachicocainization, Dr. Chaput states that he injects $3\frac{1}{2}$ to 4 centigrams of cocaine, directs the stream upwards and thus obtains an anesthesia which includes the arm, thorax, chin and ear. Before the operation 25 drops of Tr. digitalis and one centigram of morphine are administered and a loose elastic ligature is placed around the neck. The patient is placed in the Sim's position. A 1% solution is injected rapidly, and immediately following this 500 grams of a normal salt solution are injected into the leg. His report includes a series of 120 cases. He concludes that to obtain anesthesia of the upper extremities, four centigrams are sufficient; that the face and head are not sufficiently anesthetized for operating; that isotonic solutions appear less diffusible and less active than aqueous solutions; and that anesthesia is not accompanied by frequent or grave complications. Dr. Guinard always draws off a little of the cerebrospinal fluid to make the cocaine solution. He places a concentrated solution of cocaine in the syringe, inserts the needle into the spinal canal and draws off enough spinal fluid to fill the syringe, thus making a 1% solution. This is then re-injected. He reports 70 cases without any complications. To this series of successful cases must be added two cases of immediate death reported by Dr. Leguen. Both cases were most unfavorable, one being an emphysematous, congested individual with a cardiac lesion, who had recently had an apoplectic stroke. Less than two centigrams was injected. The other was a man of 60, who was infected for strangulated hernia. The general condition of the patient was deplorable. Six minutes after the injection breathing became labored, and death quickly ensued. The autopsy revealed kidney lesions not in themselves sufficient to cause death. Dr. Leguen thinks that in both cases death was due to direct action on the medulla.

At the meeting of the "Société Médicale des Hôpitaux," November 8th, Dr. Chantemesse reported 100 cases of typhoid fever treated with injections of anti-typhoid serum. In all cases in which it was used before the tenth day he obtained a sudden and permanent drop in the temperature, with recovery. In other cases the fever rose in a few days if the serum was not again employed. Of these 100 cases six died, all injected after the tenth day. The injections, 10 to 14 c.c. at a time, are neither painful nor irritating and are given in the forearm to facilitate quick absorption.

Medical Plays on the French Stage.—Among the novelties recently produced in Paris were two plays upon the influence of heredity, *Les Rernants* by Ibsen, and

L'Erasion by Bréux. *En Pair* dealt with the French lunacy law and *Les Remplacantes* discussed the subject of wet-nursing. In *Le Baillon* occurs the question of professional secrecy, while *Les Ararics* shows the dangers of the marriage of syphilitics. The last-named piece was prohibited by the censor.

Fiftieth Anniversary of the Ophthalmoscope.—On November 13th, 1851, Helmholtz first demonstrated the ophthalmoscope before the Königsberg Medical Society. The fiftieth anniversary of the invention of the ophthalmoscope was celebrated in Berlin November 13th, 1901, under the leadership of Professor Greeff. 120 ophthalmoscopes were exhibited in historical order, among them instruments from various countries. The meeting of the Charité Hospital Society, held the next day, was devoted to ophthalmoscopy.

Austrian Medical Students.—The number of medical students in the Austrian Universities has been gradually decreasing during the past ten years. While there were 5,275 medical students in 1891, there were but 2,555 in 1900-1901, yet the number of degrees of "M. D." conferred has only fallen from 721 in 1891 to 603 in June, 1901.

The Schools of Vienna are to have medical attention. The Board of Education is considering the appointment of a staff of medical school inspectors. It is proposed that the duties of these officials shall include periodical inspection of the schools, more frequent during contagious epidemics.

Vaccination Abroad.—Vaccination and revaccination of all children of school age has been compulsory in Germany since 1874, and in 1899, when this law had been in operation for 25 years, the total deaths from smallpox in 285 German towns, with a population of nearly 16,000,000, were only four. In France, where vaccination is far less universal, in 116 towns, with a population of 8,500,000, the deaths from smallpox in the year 1899 were 600. This seems precisely the kind of parallel which is calculated to strike popular imagination. In Germany, out of 16,000,000 of people, four died of smallpox in a year. In France, out of 8,500,000 of people, 600 died of smallpox in the same year.

The Famine in Russia is worse than the government seems to have anticipated. From the local government boards of many provinces come daily reports of deep and increasing distress and an appalling scarcity of grain and provender. Simbirsk asks for 180,000 pounds of grain, 200,000 roubles with which to buy grain, 35,000 roubles for medical relief and 10,000 roubles for public works. From Tomsk, Western Siberia, are reported crop failures and the flight of peasants back to Russia. The assignment of money and grain is declared to be insufficient, and hungry peasants have been driven to robbery and even murder. Epidemics of scurvy and typhoid are making steady progress in many governments. Between October 1 and 23 373 cases of scurvy were reported in eleven villages of the district of Khvalinsk, and both diseases have reappeared in Kherson. It is also reported that there has been an alarming spread of the plague in Southern Russia. According to despatches from Lemberg, hundreds of fatal cases have occurred in Moscow, Odessa, Kieff, Kherson, and other towns.

The Population of Sweden.—According to recently reported statistics, Sweden in 1900 contained 5,136,441 inhabitants, of whom 2,506,436 were males, and 2,630,005 females, an increase of 351,460 over the census of 1890. While 4,032,284 people inhabit the country, the cities contain 1,103,957 inhabitants, 300,724 in Stockholm, 130,619 in Gothenburg, and 60,857 in Malmö, the three largest cities.

St. Petersburg has the highest death-rate of any European capital, 51 per 1000.

Obituary.—At Marseilles, Dr. Auguste Villard, professor of medicine in the Marseilles Medical School, corresponding member of the French Academy of Medicine, died, aged 65 years.—At Ulm, Germany, Dr. Gustav Veesenmeyer, a graduate of Heidelberg, died, at the age of 86. Since 1863 he has been professor in the Ulm High School, and was later appointed librarian to the public library of that city.—In Rome, November 15, Dr. Luigi de Rossi died, a graduate of the University of Genoa, professor of otology, rhinology and laryngology in the University of Rome, aged 57 years.—Dr. J. Magaz y Jaime, former professor of physiology in the University of Madrid, has recently died.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

November 16, 1901.

1. A Clinical Lecture on Idiopathic Dilatation of the Esophagus. JAMES SWAIN.
2. Successful Operation for Perforated Intestinal Ulceration in Typhoid Fever. FRANCIS T. HEUSTON.
3. Two Cases of Post-Operative Thrombosis of the Mesenteric Vessels Followed by Death.
A. ERNEST MAYLARD.
4. On the Removal of Great Lengths of Intestine.
ALEXANDER BLAYNEY.
5. A Case of Intussusception in a Patient aged 72; Laparotomy; Recovery. C. C. STEAD.
6. After-Care of Cases Which Have Been Operated Upon for Perforation of the Stomach.
HASTINGS GILFORD.
7. An Improved Incision in Laparotomy for the Prevention of Post-Operative Hernia. ARTHUR H. BUCK.
8. A Case of Congenital Hydronephrosis; Nephrotomy and Drainage; Recovery.
JOHN THOMAS SHIRLAW.
9. Bilocular Intrapelvic and Scrotal Hydrocele.
J. LACY FIRTH.
10. A Case of Excision of the Vesiculæ Seminales for Primary Tuberculous Disease. J. F. HODGSON.
11. The Use of a Bag Previous to Air in Ether Anesthesia.
W. YOUNG.
12. Method of Preparing Sterilized Catgut. C. A. BALL.

1.—Swain reports a case of a female aged 26 years, who had complained of dysphagia, dyspnea, and vomiting for over two years. Just before the onset of the symptoms she had fallen down a flight of stairs. A tube could be easily passed into the stomach and after withdrawing it 8 or 10 inches, undigested food, alkaline in reaction, could be washed from the esophagus. A bullet-shaped metallic body after being swallowed was found by the X-rays to be lodged at the level of the 6th dorsal vertebra. The swallowing sound was absent. Both the Rumpel and the Einhorn tests showed that all the fluid flowed into the stomach, i. e., that the dilatation of the esophagus was spindle-shaped. The Rumpel test is as follows: A tube with numerous perforations in its lower third is passed into the stomach and a second tube passed into the esophagus. A measured quantity of fluid is poured into the first tube and if a diverticulum exists only a portion of the fluid will be recovered from the stomach; the rest which occupies the diverticulum may be withdrawn by the second tube which is in the esophagus. Einhorn has the patient drink a cup of clear water after a cup of coffee has been passed into the stomach. A tube introduced into the esophagus will bring away clear water of alkaline reaction and when pushed on into the stomach will withdraw coffee of an acid reaction. Swain's patient is comparatively comfortable when soft foods only are ingested and when the esophagus is systematically washed out. [F. T. S.]

2.—Heuston's successful operation for typhoidal perforation was done about 4½ hours after the onset of the symptoms. The patient was a woman, aged 32 years, who had passed through an uncomplicated attack of enteric fever. Four days after the temperature had become normal she was seized with violent abdominal pain; the temperature rose to 104° and the hepatic dulness was displaced by tympany. Although the abdomen swelled, the tension was but little increased. The perforation, about the size of a pin-head, was found 8 inches above the cecum; the whole ulcerated area was inverted by Lambert sutures of silk. The thin fecal material which had invaded the peritoneal cavity was removed by copious washings of salt solution.

[F. T. S.]

3.—Maylard publishes two cases of post-operative thrombosis of the mesenteric veins. The first patient, a woman

aged 26 years, died 4 days after a gastro-jejunostomy for pyloric obstruction; the second patient, a woman, aged 28 years, perished 3 days subsequent to an excision of the left half of the thyroid gland for exophthalmic goitre. In both a ventricular systolic murmur and a rapid pulse was noted before operation. The heart of the first was not examined after death and that of the second presented no valvular lesions. Both patients were excessively restless on the second and third days following operation; both complained of severe pain in the lower portion of the abdomen; and in both the operative wounds were healthy. The pyloric case passed flatus, the goitre case had diarrhea and passed blood; in the pyloric case 3 feet of the ileum immediately above the cecum were dark purple in color, collapsed and contained no blood; in the goitre case the whole ileum was ecchymosed, distended, sloughing in places, and contained fluid blood. Maylard has searched the literature of the subject and has been unable to find any case following or dependent upon operation. The following symptoms occurring shortly after an operation should suggest thrombosis of the mesenteric vessels especially if the operation was not one involving the intestinal canal: abdominal pain; diarrhea with or without blood; vomiting which is not of the obstructive character; rapid pulse; extreme and inexplicable restlessness and excitability; and symptoms of cardiac or vascular disease.

[F. T. S.]

4.—Excision of extensive portions of intestine when not immediately fatal is followed by an enormous appetite, diarrhea, and a fatal marasmus. As a result of experiments on animals Senn concluded that the resection of more than one third of the intestinal canal was productive of a fatal marasmus. Trzebielky maintains that one half of the intestinal tract may be resected without a fatal issue. Monari has removed seven-eighths of the intestine of the dog without seriously interfering with metabolism. Blaney studies the subject from a clinical standpoint. Including the case reported in the present communication he has collected 33 instances in which more than one metre of intestine has been removed. Nine died soon after operation and three after 4 months. In the 21 surviving, the part resected consisted of colon in 2, of ileum and jejunum in 1, and of a portion of the ileum in the remaining cases. In the 7 cases which showed digestive disturbances subsequent to operation, the length of intestine removed, with 2 exceptions, was over 200 cm. (6 ft. 6½ in.). The 14 which showed no untoward symptoms lost less than 200 cm., with one exception in which 205 cm. were removed. From these statistics the author concludes that 200 cm., or less than one third of the total length of the intestine is the danger limit. Children stand extensive resections better than adults; and the loss of intestine is more serious the nearer one approaches the stomach. This study will be of little value to the surgeon at the time of operation, for if the bowel be gangrenous he must remove all of it no matter how far it extends. [F. T. S.]

5.—Stead reports a successful operation for intussusception in a woman aged 72. A mass of bowel 8 inches long and 8 inches in circumference protruded from the anus. Even after the abdomen had been opened, reduction could not be effected, until the sphincter ani had been divided. A slow but interrupted convalescence followed. [F. T. S.]

6.—Gilford discusses the after-treatment of cases of gastrorrhaphy for perforated gastric ulcers. Water may be given 4 hours after operation. After 24 hours grape sugar in the form of raisin tea or a decoction of malt may be administered in small doses. Milk contains proteids which undergo digestion in the stomach and should be avoided; beef tea and the various beef extracts stimulate the secretion of gastric juice and are not to be employed. After from one to three days cream and water (1 part of the former to 12 parts of the latter) may be added to the grape sugar. At the end of a week solid food may be commenced, but for 2 weeks longer it is better to select food

which is digested mainly in the intestine. The patient should lie on the right side with the shoulders slightly raised in order to facilitate the egress of fluids from the stomach; if the ulcer be low down on the anterior wall of the stomach, the supine position is the best attitude. The bowels should be moved by the use of enemata if possible; calomel and salts being withheld unless ileus is threatened and rectal injections have proven ineffectual. [F. T. S.]

7.—Buck believes incisional hernia may be prevented by having the breach in the abdominal wall supported by muscle whose nerve supply has not been injured and whose fibres are not constricted by sutures. He proposes slitting the anterior sheath of the rectus abdominis about one inch from its inner edge, retracting the muscle outward, and opening the peritoneal cavity in the same vertical plane as the primary incision; after the intra-abdominal manipulations have been completed, the posterior sheath of the rectus together with the peritoneum is sutured with fine silk, the rectus allowed to slide in place, and the anterior sheath and the skin united. [F. T. S.]

8.—Shriaw's patient was a child 9 weeks old whose abdomen had been swollen from birth. A kidney-shaped tumor occupied the left side of the belly. The hydronephrosis was drained through an incision just below and parallel to the last rib. [F. T. S.]

9.—The bilocular hydrocele recorded by Firth occurred in a laborer aged 20, who had a swelling in the left scrotum since infancy. This swelling could be reduced, was translucent, and transmitted a wave of fluctuation when struck to a hand on the abdomen as high as 5 inches above the pubis. At operation a large extraperitoneal sac was found communicating with the scrotal hydrocele; the intrapelvic portion of the hydrocele was enucleated. [F. T. S.]

10.—Hodgson publishes the notes of a case that he believes was a primary tubercular inflammation of the seminal vesicles. The patient was 32 years of age. The symptoms were frequency of micturition, dysuria, pain in the perineum, and occasionally hematuria. Tubercle bacilli were found in the urine. By rectal examination the right seminal vesicle could be felt enlarged and nodular. Both vesicles were enucleated through a transverse perineal incision. Three months after the operation the right epididymis began to enlarge. [F. T. S.]

11.—Young proposes to substitute for the ordinary rubber bag which is used with the Clover inhaler, a bag made of fine linen. A freshly washed and starched bag is used for each patient. Cyanosis is usually absent but more ether and more time are consumed in the anesthetization. [F. T. S.]

12.—Ball sterilizes catgut by winding it on a glass spool, placing it in a 5% solution of formalin for 24 hours, boiling it in water for 5 to 10 minutes according to the size of the gut, and finally keeping it in a solution of corrosive sublimate 1 part, glycerine 250 parts, and methylated spirit 1,000 parts. The glycerine and spirit dehydrate the gut, the former renders it pliable, and the mercury hardens it. [F. T. S.]

LANCET.

November 16, 1901.

1. Harvelan Lectures, on Twenty-five Years' Experience of Urinary Surgery in England.

BUCKSTON BROWNE.

2. Post-Graduate Lecture on the Administration of Anesthetics in Operations about the Mouth, Nose and Throat. RICHARD W. LLOYD.

3. Impressions about Chloroform and Ether.

SIR WM. MITCHELL BANKS.

4. Ulceration of the Esophagus and Stomach due to Swallowing Strong Hydrochloric Acid.

C. B. KEETLEY.

5. Notes of a Severe and Longstanding Case of Lupus Treated by Application of the X-rays.

GEO. H. RODMAN.

6. A Case of Lupus Vulgaris treated by Exposure to X-rays. T. COKE SUANCE.

7. Rotation of the Forearm. RICHARD J. ANDERSON.

8. On a New Method of Preserving Museum Specimens. HUGH GALT.

1.—Buckstone Browne presents to the Harvelan Society his personal experience of twenty-five years' in genito-urinary surgery. He speaks of his long association with Sir Henry Thompson and details the various advances made in genito-urinary work during this period. In speaking of the operations of litholapaxy and lithotripsy he suggests the propriety of not employing these methods in cases in which the urine is purulent and alkaline, the prostate large, and the stone large and phosphatic. In such cases suprapubic cystotomy is indicated. [J. H. G.]

2.—Richard W. Lloyd in a post-graduate lecture on the administration of anesthetics in operations about the mouth, nose and throat discusses the various means of employing anesthesia in these operations. Interference with respiration and the loss of blood necessarily associated with the operations prolong the state of anesthesia and render a small quantity of the anesthetic effectual. The patient should never be profoundly anesthetized or else the pharyngeal and laryngeal reflexes will be abolished and blood is apt to make its way into the trachea. The application of cocaine as a preliminary to the administration of the general anesthetic is sometimes useful. Where chloroform however is to be employed, the cocaine should be used very sparingly. In operations about the mouth and face ether or ether and gas may be first employed and the anesthesia kept up by the administration of chloroform. Lloyd prefers the patient to occupy a position on his side with the pillow removed and the face turned toward the table as this facilitates the flow of blood away from the air passages. He does not approve of the position with the head hanging over the end of the table. No hard and fast rules can be laid down as to the particular anesthetic to be employed in these cases. [J. H. G.]

3.—W. M. Banks presents at some length his impressions about chloroform and ether. He does not consider the experimental work which has been done upon animals of much value. Chloroform is undoubtedly much more dangerous than ether and he thinks that the latter anesthetic might be employed more frequently in Great Britain. Since the surgeon is held responsible for deaths occurring during anesthesia, he should always maintain control and direction over the anesthetist. Stress is laid upon the fact that in nearly every instance there are danger symptoms which present themselves before the patient goes into collapse and that these should be carefully watched for by the anesthetist. Imperfect breathing is greatly counteracted by withdrawing the tongue and Banks is a strong advocate of the tongue forceps. Since the period of greatest danger in chloroform anesthesia is while the patient is struggling, the greatest care should be taken to avoid this. It is a mistake to restrain the patient when he begins to struggle, as this only excites him. The dangers of chloroform lie: (1) in absolute over-dosing of the patient up to the poisoning point when there is no necessity for it as regards the operation; (2) an omission to allow the patient to be constantly and freely getting abundance of air into his lungs; and (3) violent repression during the stage of excitement combined with continued dosing with chloroform. The danger is greatest between six and ten minutes after the anesthetic is commenced and great watchfulness is required at this time. Nausea is more frequent after ether but is apt to be more prolonged after chloroform. The patient is best resuscitated by elevating the feet and the employment of Silvester's method of artificial respiration. Subcutaneous injections of ether and strychnia are of advantage. Banks has found friction

of the nose and lips with a dry towel of advantage in preventing and overcoming minor forms of collapse which take place during anesthetization. Large doses of brandy with a small amount of water given just before the anesthetic is begun is highly recommended. In commencing the anesthetic Banks instructs the patient to count and is very careful to see that everything in the room is perfectly quiet. In old people and those suffering from bronchitic or asthmatic conditions chloroform is to be preferred. The safest position for the administration of an anesthetic is the recumbent one with the patient on the left side.

[J. H. G.]

4.—C. H. Keetley reports four cases of ulceration of the esophagus and stomach due to swallowing strong hydrochloric acid. The first case was one of enormous dilatation of the stomach after accidental poisoning by strong hydrochloric acid eight months previously. Complete relief was obtained in this case by the performance of Loreta's operation. The second case was a man 25 years of age, who a number of weeks previously had swallowed a large amount of strong hydrochloric acid with suicidal intent. When the abdomen in this case was opened, the patient became collapsed and the stomach was not opened. The mere attempt at operation was followed by improvement for ten days. Death, however, occurred and the patient was found to have a pneumonia and contraction of the pylorus. Case No. 3 was a woman, 46 years of age, who had swallowed strong hydrochloric acid with suicidal intent. Operation was performed six weeks later and marked stricture and progressive ulceration of the esophagus as well as of the pyloric end of the stomach was found. Immediate relief and continued improvement for nearly six weeks followed gastro-enterostomy with a Murphy button. Death occurred from bronchitis and pneumonia. The Murphy button was found in the stomach and the ulceration of the esophagus was unhealed. It is Keetley's opinion that ulceration of the esophagus and pharynx leads to infection of the air passages. This infection may take place through the lymphatics or through the trachea. In the future it is proposed to carry out the following treatment:

"1. The patient should receive no food (either liquid or solid) by the mouth for several weeks—i. e., he should not be fed by the mouth as soon as he can swallow with little or no pain, but oral feeding should be postponed until there is good reason to believe that the injuries have completely healed.

"2. When the injuries are serious (and they generally are so) an operation should be performed within a few days of the date of the poisoning—the sooner the better." It is impossible to say definitely that the ulceration of the stomach or esophagus is healed since only the mouth and pharynx are visible. The pyloric portion of the stomach is the part most seriously injured. In these cases Keetley strongly recommends that a gastro-enterostomy be performed and that two tubes be introduced through the abdominal wound, one entering the intestine through the new opening and the other remaining in the stomach; through one the patient can be fed and through the other the stomach can be irrigated. The after-treatment is of the greatest importance. [J. H. G.]

5.—Geo. H. Rodman reports a case of severe and long-standing (twenty years) lupus occurring in a woman 33 years of age. Various local measures had been employed together with curettage. The patient was subjected to the X-rays for periods varying from five to twenty minutes for about three months, at the end of which time complete healing had taken place, as is shown by the accompanying illustrations. At the early stages the length of the exposure should be shorter and the distance of the tube from the disease greater than that employed later on in the treatment. In this way the patient's tolerance can be ascertained. The healthy portions of the face should be

covered by a paper pulp mask, the outer surface of which is covered by a layer of thick lead foil. [J. H. G.]

6.—T. Coke Squance reports a case of *lupus vulgaris* of two years' duration in a seventeen-year-old girl, in which a cure was obtained by the employment of the X-ray. [J. H. G.]

7.—Richard J. Anderson shows that in rotation of the forearm not only the radius revolves but that the ulnar also takes part. [J. H. G.]

8.—Galt devises a new method for preserving museum specimens which possesses many advantages over the methods now in use. The formula for this fluid is as follows: common salt, five ounces; potassium nitrate, one ounce; chloral hydrate, one ounce; water, 100 ounces. After washing the specimen in water and allowing it to remain in 80% alcohol for from one to four days, it is placed in the solution just indicated. He states that the cost of the preliminary treatment of this method is much less than the preliminary Kaiserling's solution. Shrinking of the specimen is distinctly less than with Kaiserling's method and far less than with the old formalin and alcohol methods and finally he remarks that the color of the specimen is retained to a very high degree. [F. J. K.]

MEDICAL RECORD.

November 30, 1901.

1. Vaginal Cancer. W. ROGER WILLIAMS.
2. Various Methods of Infant Feeding. LOUIS FISCHER.
3. On the Presence of Typhoid Bacilli in the Blood of Typhoid Fever Patients. ALBION WALTER HEWLETT.
4. A Device for Irrigating the Male Bladder. U. S. BIRD.

1.—Williams, in speaking of cancer of the vagina, remarks that of the organs evolved from the different segments of the Müllerian ducts only the uterus manifests great proclivity to tumor-formation; the vagina and Fallopian tubes are seldom affected. From this it may be inferred that the biological peculiarities which determine a given part to tumor-formation depend more upon functional than upon genetic consideration. He further remarks that notwithstanding its rarity, cancer of the vagina is by far the commonest form of primary vaginal neoplasm. It may be said that less than one per cent. of all cancers in women are of vaginal origin. This is contrary to the belief that irritation is the chief determining factor in cancer-causation, for few parts of the body are more prone to all kinds of irritation than the vagina. A controversy is still maintained concerning the question of glandular structures in the vaginal members. Most observers have failed to find structures of this kind. Preuschen and others have, however, asserted their existence. Williams gives a description of the clinical characteristics of the various forms of vaginal cancer. Posteriorly evolving cancers tend to spread backward and forward, involving the rectum and resulting in recto-vaginal fistulae. Anteriorly evolving cancers are apt to invade the base of the bladder and the periurethral region. Cancers of the lower part of the vagina nearly always invade the vulva. Pelvic peritonitis is a common complication of vaginal cancer. Dissemination of the disease in the adjacent lymph-glands generally takes place sooner or later, but it is usually of somewhat tardy development. [W. A. N. D.]

2.—Louis Fischer presents an article upon the various methods of infant feeding, including breast feeding and bottle feeding. The article deals with familiar observations upon the subject, and includes the study of some personal cases which were benefited by the methods of treatment outlined. [T. L. C.]

3.—A. W. Hewlett presents a paper on the presence of typhoid bacilli in the blood of typhoid fever patients. The great certainty of such a means of diagnosis led to a systematic test of its value in a series of cases at the New York Hospital. There was a total of twenty positive cases out of the twenty-four, or eighty-three per cent. of the number investigated. Of sixteen consecutive cases from the male and children's wards, typhoid bacilli were ob-

tained from the blood of fifteen, showing that the above percentage was not raised by a selection of patients. He employs Cole's method in making the blood cultures. His series of cases leads to the view that in the great majority of cases of typhoid fever there is an invasion of the blood with bacilli in the various stages of the disease. It is not, however, properly a septilemia, for the number of bacilli present is ordinarily very small. During the third week of the disease, or about the time the temperature begins to fall, bacilli are no longer to be obtained in blood cultures. With the onset of a relapse, the bacilli reappear in the blood, only again to disappear as the relapse subsides.

[T. L. C.]

4.—U. S. Bird presents a device for irrigating the male bladder. The reservoir containing the irrigating fluid is raised to a convenient height; the nozzle is introduced into the meatus, and pressure sufficient to prevent escape of liquid is made with the thumb and forefinger on the glans and urethra around the nozzle, and the bulb is compressed. The use of gentle, slowly increased, and regulated pressure will cause the liquid to enter the bladder, and the rest is easy. The bladder is emptied naturally and the operation repeated as indicated. He uses the bulb and discharge tube or a bulb syringe connected to the tube of a fountain syringe, and a hard nozzle guarded by a soft-rubber tip displaces the one originally used. He believes that the advantages of the device are: That there is greater safety from infection than when instruments are passed into the bladder; that the possible pain and nervous reaction are more tolerable than when either intravesical instrumentation or gravity alone, as a motive power, is used; and, that it is more certain than gravity alone, as a motive power.

[T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

November 30, 1901. (Vol. LXXIV, No. 22).

1. State and Individual Prophylaxis of Tuberculosis During Childhood, and the Need of Children's Sanatoria. S. A. KNOFF.
2. The Blood in Infancy and Childhood. GERTRUDE UNDERHILL LIGHT.
3. The Daily Medical Inspection of Schools. D. S. LAMB.
4. Frost-bite of the Cornea, Due to Excessive Application of Cold in the treatment of Mild Mucopurulent Conjunctivitis in the Newborn. E. L. MEIERHOF.
5. Cholecystectomy for Gallstones. C. L. GIBSON.
6. Fifty Years of Medicine; A Retrospect of Progress During the Past Half Century. T. GALLARD THOMAS.

1.—S. A. Knopf, in his article, gives the following experiences of authorities as to bacilliary transmissions: (1) Lartigan reports four cases, and even in these it was possible that there was hereditary predisposition with subsequent bacterial infection. Benda thinks spermatozooids incapable of transporting immotile bacilli; (2) Walter examined microscopically 230 different preparations from the testicles and 63 from the prostate glands, coming from 21 patients who had died from pulmonary tuberculosis, and could not find a single bacillus in any one of them; (3) Straus, who has made extensive experiments in this direction, repeatedly transplanted portions of the various organs of a fetus from a mother in the last stages of consumption into guinea pigs, and never succeeded in producing tuberculosis in these animals; (4) von Leyden failed likewise in his experiments to inoculate tuberculosis by means of organs taken from a child which had died a few minutes after birth and which had a consumptive mother; (5) Noceard, who only experimented with animals, took the organs of 32 fetuses from four tuberculous rabbits and eight tuberculous guinea-pigs, and inoculated 32 guinea-pigs, all with negative results. From these data the author assumes two cardinal points: (1) That tuberculous infection, contracted in whatever way, during infancy or childhood comes from without and not from within; (2) That there may, however, exist a hereditary predisposition to tuberculosis. As to the frequency of tuberculosis in childhood, Bollinger, in 500 autopsies of children of all ages up to the fifteenth year, found lesions of tuberculosis in 218 cases. In 150 of these the lesions were active, and 68 latent. The maximum death-rate from tuberculous lesions in childhood is reached between the second and fourth years. [T. M. T.]

2.—G. U. Light gives the three characteristic factors in

the blood of infants and childhood: (1) The blood of an infant tends constantly to resume embryonal characteristics when the clinical balance is disturbed; (2) such disturbances produce blood changes out of proportion to the exciting cause; (3) lymphocytosis is pronounced. At birth the red cells average 5,742,980 to the cubic millimeter; there is an accompanying excess of from 25 to 30 per cent. in the hemoglobin with a corresponding increase in the specific gravity; and the white cells in the physiological leukocytosis of the new-born average 15,000 to the same cubic volume. The red count decreases to the end of the first year, and then rises to the twelfth, when the adult balance is acquired. The birth leukocytosis is sustained by a leukocytic count higher than in adult blood to the end of the second year, after which the number gradually sinks and, by the twelfth, the absolute count of the white cells, the differential count, have reached the adult type. Digestion leukocytosis is relatively higher in the early years. The eosinophilia of childhood varies at from 1 to 20 per cent. From 2 to 10 per cent. is doubtless normal in the early years, and an increase in the number of acid-staining cells has not the significance of later life. [T. M. T.]

5.—C. L. Gibson gives his position in regard to cholecystectomy for cholecystitis and cholelithiasis: (1) In properly selected cases it is an extremely simple and safe operation; (2) it is a curative operation, doing away with subsequent attacks of cholecystitis, and, more remotely of renewed stone formation; (3) it eliminates the disagreeable possibilities of long continued biliary mucous fistulae; (4) it is indicated in certain technical conditions, such as atrophic or inaccessible bladder, obliteration of the cystic duct, or impacted stone in the cystic duct, and in hemorrhagic conditions of the gall bladder; (5) it is a prophylactic measure against the development of carcinoma on the site of long-standing irritation; (6) it offers the prospect of a shorter and easier wound healing and convalescence; (7) it is not to be employed indiscriminately, but has its proper limitations and contraindications. [T. M. T.]

MEDICAL NEWS.

November 30, 1901. (Vol. LXXIX, No. 22.)

1. A Tribute to Dr. T. Gallard Thomas.
 2. Courvoisier's Law. RICHARD C. CABOT.
 3. Report of a Case of Diaphragmatic Hernia. H. D. HOWE.
 4. Some Observations, General and Technical, Made at the Craig Colony. SMITH ELY JELLIFFE.
 4. Recent Epoch-Making in Medicine—Annual Oration Delivered Before the Michigan State and Medical Society. SAMUEL BELL.
 6. Deformity Arising from Injury to the Lower Epiphysis of the Tibia. B. E. M'KENZIE.
 7. Dangers to Public Health and Morals. Especially to Young Persons, from Quackery, as Promulgated by Public Advertisement. E. STUVER.
- 2.—Dr. R. C. Cabot gives Courvoisier's law in regard to enlargement of the gall-bladder as follows: When the common duct is obstructed by a stone, dilatation of the gall-bladder is rare. When the common duct is obstructed by other causes, dilatation of the gall-bladder is common. In the first condition, in a great majority of cases, when a stone blocks the common bile duct, there are or have been stones in the bladder. The irritation thus produced results in chronic inflammation with thickening of the wall of the gall-bladder and the gall-bladder is no longer distensible. In a great many cases it contracts. In the latter condition in which the common duct is blocked by cancer of the pancreas or other causes outside of the ducts, the walls of the bladder are thin and easily distended, so that the blocking up of the bile behind the duct readily distends them. [T. M. T.]
- 3.—H. D. Howe reports a case of diaphragmatic hernia with the following history and postmortem. Seven months after being struck by the end of a shaft just below the left breast, from which he seemed to have entirely recovered, and after violent exertion in a jumping contest, the patient was unable to continue on account of pain in the chest. On admission to the hospital he complained of

nausea and a dull pain up and down the lower half of the sternum. There was a decrease in the respiratory movements in the lower half of the left chest with distant breath sounds. The heart was displaced to the right and upward, with normal sounds. The abdomen was somewhat scaphoid, but nothing abnormal was found. The bowels were constipated. Nothing could be kept in his stomach, so rectal feeding was resorted to. At times there was abnormal tenderness. Vomiting was relieved by lavage. The autopsy revealed extreme rigor mortis and considerable emaciation. The stomach, transverse colon, upper part of descending colon and fully one-half of the great omentum were found in the left chest cavity. The rupture in the diaphragm was one and a half by one and half inches, and was near the center of the muscular portion, one inch to the left of the esophageal opening. The edges of the hernial opening were indurated and rolled upward in the thoracic cavity. The heart was displaced to the right and upward. The lung was crowded up above the fourth interspace, but was normal otherwise. The stomach was somewhat dilated and contained about eighteen ounces of ink fluid. The hernia was not strangulated and there was no inflammatory condition of the stomach and intestines. At a point near the junction with the colon, the omentum was strongly adherent to the pleura in the sixth interspace—the site of the contusion of the chest. There was an almost entire absence of the intercostal muscles at the point of the old injury, but no fracture of the rib was perceptible. [T. M. T.]

5.—S. Bell, in his annual oration delivered before the Michigan State Medical Society says: It is an interesting fact to note that after the discovery of the anthrax bacillus by Pollenden and Davaine, in 1849, there was a prolonged period in which no important discoveries of pathological organisms were made, but during this period important methods of technic were elaborated. This was again followed by a period in which important additions followed each other in rapid succession. In 1873 Obermeier discovered the *Spirillum Obermeieri* of relapsing fever. In 1879 Hansen made the announcement of the discovery of bacilli in the cells of leprosy nodules. During the same year Neisser discovered the specific gonococcus of gonorrhea. In 1880 the typhoid bacillus was first observed by Eberth and independently by Koch. During the same year Pasteur published his work on "Chicken-Cholera" and the pneumococcus was described by Sternberg. It was in the year 1882 that Koch made himself immortal by announcing to the world the discovery of the tubercle bacillus, and in 1882 Pasteur published a work on "Rouget du Porc" and Löffler and Schutz reported the discovery of the bacillus of glanders. In 1884 Koch announced the discovery of the "comma bacillus," the cause of cholera, and at about the same time Löffler discovered the diphtheria bacillus, and before the end of the same year Nicolaier the tetanus bacillus. In 1892 Cannon and Pfeiffer discovered the bacillus of influenza. In 1894 Yersin and Kitasato independently isolated the bacillus causing the bubonic plague. In 1894 Sanarelli discovered the bacillus *leteroides*, supposed to be the bacillus of yellow fever. [T. M. T.]

5.—B. E. McKenzie, in his article on deformity arising from injury to the lower epiphysis of the tibia reports three cases in which the following operation was successful. He removed a section about one inch in length from the fibula subperiosteally, the tibia was cut through at the same level as near to the lower end as was thought safe, and the foot moved outward in its relation to the leg, to its normal position. In one of the cases, on account of the patient being quite young, it was decided that the deformity would recur, hence the epiphyseal cartilage was removed from the lower end of the fibula, but in the other two this was not done. Separation of the epiphysis is not of frequent occurrence; and of the various epiphyses, separation of that of the tibia is one of the least frequent. Mr. Hutchinson has seen 17 cases of separation of the lower radial epiphysis; 14 to 15 of the lower humeral; 13 of the upper humeral and 10 of the lower femoral. [T. M. T.]

7.—E. Stuver, after considering the subject of his article quite extensively, concludes with the following facts: (1) The great life-saving discoveries have been made by quite unobtrusive men; (2) quacks and charlatans have never made any great discoveries in sanitary science, but, on the other hand, have always opposed scientific progress and investigation; (3) quackery flourishes best in an atmosphere of ignorance, credulity and pseudo-science, and is promulgated by boastful, arrogant pretensions, and public advertising; (4) antivaccinationists, antivivisectionists, Christian scientists, *et id omne genus*, by opposing preventive sanitary measures and scientific investigations, facilitate the spread of infectious and contagious diseases, oppose the stamping out of diseases already established and impede investigations as to the causation, prophylaxis and cure of disease; (5) the newspapers, which derive a large part of their revenue from advertising, nearly always espouse the cause of the so-called commercial interests, regardless of the fact whether they are supported by truth and justice, or are opposed to the best interests of the public. This is well illustrated by the recent occurrence of the bubonic plague in San Francisco; (6) the boastful pretension and misrepresentations of quack advertisements (patent medicines) lower the public regard for truth and fair dealing, and encourage falsehood and duplicity; (7) the bold and shameless introduction of advertisements, calling attention to and suggesting vile, immoral and even criminal acts, debases and demoralizes the young, and leads to disease, crime and degeneration. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

November 28, 1901. (Vol. CXLV, No. 22).

1. One's Health in Egypt. F. GORDON MORRILL.
2. Hernia Epigastrica and Fatty Tumors in the Epigastrium. HOWARD A. LOTHROP.
3. Abscess in the Posterior Mediastinum in Connection With Pott's Disease. The Report of a Successful Operation for the Drainage of Such an Abscess. JOEL E. GOLDTHWAIT.
4. Pathological Lesions in Rheumatoid Arthritis. C. F. PAINTER.
5. A Case of Papillary Adenocystoma of the Thyroid Gland. HARRY C. LOW.

2.—Will be abstracted when finished.

3.—Goldthwait has seen four cases in which abscess of the posterior mediastinum was diagnosed in connection with Pott's disease on account of pressure symptoms. Three of the patients died, and in one the symptoms disappeared with the drainage of the abscess. Dyspnea is the chief symptom. The attacks are paroxysmal in character with more or less of the tubular or metallic breathing that is seen in acute laryngitis. [J. M. S.]

4.—Painter regards rheumatoid arthritis as a polyarticular disease, occurring usually in young and middle-aged women. It is a disease of insidious onset and development and is brought on by wear and tear. It produces marked constitutional disturbances and manifests itself by a spindle-shaped swelling, marked by synovial distension. There is no true bony enlargement, but there is decided atrophy of the soft parts and osseous erosions. He distinguishes this disease from osteoarthritis. The disease cannot logically be claimed to be an inflammatory one, because of the lack of histological elements found at the seat of the lesions in the joints involved that at all compare with the elements of other inflammatory lesions. The author thinks the bacterial etiology of the disease is not proved. [J. M. S.]

5.—Low reports a case of adenocystoma of the thyroid gland. The patient was a woman, aged 49 years, who noticed the swelling following an attack of sore throat. There was no indication of exophthalmos. The tumor was removed and the diagnosis confirmed by examination.

[J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

November 30, 1901.

- Chairman's Address Delivered Before the Section on Pathology and Bacteriology at the Fifty-Second Annual Meeting of the American Medical Association. LUDVIG HEKTOEN.
- Affect of Direct, Alternating, Tesla Currents and X-Rays on Bacteria. F. ROBERT ZEIT.
- Laboratory Observations on Hydrophobia in Ohio. A. P. OHLMACHER.
- The Newer Pathology of the Retina, Etc. HARRY FREIDENWALD.
- Atrophy of the Retina. DUDLEY S. REYNOLDS.
- A Case of Blindness from Drinking Bay Rum, Etc. H. MOULTON.
- Indications for Operation in Calculous Nephritis and Ureteritis. CHARLES LESTER LEONARD.
- Acute Cholecystitis and Cholangitis as a Complication of Gallstones. DANIEL N. EISENDRATH.
- Dissecting Abscess of the Abdominal Wall Producing Deformity Simulating Pott's Disease. JAMES B. BILLITT.

1.—Hektoen delivered the chairman's address before the Section on Pathology and Bacteriology, at the fifty-second annual meeting of the American Medical Association, in which he set forth the lines upon which the work should be carried out. He emphasizes the necessity of securing accurate minutes of the proceedings and also the necessity of exercising the most careful scrutiny in the publications of the articles in the *Journal of the American Medical Association*. He stated that there were unexcelled opportunities for the demonstration to large numbers of specimens, apparatus, and methods of working and teaching in the pathological exhibit. He also remarks that the facilities for scientific work, in this country at the present time, are highly developed, and that research and criticism flourish in the modern American University.

[F. J. K.]

2.—Zeit discusses the effect of direct, alternating, Tesla currents and X-rays on bacteria, before the Section of Pathology and Bacteriology at the fifty-second annual meeting of the American Medical Association. This author performed a large number of experiments, the results of which finally lead to the following conclusions, which we quote in substance: (1) A continuous current of 260 to 320 milliamperes passed through bouillon cultures kills bacteria of low thermal death points in 10 minutes by the production of heat—98.5° C. The antiseptics produced by electrolysis during this time are not sufficient to prevent growth of even non-spore bearing bacteria. The effect is a purely physical one; (2) a continuous current of 48 milliamperes passed through bouillon cultures for from 2 to 3 hours does not kill even non-resistant forms of bacteria. The temperature produced by such a current does not rise above 37° C. and the electrolytic products are antiseptic but not germicidal; (3) A continuous current of 100 milliamperes passed through bouillon cultures for 75 minutes kills all non-resistant forms of bacteria even if the temperature is artificially kept below 37° C. The effect is due to the formation of germicidal electrolytic products in the culture. Anthrax spores are killed in 2 hours. Subtilis spores were still alive after the current was passed for 3 hours; (4) a continuous current passed through bouillon cultures of bacteria produces a strongly acid reaction at the positive pole, due to the liberation of chlorine which combines with oxygen to form hypochlorous acid. The strongly alkaline reaction of the bouillon culture at the negative pole is due to the formation of sodium hydroxide and the liberation of hydrogen in gas bubbles. With a current of 100 milliamperes for 2 hours it required 8.82 milligrams of H₂SO₄ to neutralize 1 c.c. of the culture fluid at the negative pole, and all the most resistant forms of bacteria were destroyed at the positive pole, including anthrax and subtilis spores. At the negative pole anthrax spores were killed also, but subtilis spores remained alive for 4 hours; (5) the continuous current alone, by means of the Dullos-Reymond's method of non-polarizing electrodes and the exclusion of chemical effects by ions in Kruger's sense, is neither bactericidal nor antiseptic. The apparent antiseptic effect on suspension of bacteria is due to electric osmosis. The continuous electric current has no bacteri-

cidal nor antiseptic properties, but can destroy bacteria only by its physical effects—heat—or chemical effects, the production of bactericidal substances by electrolysis; (6) a magnetic field, either within a helix of wire or between the poles of a powerful electro-magnet, has no antiseptic or bactericidal effects whatever; (7) alternating currents of a three-inch Ruhmkorff coil passed through bouillon cultures for 10 hours favor growth and pigment production; (8) high frequency, high potential currents—Tesla currents—have neither antiseptic nor bactericidal properties when passed around a bacterial suspension within a solenoid. When exposed to brush discharges, ozone is produced and kills the bacteria; (9) bouillon and hydrocele-fluid cultures in test-tubes of non-resistant forms of bacteria could not be killed by Röntgen rays after 48 hours' exposure at a distance of 20 mm. from the tube; (10) suspension of bacteria in agar plates and exposed for 4 hours to the rays, according to Rieder's plan, did not kill them; (11) tubercular sputum exposed to the Röntgen rays for 6 hours at a distance of 20 mm. from the tube, caused acute miliary tuberculosis of all guinea-pigs inoculated with it; (12) Röntgen rays have no direct bactericidal properties. The clinical results must be explained by other factors, possibly the production of ozone, hypochlorous acid, extensive necrosis of the deeper layers of the skin and phagocytosis. [F. J. K.]

3.—Ohlmacher gives an account of laboratory observations on hydrophobia in Ohio. This author has had an opportunity of observing, during the past five years, several cases of suspected hydrophobia in the State of Ohio. He gives a brief account of the histories of five cases and reaches the following conclusions: (1) Four instances in which human beings were bitten by dogs suspected of rabies were tested by laboratory methods with positive results in two. All the patients were given the preventive treatment; (2) In three cases the patients were treated at the Chicago Pasteur Institute, and here the only one positive by laboratory test died of rabies in the midst of treatment, presumably because the inauguration of treatment was somewhat delayed and because the stage of incubation was remarkably short; (3) in the fourth case, conclusively demonstrated as rabies in the laboratory, the patients were promptly treated in the Pasteur Department of the Baltimore City Hospital, and they have no evidence of the disease six months after having been bitten. [F. J. K.]

4.—See Philadelphia Medical Journal, June 15, page 1141.

5.—See Philadelphia Medical Journal, June 15, page 1141.

6.—See Philadelphia Medical Journal, June 15, page 1141.

7.—C. L. Leonard in discussing the indications for operation in calculous nephritis and ureteritis refers to the increased frequency of diagnosis of ureteral calculi by the Röntgen method, showing that this condition is much more frequent than was heretofore supposed. It is possible for ureteral calculi to remain quiescent for a long time. The mere presence of a stone in the ureter is no indication for operation. Leonard proposes an expectant or conservative plan of treatment in many of these cases when the stone is small. The Röntgen method has been found as accurate in making negative as positive diagnoses. In over 50% of 48 cases in which calculi were found the stone was lodged in the ureter. The symptoms indicating nonoperative treatment are the presence of a small calculus, a more or less constant, dull ache in the lumbar region with recent and repeated attacks of more acute pain. If the Röntgen picture shows the kidney to be hydronephrotic, there is great likelihood of the subsequent passage of the calculus. Where no infection is present the employment of all exploratory instruments in the male is to be avoided. The segregator, the cystoscope and ureteral catheter are all of value, but their employment in antiseptic cases is still *sub judice*. Urinalysis is of doubtful value excepting as confirming the condition. The Röntgen rays not infrequently will demonstrate the presence of phleboliths in the venous plexus of the broad ligament which may be mistaken for ureteral calculi. In such cases the use of the wax-tipped ureteral catheter is of value. The presence of infection in the female should be considered a positive indication for operation. Com-

plete or unilateral anuria is always an absolute indication for immediate operation. In the male, any form of anuria, the presence of calculi too large to pass, accompanied by symptoms indicating serious injury to the kidney, are indications for operation. Leonard asserts that incision into the kidney for suspected calculus is only justified by the previous detection of the calculus by the Röntgen method. The definite location of the calculus by the X-rays has greatly diminished the traumatism of both kidney and ureter at the time of operation. Stress is laid upon the necessity of thoroughly examining the bladder with a Bigelow evacuator before operating for small ureteral calculi.

[J. H. G.]

8.—D. N. Elsendrath discusses **acute cholecystitis and cholangitis as a complication of gall stones**, and reports an interesting case of a girl 17 years of age who was operated upon for gallstones and purulent cholecystitis in which colon bacilli were found and who died 3 days after operation with symptoms of cholemia. The liver showed evidences of diffuse hepatitis and nonsuppurative cholangitis, and to this condition the death is attributed. Elsendrath reviews very thoroughly the literature regarding the etiology and pathology of infection of the gall bladder and bile ducts, and discusses the symptoms of the various forms of cholecystitis. He condemns the practice of employing any other treatment than surgical after empyema of the gall bladder has been diagnosed. [J. H. G.]

9.—James B. Bullitt reports the case of a 16 year old boy who, 4 months after a typical attack of typhoid fever, developed a **dissecting abscess of the abdominal wall**, which produced a deformity closely simulating **Pott's disease**. After discussing this subject Bullitt reaches the following conclusions: (1) Abscesses of the abdominal wall without any connection with the abdominal cavity occur most frequently as a result of typhoid fever and readily heal after incision and drainage; (2) the larger dissection abscesses of the abdominal wall communicate at their inception with some portion of the intestinal tract, occur most frequently as a sequela of typhoid fever or appendicitis, and result from an adhesion between the parietal peritoneum and a viscus, with perforation of the latter. After rupture such abscesses follow the course of fecal fistula, healing sometimes spontaneously or as a result of incision with drainage only after the communication with the intestine has become obliterated. This obliteration sometimes occurs spontaneously, sometimes must be brought about by operative procedure; (3) a dissection abscess may produce symptoms and deformity simulating Pott's disease; on the other hand, Pott's disease with abscess appearing after an attack of typhoid fever may be confounded with abscess resulting from the typhoidal process. [J. H. G.]

AMERICAN MEDICINE.

November 30, 1901.

1. The Diagnosis of Gallstones and their Aberrances. CHARLES G. STOCKTON.
2. Features Determining Permanency of Cure in Radical Operations for Hernia. A. J. OCHSNER.
3. The Neurasthenic Spine. ROBERT W. LOVETT.
4. Some Thoughts on Rheumatism and Rheumatic Simulants. JAMES J. WALSH.
5. Diagnosis of Diseases of the Urinary Bladder. JOHN R. WATHEN.
6. Shall Massage of the Stomach be Recommended? Etc. MARK I. KNAPP.
7. Tuberculosis of the Sacroiliac Joint, etc. C. O. THIENHAUS.
8. The Indications for Operation in Calculous Nephritis and Ureteritis. CHARLES LESTER LEONARD.

1.—Charles G. Stockton discusses the **diagnosis of gallstones and their aberrances**. He describes cases illustrating the more common forms of the disease, and closes with some general points upon the diagnosis: cholecystitis which is often mistaken for gastralgia. The curious signs of transient pyloric obstruction that follow adhesions of the liver and gallbladder, and the lower end of the stomach must be remembered. It should also be remembered that jaundice is a far from necessary accompaniment of cholelithiasis.

The chief symptoms of gallstone disease, including of course those of the attending cholecystitis, are. Paroxysmal pain, tenderness below the junction of the ninth rib and cartilage; vomiting; ague-like fever; jaundice; the formation of tumor; collapse, and the passage of calculi in the stools. [T. L. C.]

2.—A. J. Ochsner contributes a paper dealing with the features determining with permanency of cure in radical operations for hernia. He states the wound must heal primarily; that in order to avoid pressure-necrosis the stitches must not be drawn tightly; that the edges of the surfaces must be free from fat and other unstable tissues; the tissue should be manipulated with the greatest care during the operation; the wound should be supported by broad rubber adhesive plaster strips; the patient should be kept in bed for two or three weeks; after the operation abnormal intraabdominal pressure should be eliminated. These general conditions, being fulfilled, apply to all cases of hernia alike. He discusses, as well, the steps to be taken in order to secure permanency of cure in inguinal hernia, femoral hernia; ventral hernia following laparotomy, and umbilical hernia. [T. L. C.]

3.—Robert W. Lovett presents a paper upon **neurasthenic spine**, the term used to describe the functional disturbances in which pain and more or less disability of the spine are present. He discusses the conditions from a practical, surgical point of view, and groups them in classes: 1. Irritation of the spine due to faulty attitude. 2. Cases resulting from severe traumatism. 3. Cases resulting from slight traumatism. 4. Spinal invalidism. In this group he includes those case in which severe spinal disability occurs without traumatism or faulty attitude connected with neurasthenia. He believes that classification given is of assistance from the therapeutic point of view. The essential of treatment seems to consist in the progressively increasing use of the spine under proper conditions without too much regard to the subjective symptoms. [T. L. C.]

4.—James J. Walsh contributes some thoughts on **rheumatism and rheumatic simulants**. He discusses briefly the broad use of the term rheumatism, covering a multitude of different conditions, and mentions that finally of late years we have come to realize that acute rheumatic arthritis must be considered as an acute infectious disease of microbic origin. Besides the joint symptoms which occur in connection with mycrobic disease of various kinds there are a series of arthropathies which are due only to the presence of toxins in the blood. These toxic arthropathies represent an important portion of the rheumatic simulants, for instance, the arthropathy which occurs during the course of blood poisoning. There are also a series of cases with painful symptoms usually located in the neighborhood of joints, which have been diagnosed either by the patients themselves or by their physicians as rheumatism. When the patient was not able to give a distinct history of acute rheumatism, the case was assumed to be not rheumatic in character. Among 40 patients under treatment, 15 who presented so-called rheumatic symptoms of the lower limbs were found to be suffering from flat foot. This proportion, says the writer, a little more than one-third, represents very nearly the ratio in which flat foot symptoms are mistaken for rheumatism. He discusses also the treatment of brachialgia growing common among motormen in the cities. Salicylates while they relieve the pain of this condition, are distinctly depressing. What is needed particularly is that the men be instructed to husband their arm energy and use the body weight effectively. [T. L. C.]

5.—John R. Wathen treats of the **diagnosis of diseases of the urinary bladder**. He discusses the various forms of cystitis; the presence of benign papilloma, and the frequent and gradual malignant transformation of the stalk or pedicle of these growths as well as the symptoms of these conditions. [T. L. C.]

6.—Will be abstracted when concluded. [T. L. C.]

7.—C. O. Thienhaus presents a paper on **tuberculosis of the sacroiliac joint**, together with a description of its diag-

nosis and treatment, and the history of a patient with *sacrocoalgia frusta*. The case which he presents was in a young woman of 19 years, who first complained of pain in the lumbar region. The pain irradiated down the left iliac crest and the left side, and gave the impression of a rheumatic disorder. A year and a half previous a swelling appeared on the inner side of the anterior superior spine, above as well as under Poupert's ligament. This was operated upon. Thin, flocculent pus was encountered and the tuberculous cavity was treated in the usual manner with iodoform. In March, 1900, the patient was anemic, but fairly well nourished. Two centimeters to the inner side of the anterior superior spine a round swelling was apparent, upon which two fistulas opened which excreted, by pressure, flocculent pus. A sound introduced into the fistula passed up to the region of the left sacroiliac joint. By vaginal examination swelling and tenderness in the neighborhood of the left sacroiliac joint could be encountered. She has improved somewhat in weight and is able to walk about, but the fistulas are still secreting a thin, muculent fluid.

[T. L. C.]

8.—C. L. Leonard presents a paper on the indications for operation in calculous nephritis and ureteritis, in which he states that the differentiation between the cases that demand immediate operation and those in which a conservative, expectant line of treatment should be pursued, is based upon the results of the Röntgen method of diagnosis. The position and size of the calculi are determined by it, and when taken in conjunction with the symptomatology, furnish accurate data upon which the indications for operation can be based. [T. L. C.]

VRATCH.

September 1, 1901. (Vol. XXII, No. 35).

1. On the Question of Mixed Infection in Bubonic Plague. V. P. KASHKADAMOFF.
2. A Method of Increasing the Amount of Fat in Diluted and Sterilized Cow's Milk to Approximate the Normal Fat of Mother's Milk. A. A. ROMANOFF.
3. On Extravasations into the Spinal Cord. M. O. SCHAIKEVITCH.
4. Stinging Nettle (*Urtica Dioica*) in Uterine Hemorrhages. I. S. KALABIN.
5. A Case of Cesarean Section by Porro's Method in a Woman with a Kyphotic Pelvis. I. A. DISK.
6. Phenosalyl in Gummatous and Varicose Ulcers. F. I. TSCHITSCHERIN.
7. On the Question of Treatment of Intestinal Obstruction by Batsch's Method (Injections of Atropin). S. N. IVANOVSKI.
8. A Case of Rupture of the Spermathecal Cord. A. ABUTKOFF.

1.—Kashkadamoff instituted a series of experiments with the view of determining whether the inhibitory effect of the staphylococci on the plague bacilli observed by Tartakovsky in vitro holds true also in the animal organism. He found, as did Tartakovsky, Kanski and others, that when the plague bacilli are grown in culture media together with the staphylococci, the latter seem to completely inhibit the growth of the former, and on examination are the only organisms found. This, however, does not take place in the animal body. Experiments on guinea pigs and mice have shown that when a virulent culture of the plague bacillus is injected subcutaneously and followed in 24 hours by the injection of a culture of staphylococcus, or vice versa, the animal invariably dies of plague septicemia, the staphylococcus infection remaining localized. A slight antagonism between the two microorganisms was, however, observed also in the animal body. At the point of inoculation of the staphylococci, the subcutaneous tissue, blood vessels and lymphatics became infiltrated with staphylococci, but no plague bacilli could be found, although the animal succumbed to a general plague septicemia. In

white mice the mixed infection seemed to have increased the virulence of the plague bacillus. [A. H.]

2.—Romanoff describes a method of obtaining cow's milk with the proper proportion of fat. The milk is diluted one-half, 4% sugar added, and poured into 6 ounce flasks which are then sterilized for 10 minutes. The flasks are placed on ice for 2-3 hours, when the lower half of the milk in each is removed by means of a siphon. The latter is made of a bent glass tube, the shorter arm of which communicates through a double-perforated stopper with a bottle; through the other perforation another glass tube bent at right angles is passed, somewhat in the fashion of a spritz-bottle. By means of suction any portion of the milk can be readily removed. Repeated analyses showed that the remaining upper half of the milk contains the requisite proportion of fat. [A. R.]

3.—Schaikevitch, from a study of 3 cases and the literature on the subject, draws the following conclusions: 1. Together with the described forms of *hematomyelia* there may be met also such which do not present the *syringomyelic* interruption of sensation and in which the white matter of the cord is principally affected. 2. In these cases the membranes of the cord participate in the morbid condition. 3. This fact is not sufficiently emphasized by other observers. 4. It is not always that the band of *syringomyelic* interruption of sensation is noticed above and below the area of injury and pressure due to fracture of the vertebrae, as shown by Minor. 5. There are cases in which for a long period after the hemorrhage it is impossible to suspect the development of *gliomatosis*. [A. R.]

4.—Kalabin reports 6 cases of *metrorrhagia* from various causes in which the administration of an infusion of *nettle* (10 grms. to 200 cc. of water) in tablespoonful doses had a beneficial effect. He considers this drug a very good hemostatic in certain cases of *metrorrhagia*. [A. R.]

5.—Disk reports a case of a *kyphotic pelvis* in which a 7-months pregnancy was successfully interrupted by a *Porro* operation. He considers the latter preferable to *craniotomy*. The decision as to whether a simple *Cesarian* section or a *Porro* operation should be performed should rest with the woman. [A. R.]

6.—Tschitscherin employed *phenosalyl* in a number of cases of *gummatous* and *varicose ulcers* of long standing, with remarkable success. *Phenosalyl* is composed of carbolic acid, 9 grms., salicylic acid, 1 gm., lactic acid, 2 grms. and mentol, 0.1 gm. It was found by Christmas to be next to bichloride of mercury in its germicidal properties, while it is far less toxic than the other germicides. The most obstinate ulcers yielded to external applications of 10-25% glycerin solution of *phenosalyl*, without the aid of any other treatment. [A. R.]

7.—Ivanovski treated successfully 2 cases of *intestinal obstruction* with hypodermic injections of *atropine*. [A. R.]

8.—Abutkoff reports a rare case of *complete severance* of the *spermathecal cord*, resulting from a slight injury to the testicle. Except a slight hydrocele and temporary pain, no ill effects followed. The patient was seen 5 years after the injury took place. [A. R.]

EDINBURGH MEDICAL JOURNAL.

September, 1901.

1. The Tuberculosis Problem, as Affected by the British Congress on Tuberculosis. R. W. PHILIP.
2. On the Graver Complications of Chronic Purulent Otitis Media. HERBERT F. WATERHOUSE.
3. A Note on the Treatment of the Ataxia of Tabes by Means of Co-ordinated Exercises. EDWIN BRAMWELL.
4. Tuberculosis of the Heart Muscle. RAYMOND CRAWFORD.
5. On the Sterno-Costal Venous Pecton. GEORGE THIN.
6. The Relation of Alcoholism to Tuberculosis. T. N. KELYNACK.

7. Typhoid Bacilluria. C. J. LEWIS.

2.—Waterhouse is convinced that the majority of grave complications of purulent otitis media result from the neglect of treatment of otorrhea. In the majority of cases, aurial polyp, which may be mucous, fibrous, or myxomatous, are caused by purulent otitis media. The polypus, when once developed, tends to aggravate the purulent process by increasing and tending to dam back the flow of pus from the middle ear. They are generally attended by a flow of fetid pus often mingled with blood and, at times, by neuralgic pains, tinnitus, giddiness and attacks of vomiting, symptoms which are dependent, in large part, on the presence of a foreign body that offers an obstacle to the escape of pus from the middle ear. Removal of the polypus is, of course, the treatment to be adopted, but before attempting its removal the cavity of the tympanum should be purified as far as possible by the use of a 1 to 3000 solution of biniodide of mercury in rectified spirit. Purulent inflammation of the mastoid antrum and mastoid cells, if very acute, should cause immediate opening of the mastoid antrum. The author recommends operation upon the mastoid in cases of chronic otorrhea associated with (1) continuous or frequent pain in the ear, mastoid or side of head, particularly when such pains are aggravated by percussion over the mastoid process, (2) total loss of hearing, with frequent attacks of giddiness, suggesting purulent involvement or destruction of parts of the internal ear; (3) caries or necrosis; (4) polypi and granulations that recur after removal, and resist careful treatment with the biniodide and spirit ear drops; (5) caseous deposits and cholesteatomata; (6) facial paralysis, which is so frequently due to caries or necrosis of the facial canal; (7) distinct symptoms of intracranial abscess, meningitis or infective thrombosis of the lateral sinus. The most fatal complication of purulent otitis media is purulent leptomenigitis. The symptoms are frequently modified by the coexistence of abscess of cerebrum, cerebellum, or an extradural collection of pus. There is but one treatment for intracranial abscess; namely, evacuate the pus and drain the abscess cavity; no case must be considered hopeless. The result of operative treatment in intracranial abscess uncomplicated by the coexistence of meningitis or lateral sinus pyemia, is far more favorable than is generally believed. Do not put off operation in the absence of localizing signs. Pyogenic lateral sinus thrombosis is more common than is generally considered to be the case. The symptoms are headache and vomiting, pain on tapping over the situation of the lateral sinus and pain on pressure over the upper 2 or 3 inches of the course of the internal jugular vein and sometimes a hard swelling, the size of the little finger, in the upper part of the course of that vein. The temperature fluctuates between 105° and 106° and 100°F., the pulse is very quick, 120 to 150 per minute. Rigors, edema of the mastoid and occipital regions, icterus, dry and dirty tongue and very foul breath. Diarrhea is constant in the later stages. The lungs suffer on account of fragments of the infective clot, forming pulmonary emboli. Cough is noticed for a day or so, then a sudden sharp pain in the chest, which lasts for half a day, and then subsides. This is repeated perhaps in 2 to 6 other parts of the lungs, and a few hours later the characteristic prune-juice expectoration makes its appearance. The invariable rule of practice must be incision of the sinus and clearing out the clot and puriform debris, with division of the internal jugular vein between two ligatures. [J. M. S.]

3.—The tabetic must learn to forget the "movement memories" that served his purpose while in health, and proceed to acquire a new series of "movement memories," representing the impressions that he now receives in his diseased state through the neurons that remain intact. The amount and rapidity of the improvement is largely influenced by the personal equation of the patient. Without doubt, the best results are obtained in persons who take an intelligent interest in the exercises, and who are at the same time gifted with mental concentration and perseverance. In the presence of a mental defect or disorder, where the foregoing qualities are deficient, little benefit is to be expected. The beneficial effects of the treatment are not limited to a diminution of the ataxia. The change

in the patient's mental disposition which occurs during the course of the treatment is often remarkable. A list of exercises for the lower limbs follows. A quarter of an hour, 2 or 3 times a day, will probably be sufficient at first. An exercise must be stopped on the earliest appearance of fatigue, or if there are any signs of the patient's attention beginning to wander. [J. M. S.]

4.—It is more than doubtful if the attention of the heart muscle with tuberculosis is ever primary. Nearly all the cases are secondary to tuberculosis of the thoracic organs. Adherent pericardium is almost constant, but tuberculosis of the myocardium may exist without any affection of either pericardium or endocardium. In a very large proportion of cases the mediastinal and tracheobronchial glands and the lungs have been extensively and obviously tuberculous. The usual mode of propagation to the heart muscle is by direct extension, but in other instances perfectly healthy heart muscle intervenes between the adherent pericardium and the tuberculous deposit. The infection of the myocardium may be due to carriage by the blood or by the lymph stream. The anterior and upper aspect of the right auricle is the part of the organ most frequently involved in the process. Tuberculosis of the heart muscle may take the form of the large tubercle, the miliary tubercle, or tuberculous myocarditis. [J. M. S.]

5.—The thorax of young and adult men often presents a remarkable development of the veins, which is known as the venous sternocostal festoon. It consists of a band of small veins passing downward and outward from the lower end of the sternum towards the sides below the nipple. The festoon is composed of venules that unite to form the veins that correspond to the terminal branches of the internal mammary artery. In the very great majority of cases, in which Thin observed this condition, the lungs were healthy. The condition occurs in men who take occasionally long-sustained and violent exercise when their ordinary mode of life prevents their being in "hard" condition; and if this suggestion is correct, it would indicate that, in young men in a "soft" condition, the walls of the small veins are less resistant and more dilatible than in those whose condition is described as "hard."

[J. M. J.]

6.—See Philadelphia Medical Journal, Vol. VIII, No. 3, p. 290.

7.—In a considerable proportion of cases of typhoid bacilluria pyuria is present, although not necessarily in large quantities. The fresh urine is slightly turbid. Lewis has noticed that the condition usually commences in the second or third week of typhoid fever and continues for a varying length of time. On the other hand it may not begin until convalescence is progressing and then may last for a long time. The urine is a more or less pure culture of the bacillus typhosus. The author believes that some breach of the excretory membrane is necessary for the escape of the bacillus from the kidney and that there is no true elimination by that organ. Proof that the typhoid bacillus is excreted in the urine, in a condition capable of infecting other persons, has been very definitely forthcoming. It is possibly met with in 10% of cases of typhoid fever. The best internal remedy is urotropin, given in doses of 10 grains, 3 times daily. During the continuation of the attack the urine should be boiled to kill the bacillus.

[J. M. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 38.

1. Puerperal Fever. A. HEGAR.
2. Treatment for Sea-Sickness. R. HEINZ.
3. Contribution to the Question of Renal Diabetes. H. LUETHJE.
4. Osteoclasts and Osteoclasts. L. HEUSNER.
5. Acute Osteomyelitis of the Sternum in Typhoid Fever. G. JOCHMANN.
6. Tamponing the Abdominal Cavity with Air for the Purpose of Arresting Intestinal Hemorrhage that Threatens Life. G. KELLING

7. The Difference of the Histological Action of Tubercle Bacilli and Other Bacilli that Have the Same Quality of Resulting Acid; The Grass Bacillus of Moller; the Butter Bacillus Peirl-Rabinowitsch; and the Timothy Bacillus of Moller. HOELSCHER.

8. Eczema. J. FREDERIE.

9. Experimental Investigations Upon the Disinfection of the Hands. Eighth Paper. PAUL and SARWEY.

1.—Hegar, after an eloquent summary of the history of Semmelweis' efforts and results, discusses the present status of puerperal infection. Ordinarily infection occurs from without, giving rise to endometritis, salpingitis, disease of the uterine blood vessels, etc. The diagnosis is sometimes difficult, on account of the difficulty of differentiating from other febrile conditions. The commonest cause is infection from the hands or instruments of the accoucheur. The treatment varies of course with the nature of the process, if there is gangrenous process associated with thrombosis, very little can be done, a reliable antistreptococcic serum not yet having been produced. Prophylaxis consists in thorough cleansing of the patient, and in prohibiting all persons suffering from even the slightest form of infectious disease, such as onychia or furuncles, from attending a woman in labor. Perhaps the most useful therapeutic measure is a careful douching of the uterus, occasionally associated with persistent drainage. The douching should be repeated every hour or two. For this purpose Hegar prefers chlorine water diluted one to four times. [J. S.]

2.—Heinz having noticed that a tendency to nausea or vomiting may be overcome by producing a state of apnea, as for example, by means of forced respiration, has employed this in one case of severe sea-sickness with excellent results. The method is to direct the patient to take one half dozen deep, forcible in- and expirations every time there is a slight sensation of nausea. [J. S.]

3.—Lüthje believes that the following conditions should be fulfilled before we make a diagnosis of renal diabetes. (1) The absence of sugar from the urine before the disease of the kidneys; (2) the presence of sugar shortly after the disease of the kidney; (3) the independence of the amount of sugar excreted from the amount of carbohydrates administered; (4) the diminution of the amount of sugar in the blood. He reports the following interesting case, which appears to satisfy these rigid requirements. A man of 22 acquired gonorrhoea from which cystitis resulted. Later the amount of albumen in the blood was apparently in excess of the amount that should have been present as a result of the mixture of pus and blood, and hyaline and granular casts were found. There was a slight reduction of copper sulphates; there was no increase in thirst, and the spleen and liver were not enlarged. Four days later the presence of sugar was positively determined, and it could be detected in all samples examined until his discharge nearly a month later. Moreover the patient from time to time reported at the hospital for further examination, and sugar was always present. This sugar was not affected by the quantity of carbohydrates administered, but varied irregularly between 3 and 16 grms. per day. An examination of the blood showed the presence of .55% of sugar, a considerable reduction. Of course, in this case it is impossible to determine what is the exact disturbance in the function of the kidney. [J. S.]

4.—Heusner gives a history of the various methods that have been employed for the purpose of reducing deformities of the bones. In the early portion of the last century considerable success was obtained by means of subcutaneous fractures or forcible straightening. Later with the introduction of antiseptic measures, open operations became popular, and practically all cases were treated by incision and then fracture or sawing of the bone. As, however, the results were not as good as was expected, surgeons gradually recurred to the old methods of forcible reduction and then keeping the parts in place by means of plaster bandages. For this purpose numerous instruments have been devised which all consist essentially of clamps for holding the limb in a fixed position, and a screw that produces a steady powerful pressure upon the deformed part. The operations that have given rise to the greatest interest are knock-knee and club-foot. Heusner has devised an osteoclast for the purpose of reducing the former condition, that has certain advantages over those formerly in use. This instrument cannot be well understood without

illustrations, and the reader is therefore referred to the original article. For the reduction of club-foot he prefers the apparatus of Phelps, but also mentions a number of other instruments. [J. S.]

5.—Jochmann reports the following case. A man of 17 had been sick for some time, and in a state of delirium fell down two flights of stairs. When brought to the hospital it was found that both malleolar processes in the right foot were broken. The diazo and Widal reactions were positive, and the patient was delirious. He developed a few superficial abscesses of the skin, progressive weakness of the heart, and a culture of the staphylococcus aureus was obtained from the blood of an arm vein. The patient finally died of exhaustion, and at the autopsy, in addition to the characteristic changes in the intestines, there were abscesses in the lungs, and an area of softening in the upper portion of the sternum, which had given rise to spontaneous fracture. The author regards it as a case of osteomyelitis of the sternum occurring in typhoid fever as a result of the infection with the staphylococcus pyogenes aureus. The case proves that in some instances suppuration after typhoid fever is not the result of the typhoid bacillus. [J.S.]

6.—Kelling has made a series of experiments in order to determine to what extent the intra-abdominal pressure can be increased by enveloping the abdomen with rubber bandages and pumping air into the stomach with a stomach tube. For this purpose, after the air has been pumped in, he attaches a dynamometer to the end of the tube, and has found that under favorable circumstances it was possible to produce a pressure equivalent to 10 cm. of mercury, that could be increased by pressure with the hands upon the abdomen to 18 cm. This method, however, really produces very little effect upon the viscera of the abdomen, in order to treat hemorrhage from the intra-abdominal vessels it is necessary to produce considerably more pressure, and Kelling suggests that the peritoneal cavity be filled with air or water, and has attempted to answer the following questions. First, the approximate amount of pressure from the bleeding vessels; second, whether enough intra-abdominal pressure can be produced to check the hemorrhage; third, the effect of the procedure; fourth, whether any injuries arise; and fifth, the best method of operating and the contra-indications. Upon dogs he found that the blood pressure from the mucous membranes and from the arteries of the stomach varied from 15 to 60 mm. of mercury. In human beings it appears that the pressure is not very much greater than in dogs, and as a matter of fact during operations upon human beings the pressure in the coronary artery of the stomach was measured in 3 cases, and the value found to vary from 40 to 80 mm. In regard to the amount of pressure that can be exerted in the abdomen after it is filled with air or fluid, we know that in cases of ascites it often reaches 40 mm. of mercury. In a series of dogs on whom the operation was performed it was found that it was entirely painless, and that pressure of from 40 to 70 mm. was easily obtained. [J. S.]

7.—Hölscher has made experiments with a number of different bacteria that in many respects are similar to the tubercle bacillus, in order to determine the results of their actions upon the tissues. He found that as a result of intra-venous injection there was a formation, in various parts of the body, particularly the lungs, of giant cells and nodules, but instead of caseation these nodules underwent suppuration. The bacteria other than the tubercle bacillus did not multiply very extensively beyond the point of lesion when injected into the tissues, as for example, into the epidermis. The proliferative action was also present, but on the other hand there was a pronounced exudation of fluid injected into the peritoneal cavity. The pseudo-tubercle bacilli soon lost their vitality, and at the end of 5 days could no longer be stained. At the time there was an exudation of polynuclear cells. The pseudo-tubercle bacilli could be found in the polynuclear leukocytes and endothelial cells, whereas the true tubercle bacilli could only be found in the leukocytes. Nodules were formed in the peritoneal cavity, which in the case of pseudo-tubercle bacilli underwent suppuration or occasionally organization. The chief difference appears to be in the termination of the process. [J. S.]

8.—Frédéric has attempted to determine the bacteriological cause of eczema. He has been unable to find the moro-

coccus described by Gauer. Gilchrist and Saboroud have noted the frequency with which streptococci occur in skin lesions, and Frédéric therefore has devised a method by which it was possible for him to detect small numbers of this organism. He uses Saboroud's medium and inoculates it by means of a long capillary tube from which he aspirates the fluids or crusts to be investigated. In more than 100 cases he was able to detect staphylococci in 53.7%; 27 of these cases were eczema, and in these streptococci were present 17 times. In order to determine in what proportion of normal skins streptococci were present, Frédéric investigated 160 areas in 55 human beings, and found streptococci present in 7.5%. They are most frequent in the axilla and on the back. These streptococci resemble exactly those found in skin lesions. The artificial forms of dermatitis are sometimes sterile, sometimes bacteria in considerable numbers can be obtained from them. In the histological appearance, however, there are some differences between the two forms. In view of the extreme obscurity of this subject it is important to study all cases of eczema in two directions, first as to whether there is any internal condition that may produce them, and second, the possibility of some external irritant. [J. S.]

9.—Hägler has modified Fürbringer's method for disinfection of the hands in the following manner. He removes the fat by means of a paste formed of white clay and water, in which the hands are placed for one or two minutes. They are then thoroughly brushed with soap and water for 5 minutes, dried on a rough cloth, brushed with 70% alcohol, and placed 3 minutes in a solution of 1 to 1000 bichloride of mercury. Paul and Sarvey have tested hands sterilized by this method, and have invariably been able to obtain numerous cultures. Hahn employs a somewhat different method; he places the hands in water heated to a temperature of 43°, then cleanses them thoroughly with soft soap and a soft brush for a considerable period of time; then places them in a solution of bichloride of mercury in alcohol, and finally washes in a 2 per thousand solution of bichloride of mercury. The results showed that typical skin bacteria are frequently obtained from the hands after employment of this method. Various other methods have been suggested, for example, solution of bichloride of mercury in acetone and in methyl alcohol. These seem to produce much better results than any of the other methods, although germs could still be obtained from time to time. Experiments were also made with solutions of citrate of mercury and sulphate of mercury combined with ethylen diamine according to the method of Krönig and Blumberg, but results were not especially favorable. Finally the hands were thoroughly rubbed in a mixture of sublimate and alcohol, but even this failed to produce complete sterilization. As a general result they found that none of the methods for sterilization of the hands at present employed, are capable of producing absolute sterilization of the skin. Nevertheless they believe that it is better to attempt a partial disinfection of the hands than to neglect it altogether.

No. 39.

1. Investigations Upon the Rhodan Combinations.
A. EDINGER and G. TREUPEL.
2. Extensive Confluent Capillary Hemorrhages in the Pons Medulla Oblongata, and in the Cerebrum.
T. STRUPPLER.
3. Senile Pruritis of the Tongue. E. BAUMGARTEN.
4. Two Cases of Fatal Internal Poisoning with Lysol, and Considerations Upon the Effect of Lysol.
G. BURGL.
5. A Case of Multiple Neuritis After Poisoning with Carbondioxide, with Involvement of the Optic Nerve.
H. SCHWABE.
6. A Case of Perforative Peritonitis Cured by Operation.
BRUNOTTE.
7. Tamponing the Abdominal Cavity With Air for the Purpose of Arresting Intestinal Hemorrhage that Threatens Life. G. KELLING.
8. Christian Bäumler. G. TREUPEL.

1.—Edinger and Treupel have found that **subcutaneous injections of rhodanalkali** were entirely inactive against tuberculosis, and even that clinolin rhodan was equally useless, although much more efficient in cultures, the injections, however, produced an increase in the sulphur and nitrogen of the urine. Schlagel in association with them,

has performed a series of experiments, and found that in culture media mixed with various percentages of clinolin rhodan, tubercle bacilli failed to grow, although they grew luxuriantly upon control cultures. The same was true of cultures of septicemic anthrax. If administered to animals in whom an experimental tuberculosis had been produced, absolutely no beneficial results could be observed. They therefore undertook to administer it by the mouth to cases suffering with phthisis, and to make careful studies of the metabolism in these cases, having first determined just what the changes were in a series of experiments on 2 dogs. They found that in these animals the urine became more and more alkaline in reaction, in part at least due to very active fermentation. The investigations upon patients showed for one thing, that the acidity of the urine was not markedly influenced. The rhodan reaction appeared in the sputum one hour after administration; in the urine several days after administration.

[J. S.]

2.—Struppler reports the case of a man, 19 years of age, who, from early childhood had suffered from epilepsy. He was brought to the hospital in an unconscious condition, and a careful examination failed to reveal any serious pathological condition, with the exception of a very slight albuminuria, some increase in the patellar reflexes of the left side, and slight tonicities of the muscles of the arms. From time to time the patient had twitching in the muscles of the eyes. He gradually grew worse; the coma grew more deep, the extremities were finally completely paralyzed and the patient died. Uremia was excluded, partly on account of the history, and partly on account of the condition of the urine. At the autopsy numerous minute punctiform hemorrhages were found scattered throughout the pons and the medulla oblongata, occurring apparently in groups, and occasionally confluent and arranged around the blood vessels. It is possible that the explanation of status epilepticus given by Kazowski is correct, that there is a gradual increase in the neuroglia atrophy of the tissues around the blood vessels, and finally hemorrhages as a result of these conditions, which produces the status epilepticus. [J. S.]

3.—Baumgarten gives the following causes which produce **pain in the tongue**. Among these are varicose veins on the under surface, defective teeth, badly fitting false teeth, diseases of the stomach and intestines, chronic constipation, Bright's disease, climacterium, which produces a dry catarrh of the pharynx, occasionally disturbances of menstruation, uterine disease, paresthesia, and occasionally in neurasthenia, locomotor ataxia, and Duchenne's paralysis. In one case Baumgarten has seen pemphigus of the tongue, and in 2 cases he observed a curious condition occurring in old women which he explains by supposing it is senile pruritis. In one of these the diagnosis was confirmed by gradual transference of the itching to other parts of the body. [J. S.]

4.—Burgl reports two cases in which, as the result of a mistake, young children were given doses of pure lysol. The first, a boy of 5 days, was given a coffeespoonful. He died twelve days later, and the mucous membranes of the entire gastrointestinal tract were found seared by the caustic action of the drug. The kidneys were congested and the bladder contained urine mixed with blood. The second case, a girl of 8 years and 4 months, received a teaspoonful. She soon became unconscious and deeply cyanotic, and there was trismus. Vomiting was induced by the insertion of the stomach sound, but it did not benefit the patient. The mother of the child subsequently declared that the stomach tube had caused death by being passed into the trachea, but as it was proven that it had been inserted for a distance of 30 cm., it was concluded that this was impossible. Burgl has collected 16 cases of **lysol poisoning** from the literature, all of which were produced, as were his own, by the ingestion of pure undiluted concentrated lysol, either taken inwardly or applied outwardly, with the exception of one in which a large quantity of a 1% solution was employed. In this case, however, one in which uterine irrigation was given immediately after birth. It is possible that death was due to other causes. Of these 18 cases, 13 were produced by internal administration, of which 7 recovered, and 6 died; five by external application, of which 2 recovered and 3 died. The majority of fatal cases produced by internal poisoning

were in children. The fatal dose for children is about 1 teaspoonful and even less; for adults in one case, 100 grms. The largest dose which was followed by recovery was 60 grms. in an adult, and 25 grms. in a 4-year-old child. The treatment of lysol poisoning consists practically of repeated washing out of the stomach. Thus, 5 of the cases that recovered were treated in this manner, and 5 of the cases that died were not treated in this manner. In the remaining cases it was employed, but only when the child was moribund. Unquestionably it should be employed, no matter how late the physician sees the case, as lysol is nearly always found in the stomach after death. In addition the patient may be given vinegar to neutralize the free alkali, and in case of unconsciousness, persistent high lavage of the intestines. In view of the poisonous action of the drug it should never be used inwardly in children or adults, and should only be applied externally in children with the greatest care and in weak solutions. [J. S.]

5.—Schwabe reports the case of a man who was exposed to carbon dioxide while performing some work in a sugar factory. He became unconscious, then was weak, confused and delirious. He was finally taken to the hospital in a semi-comatose state with bradycardia, and vomiting. When he finally recovered consciousness, he complained of pains in the lower extremities, as if his legs were lost. There was peripheral paralysis in the right leg with loss of the electric reactions, and there was some weakness of the right arm. His mental condition was querulous, the patellar reflexes were normal, the Achilles reflexes, and plantar reflexes diminished on the right side. A diagnosis of polyn neuritis was made, and as it was noticed that vision was impaired, a careful examination of the eyes was made, showing diminution in the visual acuity and contraction of the color fields, apparently without inversion. The patient recovered. The remarkable features of this case are the wide distribution of the lesions, and the absence of trophic lesion, with the exception of a slight cyanosis and diminished temperature in the right leg. The involvement of the optic nerves has not hitherto been described. [J. S.]

6.—Brunotte reports the interesting case of a man, 36 years of age, who was kicked in the right lower quadrant of the abdomen, by a horse. He was able to work for three quarters of an hour, although he suffered from pain, then went into collapse, and in the course of four hours developed fever. An operation was suggested and refused. In the course of 2 days the condition of the patient was worse, and he had developed an inguinal hernia of the right side. There was persistent hiccupping, vomiting and great tenderness over the abdomen. On the 4th day the patient was brought to the hospital, and at the operation a fibrinous peritonitis was found, although no point of perforation could be discovered. The following day the patient was without fever and pain, although there was frequent vomiting and a desire to urinate. On the second day it was necessary to remove the stitches and to allow the wound to gape, on account of the tympanites. On the 4th day there was a rise of fever, which was relieved by a copious evacuation of the bowels. However, a fecal fistula developed in the wound which was rendered much more difficult to manage on account of a profuse fetid diarrhea. The patient developed a vigorous appetite, gradually recovered his strength, and finally was discharged cured. The case proves the importance of operative interference in all cases of traumatic peritonitis. [J. S.]

7.—Kelling has found that dogs will sustain an intra-abdominal pressure of from 10 to 60 mm. of mercury, produced by the injection of air. This causes considerable increase of pressure in the blood vessels, although not invariably. By a special method of examining the abdomen during the period of greatest pressure, with a modified cystoscope, it was possible to see that when the pressure reached 50 or 60 mm. of mercury the diaphragm ceased to share in respiration, the liver and spleen were contracted, and the stomach and intestines were compressed against the posterior wall of the abdomen. If the organs are injured, as for example, by cutting into the liver, very little blood flowed forth. If the air was allowed to remain in the abdominal cavity for several days the wound healed. If the animals were killed whilst the pressure was kept high, it was found that the abdominal organs were anemic. Other experiments prove further that if the organs were in-

jured whilst the pressure was still high, and the pressure then released, considerable hemorrhage occurred. Experiments upon the cadaver showed that the pressure of 150 mm. of mercury could be readily sustained without danger of injury to the peritoneum. There seems to be considerable difference in regard to the resistance shown by different human beings to intra-abdominal pressure. Two out of 20 days had serious interference with respiration. For clinical use he suggests that the apparatus consists of an ordinary double air pump and Fiedler's trocar, with a mercury manometer. In the tube through which the air passes to the abdomen, a large tube is inserted, containing sterilized cotton in order to filter the air. For the purpose of arresting hemorrhage, the pressure must be at least 30 mm. of mercury. Hitherto clinical experience has been lacking. [J. S.]

8.—Treupel gives a sympathetic account of the life of Christian Bäumler, upon the occasion of his completion of 25 years of service as Professor of the Medical Clinic in the University of Freiburg. He was born in 1836; was educated at the Gymnasium of Nuremberg, and subsequently at the Universities of Erlangen and Tübingen, and later extended his studies in Berlin, Prague, Vienna, Paris, and London. For nine years he was physician to the German Hospital in London, in which city he practiced and had a position in one of the other hospitals. At the end of this time he was recalled to Erlangen as Extraordinary Professor. Two years later he became Ordinary Professor, and finally in 1876, he was called to the Chair in Freiburg, which had been vacated by Kussmaul. His life has been particularly distinguished for his great interest in young physicians, and his willingness to help them at the cost of every sacrifice to himself. A long list of articles that he has written in German and English, is appended. [J. S.]

REVUE DE CHIRURGIE.

September, 1901. (21me. Année, No. 9.)

1. Outward Dislocation of the Metatarsus. E. QUÉNU.
2. Fracture of the Terminal Phalanx by Muscular Action. CHARLES FLEURY.
3. The Study of Malignant Leiomyoma. DEVIC and LOUIS GALLAVARDIN.
4. The Study of the Gasserian Ganglion. K. SAPEJKO.
5. Genital Tuberculosis in the Female. MARIE GOROVITZ.
6. The Study of Arthrectomy. OLIVIER LENOIR.

1.—Quénu reports a case of outward dislocation of the metatarsus upon the tarsus, which occurred in a man of 20, who had fallen while on horse-back, the weight of the horse resting for a few seconds upon his foot. There was much swelling and the diagnosis remained uncertain. The inner side of the foot projected just above the plantar surface, and the plantar arch was obliterated. Radiographs showed the first metatarsal bone adjoining the second cuneiform not in opposition with the first cuneiform bone which protruded on the internal surface of the foot; the second metatarsal bone was in contact with the third cuneiform; and there were fractures of the second and third cuneiform bones. The remaining three metatarsal bones held their normal positions, while none of the metatarsals were fractured. In spite of reduction, weeks passed before the patient could walk, and the pain still persists. Quénu gives the case-histories of seven other luxations of the metatarsus, none of which were lateral. This is the first case of outward luxation of the metatarsus reported. Quénu believes that whenever any violent movement forces the anterior part of the foot upon the posterior part, dislocating the articulation of Lisfranc and breaking its ligaments, a rotatory movement occurs which determines the type of dislocation resulting. [M. O.]

2.—Fracture of the terminal phalanx of a finger by muscular action is exceptional. Yct Féré, while at work upon Mosso's ergograph, raising a weight of over six pounds a second by the flexion of his middle finger, broke the terminal phalanx of his ring finger, which, with the index finger, was being used as a support for the middle finger. There was no pain or abnormal mobility, but the phalanx was

much swollen. The signs rapidly subsided. Röntgen photographs show the two fragments plainly. A undigital clubbing with a wide, flat nail is the only permanent result of the mishap. [M. O.]

3.—Devle and Gallavardin first report two cases of malignant leiomyoma, one in the thoracic wall of a man of 70, which was successfully excised; the other upon the hip, recurring three times in the space of one year, for which amputation at the hip was performed, with death following. Then they relate in full the history of their case, a woman of 41, over whose external iliac fossa, on the right side, a tumor had existed for years. During the past year this increased rapidly, was subcutaneous, not adherent to the deeper tissues, not ulcerated, and about the size of two fists. Six months later a large tumor appeared in the left hypochondrium, with ascites and tympanites. The liver was hypertrophied, its surface distinctly nodular to palpation. The autopsy revealed a malignant leiomyoma of the subcutaneous tissue of the buttock, with multiple metastases, the kidneys, liver, lungs, pancreas, and thyroid being affected. Such tumors are very rare, though they have been found in the uterus, stomach, and subcutaneous tissue. Many others have been described under the name of fasciculated sarcoma, or fuso-cellular fibroma. These tumors contain bundles of distinct, adult, unstriped muscle cells, crossing in all directions; no or almost no connective tissue at all; possibly some areas of myxomatous degeneration; and possibly some giant cells. The diagnosis of malignant leiomyoma is an extremely difficult one to make. [M. O.]

4.—Neuralgia causes the most severe pain of all the diseases known. It is the main cause of the cocaine and the morphin habits. Yet the treatment of neuralgia is still obscure. After Mears' opinion, that the cause of facial neuralgia was not peripheral, but existed in the Gasserian ganglion, had appeared, Rose, in 1890, performed the first resection of the Gasserian ganglion through the sphenoid bone. Horsley, Hartley and Krause operated through the temporal bone. The most delicate part of the operation is the separation of the first branch of the trifacial. Sapejko reports the case of a man upon whom he performed resection of the Gasserian ganglion with temporary relief. He believes the cause of facial neuralgia is in most cases peripheral. When the neuralgia recurs after peripheral resection of the nerve, it is due to regeneration of the nerve. But he considers the operation upon the Gasserian ganglion of importance theoretically, anatomically, physiologically, and clinically. The operation is full of difficulties; the ganglion lies deep, the hemorrhage is abundant, and some cerebral compression occurs. Sapejko gives the detailed technique of the operation. He concludes that when peripheral resection causes relief for six months or more, the neuralgia is peripheral; that when the three branches are affected, the cause is intracranial; that if the pain passes from one side of the face to the other, the centers of the trifacial nerve are affected; that for peripheral neuralgia the Thiersch method of resection should be done; that when the three branches are affected, the Gasserian ganglion should be resected; finally, in violent cases of peripheral neuralgia, with rapid recurrence after peripheral resection, resection of the Gasserian ganglion is also indicated. This extirpation of the ganglion should be as complete as possible. The symptomatology and etiology of facial neuralgia are given briefly. The literature of the subject is fully cited. [M. O.]

ARCHIV FUER KLINISCHE CHIRURGIE.

(Volume 61, No. 4.)

46. The Methods of Anesthesia and Their Limitations. J. von MIKULICZ.
47. Fracture of the Leg. ROSA EINHORN.
48. The Extirpation of Tumors of the Brain. L. HEIDENHAIN.
49. Widespread Resection of the Lung for Bronchiectasis of the Lower Lobe. L. HEIDENHAIN.

50. Fracture of the Calcaneum. MERTENS.

51. Poisoning by Cocain in Animals.

HEINRICH KOHLHARDT.

52. The Surgical Treatment of Acute Appendicitis.

REHN.

53. Arthrolysis and Resection of the Elbow-Joint.

JULIUS WOLFF.

54. Osteoplastic Operation for Old Fracture of the Patella. JULIUS WOLFF.

55. The Isolated Rupture of the Joint Ligaments.

ALEXUS von HINTS.

56. The Origin of Static Pressure Deformities.

A. SCHANZ.

46.—In the last seven years, statistics of 339,429 people anesthetized were collected by von Mikulicz, with only one death among each 2429 patients. 219,566 of these took pure chloroform, with a mortality of one in 2375. But most striking of all is the advance made by local anesthesia in the last few years. For the dangers and after-effects of a general anesthetic are altogether absent when local anesthesia is employed. Yet when too much cocaine has been injected, death may result from local anesthesia. While freezing solution are much in vogue for deadening the pain of an operation, the cocaine solution is the favorite. Cocain injections into the spinal canal were performed by von Mikulicz but 35 times, 24 of which were completely, 6 incompletely successful, and 5 unsuccessful. Local anesthesia has displaced general anesthesia in all small operations, and in those of moderate gravity and length, while major operations are still performed under a general anesthetic. The tendency to pneumonia after operation is even greater when local anesthesia is used than with ether or chloroform. The general condition of the patient, the gravity of the operation, the sensitiveness of the patient to pain, nervousness, etc., all enter into the decision between local and general anesthesia. A local anesthetic should not be used for important operations, for collapse may occur from the pain which may be felt by the patient. The case-histories of two such patients are reported by von Mikulicz. For short laparotomies, such as gastrotomy, etc., he employs local anesthesia. Ether, while less dangerous than chloroform, is but little used in Germany. Death may occur during the administration of ether or chloroform, generally from the use of too much of the anesthetic. Von Mikulicz believes that a general anesthetic should only be used when a local anesthetic is impossible. Search should always be made for possible contraindications to the administration of the anesthetic. The anesthetic should be carefully given, by someone who is experienced in its administration and knows its dangers. For short operations, when both ether and chloroform are contraindicated, bromide of ethyl can be used. Morphin, injected before operation, will increase the intensity and the duration of the insensibility to pain. For a minor operation, only enough of the anesthetic is needed to produce semi-narcosis. The statistics of the subjects are given in full. [M. O.]

47.—Einhorn reviewed the histories of 68 cases of fracture of the leg, 18 of the tibia, 16 of the fibula, and 34 of the malleoli. Next in frequency to fractures of the forearm come the fractures of the leg. These fractures are found at all ages, occurring more often in men than in women, except in old age, when women seem more prone to them. More of these fractures are seen in winter than at any other season of the year. Numerous fractures of the tibia have taken place *in utero*, probably due to faulty ossification; others occurred during labor, from injury. The length and position of the bones of the leg, their substance, and the age, occupation, season, and sex are all physiological predisposing causes; while atrophy, osteomalacia, malignant tumors, osteomyelitis, caries, rickets, scurvy, and syphilis are pathological predisposing causes. The external exciting cause may be direct or indirect violence; the internal exciting cause may be strong muscular contraction. Besides fracture of both bones of the leg, each bone may break singly, at any point, and the epiphyses of either bone may become separated. Besides, the fracture may be longitudinal, oblique, or spiral in form. Fracture of the malleoli may occur by the ankle becoming

twisted toward either side, from pressure or from traction. The malleolus may be fractured by avulsion, or division, or anastasis. The diagnosis is easy, the prognosis excellent, with good treatment. The treatment is reduction and the maintenance of the fragments in good position by a plaster cast for three or four weeks. The results are splendid. The case-histories of the 68 cases follow in detail. [M. O.]

48.—Heidenhain reports four cases of brain tumor which he has seen in the past three years. Three of them were successfully extirpated, the other one, a sarcoma of the cerebellum, killed the patient after a useless operation. In the first case, a man of 32, a solitary tubercle as large as a walnut was removed from the right paracentral lobule, with epileptic attacks after operation. In the second case, a man of 52, a cystic gliosarcoma of the right hemisphere, as large as a hen's egg, embracing the arm center, was extirpated. The tumor had evidently existed for years, but had lately undergone malignant degeneration. No symptoms remained after operation. In the third case, a man of 19, a melanotic carcinoma of the telachoroidea and ependyma of the inferior cornu was removed, with the right temporal lobe. He died three months after operation. In the last two cases, while double optic neuro-retinitis occurred, the hemorrhages were more abundant in the retina of the eye opposite that containing the tumor. These case-histories are given with full details. Heidenhain believes that operations upon the brain should be done slowly, those reported lasting from two to four hours. A nutritive enema is given an hour before operation. Chloroform is administered by the half drop, only sufficient being given to keep the patient anesthetized. Besides this, the patient is kept warm. Hemorrhage, which occurs mainly from the veins of Galen, is stopped by ligating the separate veins. The wound is then covered with sterile gauze to prevent infection. Dangerous hemorrhage may occur from the tumor itself. Heidenhain uses a special spatula to separate the tumor from the brain tissues. The space left after extirpating the tumor is packed with iodoform gauze. In the fourth case, a boy, the operation failed to discover the tumor. He died suddenly during the night which followed the operation. The autopsy showed a sarcoma as large as a potato, in the center of the cerebellum. The technique of Heidenhain's operations is given in detail. [M. O.]

49.—Heidenhain reports the case of a man of 43, in whom resection of the major part of the lower lobe of the left lung was performed for purulent bronchiectasis. This was done in two operations, with good results in spite of the severe hemorrhage. In some of the tissue removed, carcinomatous nodules were found. While the resulting deformity of the left side of the chest was marked, the bronchial mucous membrane covered the site of the operation, forming a thick cicatrix. A fistula persisted. Unfortunately he died with the symptoms of embolism five months after the last operation, a month after he had left the hospital in good condition. [M. O.]

50.—After a historical review of fracture of the os calcis, Martens reports fifteen cases in which Röntgen photographs were made. Two were double, and two were complicated. In two cases the bone was torn apart, in eight there was compression. In four cases the diagnosis was certain without the Röntgen photographs, while in four others the diagnosis was only made by the Röntgen photographs. Martens notes that, in his cases, the fracture was generally horizontal or oblique, and that the calcaneum alone was affected. The Röntgen photographs and the case-histories follow in detail. The literature of the subject is cited. [M. O.]

51.—Kohlhardt describes his experiments upon rabbits. He injected a 10% solution of cocain hydrochlorate deep into the muscles of the fore-leg which had previously been ligated. If this was loosened before three quarters of an hour had elapsed, thus letting the poison into the general circulation, the rabbit died with symptoms of acute poisoning. But, if this ligature upon the rabbit's leg was withdrawn an hour after injection, the effects of the poison were hardly noted. Large injections gave the most strik-

ing results. The intensity and duration of the poisoning is inversely proportionate to the length of time the leg is kept ligated. In similar experiments with strychnin, the results were unsatisfactory, the animals dying from the poison in all cases. The details of the experiments follow. [M. O.]

52.—Rehn believes that the mortality in appendicitis can only be reduced by operation at the correct time. Not only is appendicitis more often correctly diagnosed, but it seems to occur more frequently than formerly. Whenever possible, Rehn removes the appendix. Out of 180 cases operated in the the past year, 134 recovered and 46 died, 38 with purulent peritonitis. Out of 71 cases of purulent peritonitis, 33 recovered. Of 85 cases with circumscribed abscess formation, 77 recovered. In 24 cases the appendix was removed before pus had appeared. Out of 33 cases of total gangrene of the appendix, 22 recovered. Rehn concludes that not only is a prophylactic operation between attacks justified, but the removal of the appendix in the acute stage of the disease is often the means of saving life, for many cases never recover from the first attack. Peritonitis, which is most frequent with total gangrene of the appendix and widespread perforation near the cecum, is due to the quantity of the bacteria, their virulence, and the power of the peritoneum to counteract their invasion. When no tumor is palpable, the condition is grave. Early operation is advised in all severe cases, the expectant plan of treatment being justified only where but moderate local and general symptoms exist. Rehn's technique is described. The prognosis is always uncertain. [M. O.]

53.—Wolff terms the division of all fibrous or bony ligaments of a joint, without resection of the bones, *arthrolysis*. He has performed this operation upon nine patients, seven of which cases have already been reported. Fibrous ankylosis existed in four, while bony ankylosis was found in five. He reports his last case of arthrolysis, performed upon the elbow-joint of a woman of 22, for ankylosis of six months duration, from an unknown cause. The elbow formed an angle of 118°, half way between pronation and supination. After separating the ligaments, enough bone was chiseled off the olecranon and the radius to permit flexion, extension, pronation, and supination. Passive motion was begun, but the patient would not continue on account of the pain. Finally the elbow was put at rest at a right angle. Passive movements were given daily under an anesthetic. The final result was excellent, active motion including all normal movements. Wolff also reports a case of resection of the elbow which was performed 28 years ago upon a child of three. The result in the woman of 31 is also excellent. The little shortening is hardly noticeable, but its cause is seen in the Röntgen photograph. Wolff believes that in childhood total resection of the tuberculous elbow-joint is to be preferred to arthrectomy. Several Röntgen photographs illustrate this article. [M. O.]

54.—Wolff reports an osteoplastic operation performed upon a man of 40, in whom a patella had been fractured 15 months before. The patella was in three pieces. After laying the fragments freely open, he sutured two of them together, employing a special screw-apparatus, leaving them adherent to the edges of the wound. The tuberosity of the tibia was chiseled off and raised, while bits of bone were used to bridge over the line of fracture. Then the skin was closed over the screw-apparatus which held the bony fragments together. Firm bony union resulted, the screw-apparatus being removed six week later by operation. Now, almost two years after operation, the patella is no longer than the normal patella upon the other side. Wolff believes osteoplastic operation to be the only method of curing an old fracture of the patella. Excellent Röntgen photographs accompany the article. [M. O.]

55.—The separate ligaments of the joint-capsule are rarely broken singly, dislocation generally occurring with this condition. A full review of the literature revealed only 44 reported cases. Von Hints reports a case of the isolated rupture of the external ligament of the knee-joint, in a man of 37, who fell from a wagon, his foot, which caught upon

the wheel, being so twisted that he felt the external ligament snap. This is the third reported case of isolated rupture of the external ligament of the knee-joint. There were intense pain and some swelling. The knee was put at rest for eight weeks, the dressing being changed three times. Later he had massage and baths. Six years after the injury he shows a slight failure in the power of adduction and cannot rotate the leg outward. He walks well and is in perfect health. von Hints' experiments upon the knee-joints of fifteen cadavers, cutting the separate joint ligaments, established his diagnosis in this case. The loss of the power of adduction is due to atmospheric pressure, the action of the separate thigh muscles, and the static relations of the human body. The broken collateral fibular ligament is replaced by the sound joint-capsule. Von Hints believes that rupture of the external ligament is so much less frequent than rupture of the internal ligament, because the external ligament is so constructed that it allows freer movement than the internal ligament normally, and because the shock of a fall, etc. is borne mainly by the internal ligament of the knee-joint. The differential diagnosis of rupture of the external ligament of the knee-joint from fracture of the head of the fibula is extremely difficult. Many cases and opinions are quoted. [M. O.]

56.—Schanz describes the physical laws which govern the development of the static deformities due to pressure upon the human skeleton. When bony deformity follows, there is generally some compensatory hypertrophy of the sustaining ligaments. This paper is exceedingly technical. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

October 3, 1901. (XIV Jahrgang, No. 40).

1. The Differential Diagnosis Between Concretio Pericardii and Organic Tricuspid Disease.

WILHELM TUERK.

2. Instrumental Amusia in Beginning Progressive Paralysis. JULIUS DONATH.

1.—Treated editorially.

2.—Donath reports an interesting case of **instrumental amusia** in a gypsy aged 39, at the beginning of progressive paralysis. Without unconsciousness or paralysis, he suddenly lost the ability to speak. Then he found that he could not play upon his violin. Examination showed that he could play one piece, but only that one, no matter what he was asked to play. Words soon came back, and in time his ability to play the violin again returned. Donath notes that music-deafness, musical alexia, and musical agraphia may exist. He also reports the case of an idiotic child who could only say a few words, yet could sing 50 different songs. Word-deafness and music-deafness generally occur together. He believes that the lesion causing music-deafness is situated in the temporal lobes. In the case of the gypsy violinist, with complete motor aphasia, word-deafness, and partial instrumental amusia, it was especially interesting, psycho-physiologically, that one piece remained *in toto*. This Donath explains by believing that this piece of music occupied its separate memory compartment. [M. O.]

REVUE DE MEDECINE.

September 19, 1901. (21 me. Année, No. 9).

1. Respiratory Troubles in Relation to the Different Degrees of Pathological Emotion.

N. VASCHIDE and L. MARCHAND.

2. Critical Study of Streptococcus Epidemics.

R. BERNARD.

3. On a Form of Hereditary Cerebellar Ataxia.

A. THOMAS and J.-CH. ROUX.

4. Two Cases of Sciatic Neuritis Caused by Mercurial Injections Into the Muscles of the Thigh.

DOPTER and TANTON.

5. On the Treatment of the Paroxysm of Malarial Fever by an Iodized Iodin Solution. REGNAULT.

1.—Vaschide and Marchand report a case which illustrates the different degrees of **pathological emotion** on the respiration. [J. M. S.]

2.—Will be abstracted when concluded.

3.—Thomas and Itoux report the case of a woman who complained of lancinating pains in the right leg and thigh, which was diagnosed sciatia. Eight months later the pains returned in both lower extremities and the patient experienced some trouble in walking. Gradually both upper and lower extremities developed a tremor. Speech was difficult and jerky and the patient had a sensation as though the tongue turned with difficulty in the mouth. Then the vision became weakened. The symptoms increased in severity, and the patient died 10 years later of tuberculosis. At the autopsy it was noticed that the central nervous system was smaller than normal but the difference in size was more noticeable in relation to the spinal cord than to the other parts. The central nervous system was examined histologically. The anterior and posterior roots of the spinal cord were smaller than normal, and were composed of a large number of small fibers. There was partial atrophy of the ganglion cells in the anterior horns of the spinal cord, together with atrophy of the small cells at the base of the anterior horns. The cells of the columns of Clark were atrophied, a large number of the reflex collaterals had disappeared and the wreath of medullary fibers in the gray matter was destroyed. There was partial degeneration of the posterior columns, which was at first localized in the column of Burdach in the lumbar and sacral regions, and thence extended into the thoracic region. In the cervical region the degeneration was exclusively limited to the posterior portion of the column of Goll. There was partial degeneration of the anterolateral tract, best marked in the thoracic region, and a total degeneration of the column of Gowers. The absence of the direct cerebellar tract was indicated by a line of degeneration in the thoracic region, slightly marked in the cervical region. There was degeneration of the lateral tract of the medulla, and atrophy of the corresponding nuclei. The restiform body was degenerated in its central portion, whilst its periphery was healthy. From a study of the case, the author concludes that there is a group of **family and hereditary diseases**, in the evolution of which **cerebellar symptoms** play an important role. The anatomical explanation of this disease is a lesion situated either in the cerebellum or in the cerebellar peduncle. They resemble each other by the small size of the central nervous system which is common to them, but they differ from each other by the seat or the extent of the lesion or by its nature. [J. M. S.]

4.—Dopter and Tanton report the case of a man suffering from an old attack of syphilis, who was treated by injections of calomel into the muscles of the buttock every other day. At the time of the sixteenth injection he experienced a sensation similar to the passage of a strong electric current. Later it became impossible for him to walk on account of painful contractions and a very accentuated hyperesthesia of the entire posterior surface of the thigh, the leg and the plantar surfaces of the foot. After treatment by electricity and massage the condition was cured. In a second case of a man who had been treated for syphilis by intramuscular injections of mercury biiodide administered in the buttock, one of the injections was followed by a sense of burning deep in the buttock. Eight hours later he had tingling on the dorsal and plantar surfaces of the left foot. At the same time the foot became numb, and violent pains appeared in the leg. The region of the last injection presented an extravasation of blood, the gait was painful and somewhat resembled steppage. Under electrical treatment there was some improvement, but atrophy of the muscles was only slightly diminished, and the muscles of the leg always presented the reactions of degeneration. The authors made several experiments on guinea pigs, injecting solutions of calomel and mercury biiodide. The injections rapidly produced in all the animals intense nervous lesions. The course of the sciatic nerve is represented by a line passing 2 fingers breadth outside the posterior spine of the ilium to a point in the gluteo-femoral fold, corresponding to the mid-line of the posterior surface of the thigh. About 3 cm. on either side of this line is the dangerous zone, and any injections practiced within the limits of this area would risk injuring the great sciatic nerve. [J. M. S.]

5.—Regnault means by **iodated iodine solution**, a solution composed of tincture of iodine and potassium iodide, each

4 gm.; and distilled water, 100 gm. This solution ought to be considered a complement of quinine and methyl blue in the treatment of malaria, and not as a substitute. Quinine is a specific for malaria, but it should be given before the appearance of the fever, so as to arrest the evolution of the protozoa. Methyl blue may be a possible substitute for quinine, but ought to be administered before the beginning of the attack. Iodized iodine solution is indicated at the beginning of or during the attack, whether quinine has already been administered or not. Treatment by this solution does not prevent the administration of quinine in order to prevent the attack on the following day.

[J. M. S.]

JOURNAL DE MEDECINE DE BORDEAUX.

September 1, 1901. (31me. Année, No. 35).

1. Pharyngo-mycosis. E. J. MOURE.

1.—Liaras reports a clinic held by Professor Moure upon pharyngo-mycosis. This affection is characterized by the appearance of tiny white points on the pharynx, tonsils, base of the tongue, etc. It was first noted by Fränkel in 1873, and is due to the *leptothrix buccalis*, which, proliferating upon the mucous membrane, forms the white spots. Buccal fermentation and acidity of the saliva seem indispensable to its growth. Symptoms are generally absent, though there may be slight sore throat with fever. The diagnosis, while often difficult, can be settled by bacteriological examination. Moure recommends the application of zinc chloride (1 to 15), followed by iodine in solution (1 to 15). Cocain may be applied first (1 to 10), as an anesthetic. In some cases, tincture of the chloride of iron, chronic acid, or the cautery may be needed. An alkaline gargle, cleanliness of the mouth, diet, and hygiene should supplement the local treatment. [M. O.]

JOURNAL DES PRATICIENS.

August 24, 1901. (15me. Année, No. 31).

1. Epidural Injections into the Spinal Canal.

FERNAND CATHELIN.

2. Latent Cardiopathy and Sudden Death in the Army.

KELSCH.

3. Arnica. LIEGEOIS.

1.—Vide Abstract of *La Presse Medicale* for June 15, 1901, in *The Philadelphia Medical Journal* of August 24, 1901, page 304.

2.—Kelsch states that tuberculosis often remains latent among soldiers for a long time, suddenly breaking out in an individual, or only being found at the autopsy. Heart disease may also be latent in soldiers, and sudden death without previous symptoms is not uncommon in the army, 100 cases having been reported in 15 years, without any known disease existing. In the majority of these cases three was some latent cardiopathy. Symptoms may be noted after the first military exercises. Kelsch reports 23 such cases, showing myocardial lesions as a rule. In 6 patients aortitis alone was found. The myocarditis follows atheroma and arteriosclerosis, often terminating with rupture of the aorta. Kelsch divides cardiopathies into simple cardiopathy with hypertrophy and perhaps fatty degeneration; cardiopathy with valvular degeneration; and aortic cardiopathy. Rheumatism was not present in a single case; while aortitis, atheroma, etc., were found in 8 patients. Previous infectious diseases seem to have been the predisposing causes in these cases, alcohol, possibly, also in a few. Kelsch's cases were all vascular, the myocarditis following aortitis, atheroma, etc. Valvular conditions resulted in some. No symptoms exist in these cases, except hypotension, which is generally unrecognized. Exertion will at once upset the equilibrium of the diseased heart, and severe symptoms will result. This is especially noted in the army, among new recruits, and during war, maneuvers, etc. [M. O.]

3.—Arnica is used externally on bruises, sprains, etc.; locally for furunculosis, ulcers, etc., and with ammonium salts, for orchitis, hydrocele, and adenitis. It has been employed in a tooth wash, and is given internally for gout, renal calculus, dropsy, and serous effusions. In large doses, it has been prescribed in shock, and hemiplegia. Liégeois recommends its use in the chronic bronchitis of

old age, as a carminative and emenagogue, and in paralysis of the bladder. It is useful in the malignant fevers, dysentery, tuberculous diarrhea, etc. [M. O.]

PRESSE MEDICALE.

August 24, 1901. (No. 67).

1. The Surgical Treatment of Hydatid Cysts of the Kidney.

ALBARRAN.

2. The Diagnosis and Treatment of Peritonsillar Abscess.

E. J. MOURE.

1.—Albarran reports a case of renal hydatid cyst in a woman of 33. Pain over the left kidney and ureter began over a year ago. Her urine was alternately clear and cloudy. The pain grew more severe. The left kidney was not palpable, a mass being felt which reached up to the eighth rib, as was shown by the percussion dulness. From the white seeds found at times in the urine, the diagnosis of hydatid cyst was made. The cystoscope showed that the opening of the left ureter into the bladder was red and dilated. Catheterization showed the urine from the right kidney to be normal. The cyst was removed by a lumbo-iliac incision, and the patient recovered without a fistula. The cyst opened in the pelvis of the kidney. The ureter was dilated to three times its normal size. The wall of the cyst was calcified in places. Very little of the kidney substance remained. Albarran reviews the literature of the subject, describing four operations, Delbet's extirpation of the cyst membrane, partial resection of the kidney, nephrostomy, and nephrectomy. In hydatid cyst of the kidney Albarran advises nephrostomy in most cases in which laparotomy has been done. If a lumbar incision has been made, open the cyst and find out whether the cyst membrane can be extirpated. If the kidney still seems functional, and total extirpation of the cyst is possible, do renal resection; if the kidney still functionates and these operations are impossible, perform nephrostomy after partial resection of the cyst; if the kidney is useless, nephrectomy should be done. Should many adhesions exist, or should the patient be very weak, nephrostomy may be best. [M. O.]

2.—Moure divides peritonsillar abscesses into the antero-superior, the posterior, and the external forms, in the order of their frequency. The last, while the rarest, are also the most grave forms of peritonsillar abscess. Moure believes all cases should be opened as soon as possible, in the first three or four days. While a trocar will do to open some abscesses, the galvano-cautery is preferred by Moure. He uses cocain (1 to 5) or Bonain's solution, before inserting the cautery, which goes 1 or 2 cm. deep. If the abscess is superior, the cautery goes above, if posterior, behind, and if external, it goes through the tonsil. If the case is so far advanced that the patient cannot open the mouth, external intervention is justifiable. A mouth wash should be used. Zinc chloride (1 to 30) may be applied to the abscess cavity a day or two after operation. The tonsils should be washed and thoroughly examined before the patient is discharged cured. [M. O.]

September 4, 1901. No. 71.

1. Congenital Macroductyly. BOINET.

1.—Boinet, after reviewing this rare subject in detail, reports a case of congenital macroductyly. The middle finger alone was affected in 28 out of the 43 cases reported. The condition is more frequent in men than in women. In Boinet's case, a man of 38, the left middle finger was already hypertrophied at birth. This continued to grow larger, ankylosis beginning in the phalanges, about his nineteenth year. For the past six years the ankylosis has been complete. The volume, length, deviation, and ankylosis of the middle finger of his left hand are all shown in Röntgen photographs. Boinet concludes that bony lesions probably favor the occurrence of macroductyly; that it may rarely be hereditary; that the middle finger may reach the length of 14 cm.; that the skin may remain normal; that, though bony lesions appear in the radiographs, the pathogeny of the condition remains obscure. It may be due to an error in development. [M. O.]

Original Articles.

CONGENITAL DEFECT OF THE FOREARM, ABSENCE
OF THE RADIUS, CLUB HAND, &c. PLASTIC
OPERATION.

By ROSWELL PARK, A. M., M. D.,

of Buffalo, N. Y.

Professor of Surgery, Medical Department, University of Buffalo.

The patient, a little girl of four years, from Saginaw, Michigan, was brought to me in the summer of 1900, with a condition which is perhaps better portrayed by the accompanying illustration than by any description that I can write. Suffice it to say that there appeared to be complete absence of the left radius, which appearance was corroborated by the skiagraph, while the ulna was shortened and curved, with the hand set at nearly right angles to the forearm, the hand turning at almost a right angle to the radial border. There was defect also in the bones of the hand proper, especially in the absence of the metacarpal bone of the thumb, whose two phalanges could be pushed up and down on the side of the hand. Control of the fingers was quite uncertain and the phalangeal joints of the third and fourth fingers were stiffened with the fingers in the flexed position. The ulna was $1\frac{1}{2}$ inches shorter than that of the other arm. The child was otherwise in perfect health. There was no history attaching to the mother's pregnancy or of other congenital troubles in the family.



Congenital Defect of the Forearm.

The question naturally was as to what could be done in the way of remedying the defect and producing a better cosmetic result. The prospect of transplanting the radius did not seem encouraging enough to warrant the attempt. I did think best, however, to attempt transplantation of bone for absence of the first metacarpal bone. It seemed to me that the most hopeful thing that I could do would be to straighten the forearm by bending the ulna and then to impale the carpus upon the sharpened end of this bone, maintaining the hand in the proper position, and hoping

for a sufficient union between the ulna and carpus to make the hand useful and straight.

Operation was done September 1st, 1900, at the Buffalo General Hospital. The tendons on the radial side of the forearm were so much shortened that my first plan to merely expose the end of the ulna, shorten and sharpen it, could not be carried out. I therefore exposed the carpus, which apparently was also defective in its arrangement, and removed parts of two bones of the first row. Then freshening, and, at the same time, sharpening the end of the ulna after the fashion of a picket, I tried to fasten it into the carpus, but had to keep it from sliding by passing a needle with kangaroo tendon suture through the bones, thus lashing them together. I also made an incision over the location of the first metacarpal bone and transplanted therein a piece of bone about 1 inch long and $\frac{1}{4}$ inch in diameter, taken from the humerus of a still live rabbit anesthetized for the purpose. Both of these wounds were closed without drainage, and the arm dressed upon a splint in a perfectly straight extended position. At the end of ten days, the dressings were changed, the wounds found to be perfectly healed, and the splint was then shortened up so as to encourage motion in the fingers. This was the more necessary because the stiffened phalangeal joints had also been loosened under the anesthetic, and I wished to get restoration of motion here, if possible.

The subsequent course of the case has been uneventful; the child lives at such distance from me that I have not since seen it, but the accounts of the case sent by the family are exceedingly encouraging. It was necessary to fit a very light moulded splint upon the arm in order to maintain it in the position in which it should grow and develop. The child wears this splint nights and part of the day time, is getting very good use of the hand, and appears so far as they can tell me to have developed some new bone, at the point where the rabbit bone was transplanted.

SPLANCHNOPTOSIS.

Factors: A. Relaxed Abdominal Walls (including Pelvic and thoracic diaphragm);

B. With Consequent Distalward Moving of Viscera;

C. Gastro-Duodenal Dilatation, (with report of two operations for its relief and a rubber air pad as a supporter).

By BYRON ROBINSON, B. S., M. D.,
of Chicago.

(Continued from Page 958.)

Etiology of Splanchnoptosis.

1. Intra-abdominal pressure.

Factors

which

increase

intra-

abdominal

pressure.

1. Gestation.

2. Food.

3. Fluid.

4. Meteorism.

5. Adipose deposits.

6. Ascites.

7. Tumors.

8. Pleurisy.

9. Feces.

10. Urine.

11. Gastro-duodenal dilatation.

12. Coughing.

13. Contracted pelvis.

14. Blood and lymph volume.

2. Relaxed abdominal walls.

This consists in elongation and separation of fascial and muscular fibres of the anterior abdominal walls, the thoracic and pelvic diaphragm.

3. Compression of the transverse segment of the duodenum by the superior mesenteric artery, vein and nerve.

4. Congenital defects in the nervous, muscular and visceral systems.

5. Defective food and excessive labor.

6. Lordosis or anterior curvature of the vertebral column enhances splanchnoptosis.

7. With the progress of relaxed abdominal walls there is a disproportionate or abnormal relation established between the nervous and muscular systems, and coordination is defective and hence nourishment and function are also defective. The trauma to the sympathetic nervous system produces excessive, deficient or disproportionate secretions and peristalsis in the viscera, hence nourishment is again defective. With the advance of splanchnoptosis the blood and lymph vessels become stenosed, their mechanism disturbed, producing irregular circulation and hence nourishment is again defective.

Splanchnoptosis is a kind of neurosis. It is devitalizing of the sympathetic system in which vitality of the neuro-vascular visceral pedicle is impaired, it becoming elongated, stretched. Perhaps the elastic tissue is degenerated.

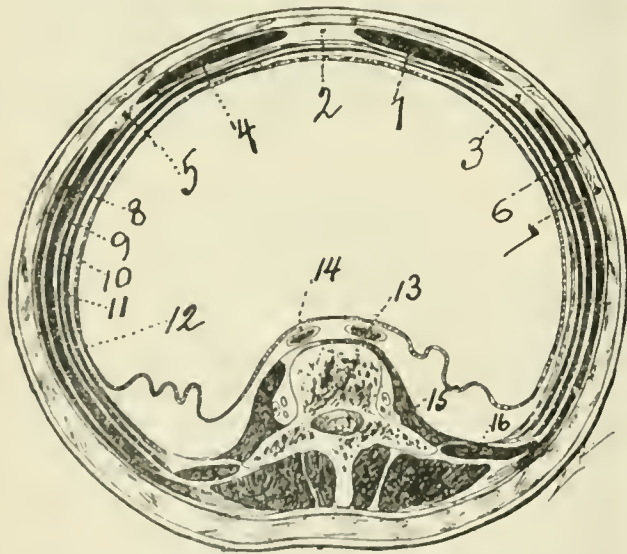


FIG. 10. Illustrates a transverse section of the abdomen, about the umbilicus of a splanchnoptotic. The fascial and muscular fibres of the abdominal wall are elongated and separated, the primary factor in the splanchnoptosis. 1, rectus; 2, linea alba; 3, 5, linea semilunaris; 4, skin; 7, fascia; 8, external oblique; 9, internal oblique; 10, transversalis; 11, transversalis fascia; 12, the peritoneum; 13, vena cava; 14, aorta; 16, quadratus lumborum; 15, psoas; 17, vertebra; 16, spinal nucleus.

Notwithstanding the manifold theories and dreams of respected authors and the easily recognized original work of industrious investigators in splanchnoptosis, I am still convinced that one of the great factors of splanchnoptosis is the waist band, not merely the corset, for a corset may be worn so loose that it practically does no damage. During the past 10 years Dr. Lucy Waite and the author have dissected over 35 female bodies for practical topographical and applied anatomy of the abdominal and pelvic viscera. We opened the cadaver and then with the two hands as a corset band or any form of waist band the body was compressed and the result on the abdominal viscera noted. What will happen in tightening the waist band? The answer is clearly evident in watching the progress

of tightening the band. First the right more mobile kidney moves medianward and ventralward, compressing the junction of the descending and transverse duodenal segments, ending in a position almost in the middle of the abdomen. The kidney suffers the most movement dislocation of any abdominal organ. The liver is compressed as is shown in autopsies in the corset liver, the gall-bladder projects ventralward, allowing stagnation of bile and subsequent formations of hepatic calculi. The daily effect of the waist band is diminutive, but continued from week to week, month to month, and year to year, its end results are enormous in changing and damaging structure and function. It constricts the right colon, compromising cecal evacuation, the canalization of the ureter, renal and ovarian veins and inferior vena cava. The nephroptosis elongates the renal vessels especially, the artery which is sheathed in a network of ganglia not only traumatizing them, but, by tugging and dragging on the abdominal brain, the trauma produces the stigmata of hysteria and other neuroses.

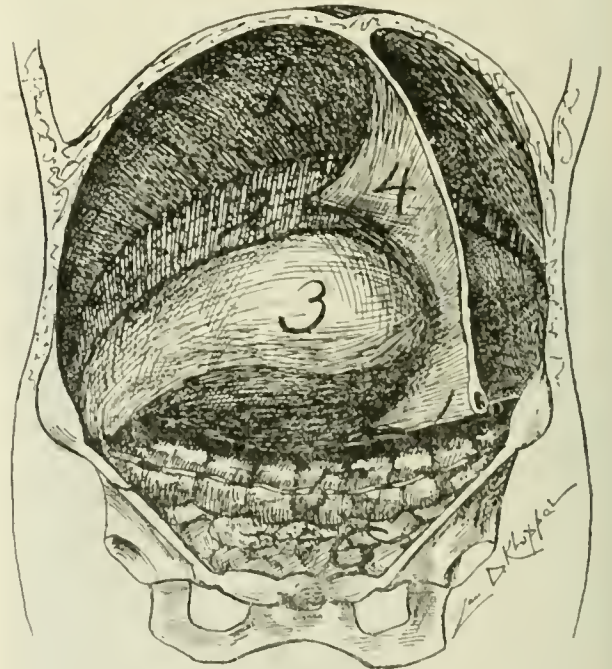


FIG. 11. Nephroptosis. 1, diaphragm; 2, coronary ligaments; 3, right lobe of liver; 4, ligamentum suspensorium hepatis; 5, transverse colon forced distalward by the wandering hepatoptotic liver; 6, loops of enteron forced into the lesser pelvis.

The Effect of Relaxed Abdominal Wall (and consequent splanchnoptosis) in Nephroptosis.

Women with relaxed abdominal walls frequently suffer with nephroptosis. In regard to the nephroptosis, the renal secretion is deficient, excessive, or disproportionate. The exact relations of factors of the nephroptosis and relaxed abdominal walls to the disturbed renal secretion are not easy to be determined.

The disturbed renal secretion would appear to be mainly due to disturbed renal mechanism. The renal artery, vein and ureter become compromised in relation to the nephroptosis. The passing distalward of the kidney from relaxed abdominal walls

stenoses the ureter and renal vein. The blood pressure in the renal vein is low, and hence light disturbed renal mechanism will easily compromise its blood flow.

In nephroptosis the distal pole of the kidney approaches the vertebral column disproportionately, and hence compromises the lumen of the ureter, damming the urine. Outside of disturbed urine flow from changed renal mechanism, equally disturbing factors in nephroptosis arise from trauma to the renal plexus. The renal plexus is a large collection of nerve plexuses and ganglia, and besides it is directly connected with the ganglia coeliacum, the abdominal brain, the largest ganglia in the body, which, being a reflex center outside of the spinal cord, reorganizes the reflexes and sends them to all other abdominal viscera. Thus the patient with nephroptosis complains of nausea and vomiting and dragging pains. She gradually becomes neurotic from reflexes due to trauma on the renal plexus. The damage in nephroptosis is, perhaps, in order:

1. Trauma of the renal plexus (and abdominal brain), producing a vicious circle by continuous reflexes on the abdominal viscera.

2. Traumatic stenosis of the vena cava, ovarian and renal veins.

3. Stenosis of the ureter with dislocation of the kidney, preventing drainage.

4. Trauma of renal artery.

5. A combined dislocation of the renal mechanism is changing the relation of the renal vein, artery, and ureter: a disturbed mechanism of the uretero-ureteral triangle.

6. The producing of deficient, excessive or disproportionate renal secretion.

7. The subject with right nephroptosis suffers nausea, headache, foul breath, gastric disturbances and constipation, accompanied by the stigmata of hysteria and other neuroses.

As nephroptosis is only part and parcel of general splanchnoptosis, nephropexy, which should be done by placing the kidney in the abdominal wall without sutures, must be limited in its local and general utility.

The Uretero-Venous Triangles.

In dissecting, one finds on the left side of the body a triangle formed by the ureter on the left side, the ovarian vein on the right side, and the renal vein on the proximal end or base. The sides of the triangle are about 2 inches and the base (the renal vein) is about 1 inch. The apex of the triangle is at the proximal arterio-ureteral crossing of the utero-ovarian, located just proximal to the iliac crest.

This is the left uretero-venous triangle. Its outlines are distorted in left nephroptosis.

On the right side of the body the uretero-venous triangle is formed by the ureter on the right side, the vena cava and ovarian vein on the left side, and the renal vein on the proximal end or base. The right uretero-venous triangle is about an inch at its base (the renal vein) and 2 inches on its sides. Its apex is at the proximal arterio-ureteral crossing of the utero-ovarian artery, and is located $1\frac{1}{2}$ to

2 inches distal to the iliac crest. The significant factor in the right uretero-venous triangle is that in nephroptosis it becomes markedly distorted, compromising the lumen of the ureter ovarian and the renal veins. The uretero-venous triangles, distinct, constant structures, are significant landmarks in topographical anatomy. I have never seen them named or described. They vary considerably in size from the varying location of the apex at the crossing of the ureter by the ovarian vein and artery. The apex of the uretero-venous triangle I have designated as the proximal arterio-ureteral crossing (of the utero-ovarian artery). In any and all nephroptosis the uretero-venous triangle is distorted and the lumen of the vein and ureter is compromised.

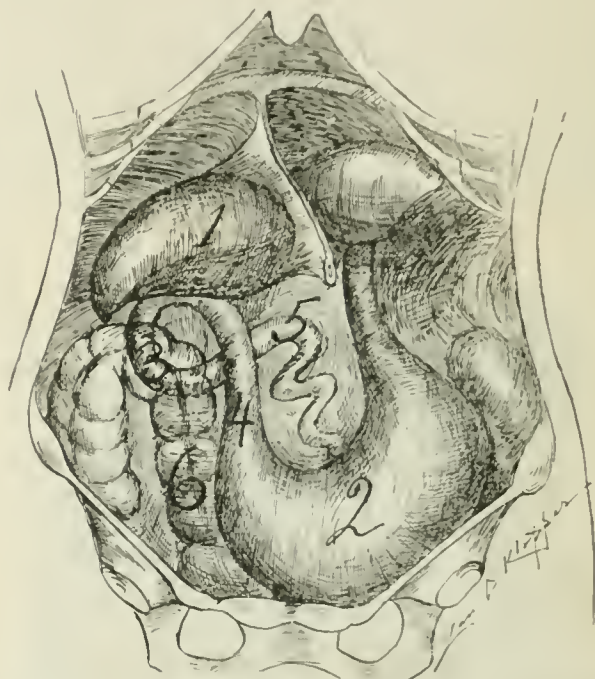


FIG. 12 Illustrates gastroptosis. The colon transversum forced distalward into the pelvis by the stomach. 1, liver with hepatoptosis; 2, stomach in the lesser pelvis; 3, 4, duodenum dilated; 5, the jejunum, normal caliber; 6, transverse colon. This cut represents gastro-duodenal dilatation—the second stage of splanchnoptosis.

Result of Relaxed Abdominal Walls (With Consequent Splanchnoptosis) in Genital Ptosis.

The same causes which produce the relaxed abdominal walls frequently produce the genital ptosis. To this class belongs the genital ptosis with relaxed pelvic floor. However, we can have genital ptosis from disturbed pelvic mechanism, without relaxed abdominal wall or thoracic diaphragm. Genital ptosis can exist with merely relaxed pelvic floor as in a relaxed or ruptured levator. In such case the muscle and the levator ani fascia superior and inferior is relaxed by separation, elongation or rupture of its fibres. The peritoneal genital ligaments become slacked, the vagina suffers ectropion, the uterus is retroverted. The vagina and uterus suffer bending with consequent disturbed circulation and peripheral nerve trauma, the bladder is traumatized, especially in the region of the trigone, where nerves and blood vessels congregate.

As a rule, genital ptosis is found to follow relaxed

abdominal walls. Genital ptosis without relaxed, soft, abdominal parietes is perfectly amenable to local treatment and genital surgery. The genital ptosis that is consequent or follows relaxed abdominal walls is accompanied by disturbed genital mechanism, viz.: compromised circulation (lymph and blood), traumatized nerve periphery with pathologic changes in the genital organs, and malnutrition. In genital ptosis from relaxed, soft, abdominal parietes, congestion arises in the pelvis, hyperemia, and there is especially a wide dilatation of the pelvic veins and plexus pampiniformis. Obscure endometrial hemorrhages without apparent cause arise with dragging pains in the terminal branches of the sacral plexus, viz., the pudic (genitals) and the sciatic (limbs). There is quick tiring when standing on the feet. In this category belong the hypertrophic myometritis, which drags and tugs on the uterine ligaments and invaginates the proximal end of the vagina, disturbing the mechanism of the pelvic structures, resulting in compromised blood and lymph circulation, traumatizing of nerve periphery, and accompanied by pathologic genital changes, with malnutrition.

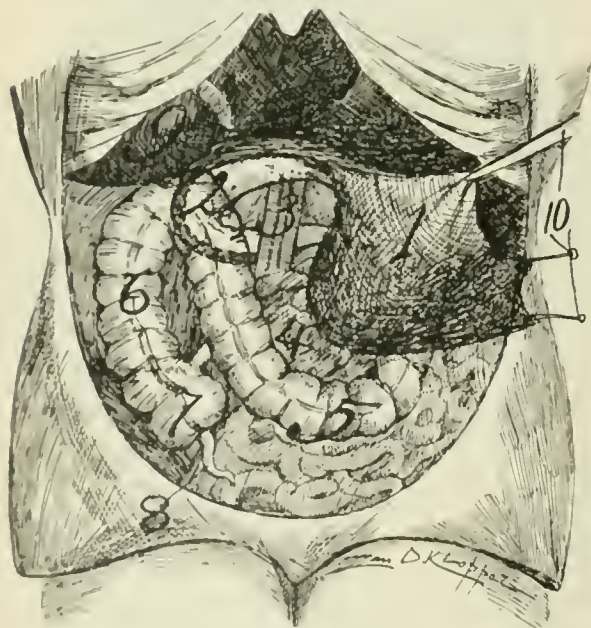


FIG. 13 Illustrates the third stage of splanchnoptosis, viz.: gastro-duodenal dilatation. It shows the transverse colon (5) in the lesser pelvis. The widely dilated stomach (1) is drawn leftward by hooks (10) from its bed to show the duodenum (2) dilated by the superior mesenteric artery, vein and nerve, (3, 4), the normal caliber loops of enteron; 5, right colon; 6, cecum; 7, the appendix. Note the enteron loops crowded into the lesser pelvis.

The chronically engorged uterus is in turn a source of hypersecretion from the endometrium, thus creating a viscous pathologic circle. The genitals, in relaxed abdominal walls, suffer much pain from excessive congestion as they are liberally supplied with blood, especially large veins. Genital ptosis causes pain in the sacro-lumbar region and in the hypogastric region, because the dragging of the genitals on the genital center in the lumbar cord induces reflex pain on the ileo-inguinal nerves and ileo-hypogastric nerves—branches from the lumbar cord. This pain in the hypogastric region is often

mistaken for ovarian pain. The dragging of the enlarged and dislocated genitals on the sensory nerves and ganglia induces discomfort, debility, and pain. The pain in genital dislocation from relaxed abdominal walls is not infrequently taken for ovarian or uterine diseases, and the patient then suffers from excessive treatment. From the relaxed and weak abdominal parietes a disturbed mechanism extends through the tractus intestinalis with its appendages, through the tractus urinarius and tractus genitalis, with accompanying compromise of the circulation and respiration and traumatizing of nerve periphery, followed by pathologic changes in the viscera, and malnutrition. I have noted, however, that patients with similar grade of relaxed abdominal walls do not suffer alike. With those who can take considerable horizontal rest and nourishing food, the deficiency is held in check, especially if the system be well drained and abdominal supporters are employed. In splanchnoptosis the kinking, stenosis, of the tractus intestinalis, fluid-carrying ducts, vascular tubes, etc., is modified because the whole abdominal viscera in toto pass distalward.

Perhaps this is compensated by a change in attitude of the vertebral column. In observing the complex symptoms of relaxed abdominal walls and consequent splanchnoptosis, not only the disease itself should be directly noted, but also compensating processes require attention. In genital ptosis defects in the pelvic floor should be repaired, as well as excessive elongation and separation of the fascial and muscular fibres composing the supports of the genitals. There may be fixation from peritoneal adhesions of the genitals in genital ptosis, or the genitals may be forced through a range extending through the distal half of the abdomen from the pelvic floor to the umbilicus. Besides, the relaxed pelvic floor increases the distal range.

Diagnosis of Relaxed Abdominal Walls With Consequent Splanchnoptosis and Gastro-Duodenal Dilatation.

Inspection.

A hanging belly is recognized by observing the person in the erect and horizontal position. Requesting the patient to control the abdominal muscles by coughing or by attempting to arise from the horizontal position, shows the disordered muscular and fascial relation of the abdomen. On coughing, the linea alba will project forward between the diastatic musculi recti abdominales, with an astonishing deformity. The abdominal walls show extensive distension without corresponding power to contract. In the horizontal position with relaxed abdominal walls the abdomen flattens and bulges out laterally. In the erect position the distal end of the abdomen extends over the symphysis and hides the genitals from view. In the sitting position, the abdomen rests on the knees like a tumor. The skin is dry and shiny and stretched. Frequently the abdominal wall is so thin that peristalsis of the tractus intestinalis is plainly observed. The patient in pronounced splanchnoptosis assumes a position of lordosis as a compensating balance similar to advanced pregnancy. The respiration assumes a typical costal type and the wide diastasis

of the recti abdominales allows the viscera to project between the diastatic recti muscles at every respiration. The linea alba is elongated and stretched to a thin blade. To test the relaxed abdominal wall, place the patient in half-reclining position and request a deep inspiration, when the linea alba will bulge forward with the rigid diastatic recti abdominales projecting one on each side.

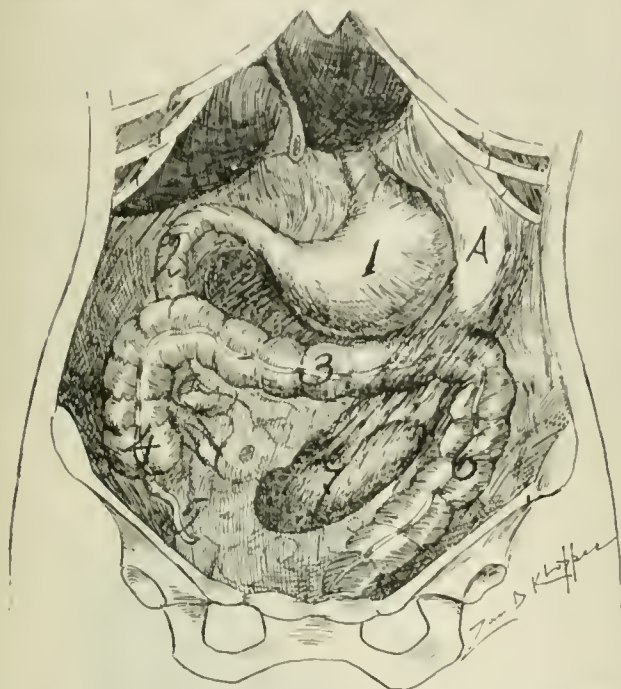


FIG. 14 represents ileopectocolitis (?). The spleen is in the lesser pelvis. General splanchnoptosis exists. In another autopsy the spleen rested on the pelvic floor accompanied by general splanchnoptosis. The spleen glides ventral to the colon.

Palpation.

A practical method to test relaxed abdominal walls is to stand behind the patient, place hands on each side of the abdomen, drawing the abdomen proximalward and then suddenly taking the hands away, when the abdomen will fall distalward according to the grade of its relaxation; high grades fall with such considerable force as to shock and traumatize the patient. Also by means of bimanual vaginal palpation one can force the hand between the recti abdominales when diastatic and touch almost all the abdominal viscera. The grade of relaxation of thinning of the abdominal walls is tested by the amount of fold the hands can grasp. One can test by the size of the folds grasped by the hands the capacity of the abdominal cavity.

Percussion.

The percussion completes the findings through inspection and palpation. Percussion locates solid organs whether normal or dislocated.

Mensuration.

One expects more from mensuration in the beginning than in the end results would show. It is true that in mensuration the form of the abdomen in relaxed abdominal walls changes prominently in the horizontal and erect position, but the tiresome, numerous measurements required are not very fruitful or practical.

Relaxed abdominal walls can be mistaken for

fatty abdomen. The massive fat accumulation may project over the symphysis like a bag. However, the lifting of the fat masses or skin folds includes the whole abdominal wall, and clears up the case.

Treatment of Relaxed Abdominal Walls and Consequent Splanchnoptosis, With Gastro-Duodenal Dilatation.

Since the primary factor in splanchnoptosis is loss of elasticity of skin and peritoneum, and loss of muscular contractility of the abdominal walls, the object of the treatment is the restoration of the strength, firmness and elasticity of the abdominal walls. Unfortunately for therapeutics the restoring of elasticity to the structures is difficult. The following methods have proven practical in the treatment of splanchnoptosis in the various stages, viz.:

(a) relaxation of abdominal walls, (b) splanchnoptosis, and (c) gastro-duodenal dilatation from pressure of the superior mesenteric artery, vein and nerve on the transverse segment of the duodenum. The duodenum is compressed in splanchnoptosis because the fixation apparatus of the duodenum will not allow it to pass distalward.

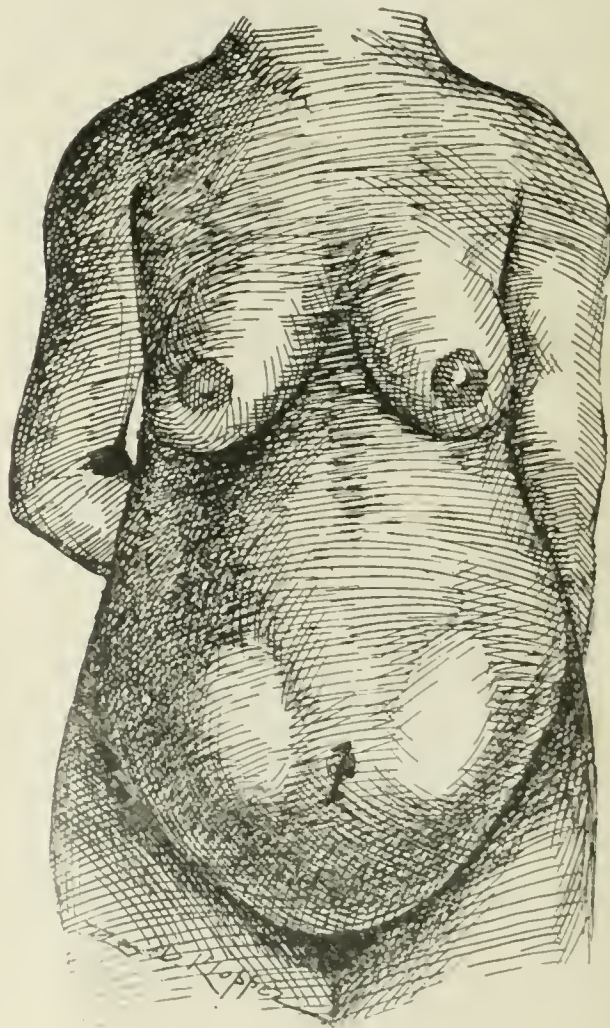


FIG. 15.—A female splanchnoptotic, a multipara, front view of relaxed abdominal walls of umbilicus. Observe that the relaxed abdominal walls pass sufficiently distalward to conceal the genitals from view.

A—Drainage (hydrotherapy).

The most important treatment for splanchnoptosis from first to last is regular and ample drainage. The sovereign drainage fluid a half normal salt solution (5i. NaCl to the quart), 8 ounces of which should be drank every two hours for 6 to 8 times a day. I add to each glass full of half normal salt solution one tablet containing (soct. aloë, NaHCO₃, KH CO₃, Fl., extract cascara-sagrada and mg. SO₄ 2 grs.). After 4 to 6 weeks' use, the tablet is omitted, the (3 to 4 pints) half normal salt solution, with established habits, is sufficient to insure daily drainage, evacuation and renal and cutaneous secretion. The half normal salt solution, aided by the tablet, not only drains the tractus intestinalis, the tractus urinaris and tractus perspiratorius, but thoroughly washes the internal tissues of the body, leaving them in an aseptic condition. The patient suffers chiefly from non-drainage and from deficient and disproportionate secretion, with consequent fermentation and meteorism. Constipation is the fate of the splanchnoptotic from lack of expulsive power. Such a patient requires continual drainage, hydrotherapy. The dyspepsia frequently accompanying splanchnoptosis is mainly owing to non-drainage of stagnant contents in the digestive tract. The more the subject is drained, the less waste-laden blood with mental and physical depression, the less meteorism and intra-abdominal pressure.

B—Massage.

The massage of the abdominal wall as well as that of the tractus intestinalis aids materially in the treatment. However, it is of limited value.

C—Electricity.

Electricity is of considerable value in relaxed abdominal walls, especially faradization of the muscles.

D—Abdominal Supporters.

Much utility and comfort arise from the use of properly fitting abdominal supporters. The kinds we have used are: (1) non-elastic, (2) elastic, and (3) the author's rubber air pad placed inside of an elastic or non-elastic abdominal binder. The objection against the use of an abdominal binder in splanchnoptosis because it does not teach the muscles self-strength, is as worthless as the objection against the use of a splint in fractures. The fact to remember is that the abdominal muscles are stretched beyond self or independent help. Abdominal supporters do not cure, but properly fitting ones help the patient to comfort and usefulness. It is not sufficient to recommend a binder. The physician should examine it to be sure that it fits properly, both for the grade of splanchnoptosis and for the avocation of the patient. The difficulty of fitting a proper support is due to the varying position of the patient—walking, sitting or lying. The author has invented a rubber air pad which has the shape to an axe. This is placed inside of the binder and subsequently filled with air to the desired size. The rubber air pad insures a fitting of the abdomen like a water bed, whether spare or fleshy, and also the size may be adjusted to the comfort of the patient. The binders are useful in moderate nephroptosis,

which is the easiest of all splanchnoptosis to aid, but when it has become advanced, binders are not only of little value but frequently harmful. In severe or distinctly diagnosable hepatoptosis I have seen none or little utility in binders. All tight waist bands should be removed, and clothing should be suspended from the shoulders or from hooks on a corset waist. If one experiments on a dead body with a tight-fitting corset, the organ which will suffer the widest displacement will be the right kidney. All tight corsets should be abandoned, but a so-called waist corset is useful to adjust and from which to suspend the clothing.

Since binder is to restore elongated and separated fascial and muscular fibres of the abdominal walls, it must fit snugly, especially the distal abdomen. Two rubber tubes must be employed passing between the limbs to fix the binder so that it will not slip proximally. The binder generally only forces posteriorly and proximally the abdominal wall, but the addition of the author's rubber pad adds to this the forcing of the viscera proximalward by acting like a pregnant uterus which lifts the viscera toward the thoracic diaphragm. If the splanchno-

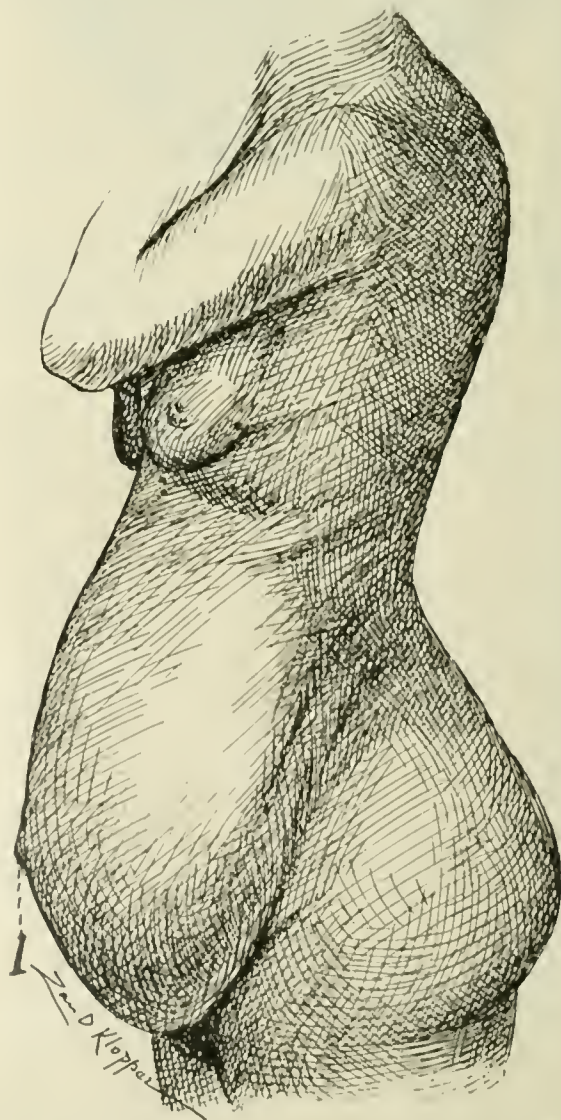


FIG. 16.—A lateral view of a female splanchnoptotic, a multipara, showing relaxed abdominal walls and umbilicus.

ptosis is not too far advanced, the rubber visceral air pad being adjusted and blown up while the patient lies on the back, will prevent the viscera gaining the lesser pelvis—the dangerous ground for stenosis of ducts, vessels and viscera, and traumatizing nerve periphery. The binder should be removed or loosened for the night's rest.

(To be concluded).

STATISTICS OF TYPHOID FEVER AT THE PHILADELPHIA HOSPITAL FROM JANUARY 1, 1897, TO DECEMBER 31, 1899.

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of Philadelphia

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It has only been since 1897 that a satisfactory method of preserving the histories has been adopted at the Hospital. It may seem almost incredible, but it is nevertheless a fact, that the enormous amount of clinical material in the shape of histories of cases at the Philadelphia Hospital has practically been worthless, because, until the past three years, there was no card catalogue of the histories kept, and no index of the cases exists prior to 1897. It is for this reason that the statistics which form the basis of this paper have been limited to the cases which have been dismissed from the hospital or have died in the wards between January 1, 1897 and December 31, 1899.

The whole number of cases in the period mentioned was 184; 135 were males and 49 females; 146 were white and 38 black or mulattoes. The fatal cases numbered 31, a mortality of 16.84 per cent. The average age of patients was 26.24 years, the oldest being 53, and the youngest 5; 93 of the 184 being 25 or under, 50.5 per cent; and 87 being between the ages of 15 and 25 years, inclusive, 47.3 per cent.

The average duration of the fever after admission in cases ending in recovery was 18½ days. The average stay in hospital of the non-fatal cases was about 40 days. This long duration is due to the fact that many of the patients were homeless, and partly to their retention as orderlies when convalescent. In fatal cases the average duration of life was 11.83 days, 14 living only a week or less.

The Fatal Cases.—A study of the fatal cases is always of interest.

1. One, a woman (A. K., aged 39 years) died on the second day after admission. She had exhibited marked nervous symptoms with nephritis and abdominal tenderness. The autopsy showed nephritis, congestion, and edema of lungs; incipient pericarditis; ruptured ectopic gestation; ovarian cyst and incipient typhoid fever. The death was evidently due to rupture of the Fallopian tube, and not to typhoid fever or any of its complications. If this death were excluded, the mortality would be 16.39 per cent.

2. In a second case, (L. G. B., colored, aged 25, the patient was a dipleptic from the nervous ward who had high temperature, receiving 71 tub baths in the ten days he lived. The autopsy showed old adhesive pleurisy, hypoplasia of the arterial trunks, and typhoid fever.

3. In the third case (J. J., colored, aged 19) the disease seems to have begun abruptly, four days before admission, with chills and high fever. He presented marked evidences of typhoid fever on admission, and subsequently developed nephritis and pneumonia, dying of the latter on

the 13th day after admission. The temperature kept pretty constantly 103°-104° throughout, except under the immediate influence of baths. It was highest (105 4/5°) on the 10th day. No autopsy.

4. The fourth case (F. O., aged 19) exhibited marked toxic symptoms from the very beginning of his illness. One week before his admission he had high fever, diarrhea with incontinence of urine and feces. The day after admission albumin and casts were found in the urine. The stools continued to be passed involuntarily, even in the tub baths. Twenty days after admission he was better, passed urine voluntarily, and asked for food. The next day, however, he had a chill, and pneumonia of the left lung developed, the temperature rose to 106 2-5°, the pulse to 144, respiration 40, and he died the following day cyanosed. No autopsy.

5. In the fifth case (M. D., colored, aged 28) the patient succumbed to a complication of pneumonia and nephritis on the 45th day.

6. In the sixth case (A. E., aged 32) the patient was alcoholic. For the two weeks before admission he had been drinking harder than usual. On the 20th day after admission he developed a pleuro-pneumonia. The exudate became purulent, and the patient died during aspiration on the 41st day after admission.

7. In the seventh case, (S. S., colored, aged 22) the patient had been ill three weeks before admission. There was marked toxemia, with delirium, nephritis and high temperature. Four days after admission he had an intestinal hemorrhage of about one pint. The rash was petechial. The next day there was a large hemorrhage from the bowels, and death occurred. Highest temperature 105° on fourth day. Pulse 88 to 160. No autopsy.

8. In the eighth case (D. P., aged 27) the patient was syphilitic. Three weeks before admission the patient had a decided chill, lasting an hour. He had had diarrhea for two weeks before admission, the stools containing a little blood on the second day before admission. On the day of admission there was an intestinal hemorrhage of a quart. Three days after admission he had severe abdominal pain, and two small bloody stools. He presented also delirium and tympany. On the fourth day there was vomiting of fecal matter, followed by death on the fifth day.

9. In the ninth case (G. S., aged 34) the patient developed pneumonia on the fifth day and died the following day.

10. P. L., male, white, aged 24, Ireland, laborer. Admitted January 11, 1899; died January 14, 1899. Admitted very delirious with a history of several weeks illness. The tongue was dry, brown, leathery; there were sordes on teeth. The spleen was much enlarged and there were numerous typhoid spots. Heart's action rapid, sounds weak, pulse feeble. Bronchitis marked. Excessive twitching of tendons. Patient took nourishment very poorly, and had vomiting and diarrhea. January 13th, intestinal hemorrhage. Was comatose for twenty-four hours; the pulse was almost imperceptible. Highest temperature 104 4-5° on the day of admission. Pulse ranged from 120 to 160. Duration, two and one half days. No autopsy.

11. C. D., male, white, aged 30, Penna., cigar maker. Admitted January 24, 1899; died January 27, 1899. Illness said to date back nine days. Complained of sore throat, weakness and dizziness. Prominent symptoms were loose bowels; abdomentympanitic, tense and tender; pulse rapid, spleen enlarged. Had two large hemorrhages January 21st, losing about one quart of blood in each. The following morning had another hemorrhage from bowels. Autopsy showed numerous ulcers in large intestine and in lower part of ileum. Lymph glands enlarged and rather soft.

12. J. McD., white, male, aged 40, Penna., laborer, admitted January 7, 1899; died January 30, 1899. After about two weeks illness, entered complaining of weakness, headache, and pain in back, legs, and feet. Nausea, vomiting, and diarrhea. Prostration. Abdomen distended and tender. Spots present. Widal positive. January 10, pneumonia. January 12, vomited clots of blood. January 16, left parotiditis, incised January 25. January 29, sharp pain with frictions in left mammary region. Died of exhaustion January 30. Highest temperature 104 2-5° on third day. Pulse 80 to 120. No autopsy.

13. A. G., white, male, aged 17, Mass., laborer, admitted December 22, 1898; died December 30, 1898. On admission complained of pain in stomach. His illness began two weeks before admission with languor, anorexia, head-

* Read at the meeting of the Pennsylvania State Medical Society Sept. 26, 1901.

ache, nausea, and occasionally vomiting and nose bleed. Abdomen tympanitic and painful all over. Typhoid spots present. December 24, delirium noisy, occasional incontinence of urine; cough. December 27, Widal positive. December 29, wild delirium, incontinence urine and feces. Urine contained hyaline and granular casts. Died December 30. Highest temperature 195 2-5° on second day; it was frequently 104° or over. No autopsy.

14. P. D., white, male, aged 32, Canada, weaver, admitted December 9, 1898; died December 17, 1898. On admission complained of weakness and fever. About two weeks before admission, developed headache and vertigo, followed by extreme weakness and diarrhea. Typhoid spots were present on the 13th. The prominent symptoms were delirium, weakness, pulse rapid and feeble, dyspnea, and edema of lungs. Widal positive. Highest temperature 105 2-5 on sixth day. It was also 105° on fifth and eighth days, and as a rule was over 104° in the evening. No autopsy.

15. D. McG., white, male, aged 28, Scotland, teamster, admitted December 12, 1898; died December 24, 1898. On admission complained of pain and soreness all over the body. About two months before admission caught cold and had coughed since; had nausea but no vomiting; headache; languor; pneumonia; spleen enlarged; typhoid spots present. Widal positive. Pulse weak, running, dicrotic. Delirium; incontinence of urine and feces. Diazo positive. Death on the 12th day. Highest temperature, 103 4-5° on the third day; pulse 128 to 140. No autopsy.

16. M. J., white, male, aged 37, Penna., cook, admitted February 17, 1899, died February 26, 1899. On admission complained of fever, diarrhea, anorexia, and prostration. Illness began about ten days ago. He 'took cold,' and had a number of chills, severe headache, some pain in right iliac fossa, anorexia, diarrhea, and bronchitis. Pulse dicrotic. Heart's action very weak. Additional symptoms were tympany, gurgling, typhoid spots, Widal positive, delirium constant and at times violent, incontinence of urine and feces, progressive failure of strength and increase of heart weakness. Death on the ninth day. Highest temperature 104 4-5° on the first, second, third, and fourth days. Pulse 104 to 130. No autopsy.

17. E. O., white, male, aged 21, Philadelphia, tinsmith, admitted January 31, 1899, died February 11, 1899. About three weeks before admission began to suffer with headache, aching over body, languor; three days later became prostrated, and suffered with intense headache, anorexia, vomiting and diarrhea. Abdomen slightly distended and markedly tympanitic. Additional symptoms were enlarged spleen, typhoid spots, insomnia, incontinence of feces, tremor of hands and of lower jaw, positive Widal reaction, carphologia, subsultus tendinum, and coma vigil. Subsequently there occurred delirium and suppression of urine. Death on the 12th day. Highest temperature, 105 4-5° on the fourth day; it was often over 104°. Pulse 100 to 128. No autopsy.

18. A. G., white, male, aged 36, Poland, laborer, admitted February 8, 1899, died March 2, 1899. On admission complained of cough and pain in the breast. Patient says he had been ill four weeks beginning with severe headache, followed by cough, pain in the breast, and nausea. Tongue was coated, dry, and fissured. Prominent symptoms were bronchitis, typhoid spots, positive Widal reaction, marked tremor of hands, incontinence of urine and feces, pulse rapid and weak. Hypodermoclysis was employed, but the patient died exhausted on the 22d day.

19. A. L., white, male, aged 38, Scotland, teamster, admitted April 11, 1899, died May 14, 1899. On admission complained of general pain over the abdomen. One week before admission felt very weak, and was obliged to give up work and go home. No headache, but fits of chilliness. Anorexia and loose bowels. Tenderness over abdomen, tongue brown and fissured, sordes on teeth, breath foul. Hebetude. Sleeps with eyes partly open; muttering delirium. Albuminuria; typhoid spots. Seemed about second week of disease at entrance. Small hemorrhage from bowels on fifth day. From this time until death, which occurred on the 32d day, there was a constant struggle to overcome exhaustion and heart failure. Highest temperature, 104 2-5° on the second day, 104° twice on third day. Pulse 90 to 116. No autopsy.

20. M. L., white, female, aged 23, married, Philadelphia, housewife, admitted to gynecological wards July 30,

1899, died August 6, 1899. Admitted with a history of abortion on the previous day, and with a history of chills and fever which had lasted five days. Uterus curetted and decomposed membrane removed. Spleen enlarged, Widal positive, tympany. Patient transferred to medical wards. Here typhoid spots appeared, the pulse became rapid and weak, the lungs congested, and the patient died soon after a convulsion on the seventh day. Highest temperature, 105° on the fourth day; it was 104° or over thirteen times. Pulse 96 to 130. No autopsy.

21. J. C., white, female, aged 23, Germany, domestic, admitted August 23, 1899, died September 2, 1899. On admission complained of anorexia, and pain in back, legs, and abdomen. Illness began two weeks before admission. Prominent symptoms were rapid and dicrotic pulse; arteries sclerosed; typhoid spots, Widal positive, tympany gurgling. Yellow, liquid stools. Delirium supervened and became violent. Occasional incontinence of urine, with albuminuria. Highest temperature, 104 2-5° on admission, generally 102° or under. Pulse 100 to 144. No autopsy.

22. A. M., white, male, aged 27, Philadelphia, laborer, admitted November 30, 1898, died December 18, 1898. On admission complained of cold and sore throat. Often gets drunk on beer. Illness began two weeks before admission with numbness of left side of face and right side of body. He fell to sidewalk and was removed to hospital. Prominent symptoms were hebetude, cough, pain in epigastrium, lips dry and parched, sordes, tongue dry and coated brown. Congestion of lungs, followed by fall of temperature to normal on the fifth; recurrence of fever on the sixth, with enlarged spleen, typhoid spots, positive Widal, several slight hemorrhages from the bowels, and then a large hemorrhage on the 15th. December 16, pulse weak, but gained in strength. Respiration frequent and accompanied by bronchial breathing over bases of lungs. Cyanosis. Large liquid stool, but no blood. Vomited 1.30 P. M. and died almost instantly. Duration, 18 days. Highest temperature, 104 4-5° on the fourteenth and fifteenth days. Pulse 78 to 124. No autopsy.

23. W. J., black, male, aged 22, Virginia, laborer, admitted April 23, 1899, died April 27, 1899. Entered hospital delirious, but with history of illness for five days. Complained of headache, cough, diarrhea and epistaxis. Pulse rapid and dicrotic. Bronchitis. Spleen enlarged. Widal positive. Delirium persisted; there was incontinence of urine and feces, and the pulse became progressively weaker. Death occurred on the fourth day. Highest temperature 105 1-5° twice on third day, and over 104° on three other days. Pulse 108 to 136; respiration 32 to 40. Autopsy: Typhoid ulcers of small and large bowel. Hyperplasia mesenteric glands, moderate enlargement of spleen; cloudy swelling of heart, liver, kidneys; beginning interstitial nephritis; no cerebral meningitis and no disease of cord.

24. G. T. B., black, male, aged 21, admitted December 19, 1898, died December 22, 1898. When admitted the patient was delirious and refused to talk. The abdomen was tympanitic and tender, urine and feces were passed incontinently, respirations were rapid and shallow, the breath sounds were rough over both lungs, Widal positive. The patient took nourishment poorly and refused to take medicine. He died on the third day. Highest temperature 105 2-5° on the first day. Pulse 128 to 130. No autopsy.

25. J. H., black, aged 26, North Carolina, laborer, admitted December 10, 1898, died December 23, 1898. Illness apparently dates back four weeks, when he began to sweat profusely, became weak and dizzy, and fell from exhaustion on the way home. Prominent symptoms, languor, anorexia, headache, enlarged spleen, Widal positive, incontinence of urine, delirium. No plasmodia. Sputum negative. Died on 12th day. Highest temperatures 105° on fourth and eighth days, 104° on first day. No autopsy.

26. E. W., colored, female, aged 20, Virginia, housemaid, admitted January 14, 1899, died January 22, 1899. Complained on admission of headache, fever, and nausea. Nine days before admission began to have vague pains and headache, but kept up until January 7, when had to go to bed. Intense headache and nausea. Tongue dry, sordes on lips. Pulse frequent and feeble. Slight bronchitis. Spleen enlarged. Tremor, restlessness, delirium, incontinence of urine, Widal positive. Highest temperature, 106°, often 105°. Duration, eight days. No autopsy.

27. R. H., black, male, aged 24, Virginia, laborer, admitted April 7, 1899, died April 13, 1899. On admission

complained of weakness and fever. Illness dates back fifteen days, when he developed headache, chilliness, pains in neck and back; no appetite. Prominent symptoms were drowsiness, hebeticity, foul breath, fissured lips, sordes, bronchitis, positive Widal. Patient said to be doing well. Tympanites was noted on the 13th, and he died suddenly. Duration, five days. Highest temperature, 101.4-5° on fifth day, 101.2-5° on second day. Pulse 78 to 108. No autopsy.

28. W. E. H., black, male, aged 28, Virginia, laborer, admitted March 23, 1899, died March 29, 1899. On admission complained of headache. Uses tobacco and alcohol to excess occasionally. Two weeks before admission began with severe headache and cough. Later free expectoration, some pain in chest, severe dyspnea, cardiac palpitation, loss of appetite, nausea and vomiting. Diarrhea marked. Abdomen distended, tympanitic; gurgling in right iliac fossa. The day after admission he was stuporous, and had incontinence of urine and feces. Widal positive. On the 27th he had a serious intestinal hemorrhage, and on the 28th and 29th, he had a number of hemorrhages from bowels, most of them small in amount. The pulse was very feeble and rapid. Coma, followed by clonic convulsion closed the scene. Duration, four and one half days. Highest temperature, 103.1-5°. Pulse 100 to 140. No autopsy.

29. L. R., black, male, aged 26, Virginia, admitted December 10, 1898, died December 15, 1898. On admission complained of pain in the epigastrium. Illness began about three weeks before admission with chilliness, headache, languor, anorexia, pain in stomach, nose bleed. Bowels constipated. Fever and delirium at times. Heart weak. Some blood was found in stool on day of admission. The next day there was a bloody stool, and on the 12th, a large intestinal hemorrhage. On the 13th there were four hemorrhages, three occurring in an hour and a half. Severe nephritis existed. Patient died on the 15th, being in the hospital four and one half days. Widal positive. Temperature was low, only once reaching the sponging point. No autopsy.

30. H. B., male, black, aged 25, North Carolina, laborer, admitted January 31, 1899, died February 10, 1899. On admission had cough, rapid respiration and pulse, high temperature, pain in the left chest, and extreme prostration. Said to have 'taken grippe' one month before admission, but worked until three weeks before admission. Tongue dry and heavily coated, sordes. Rusty sputum. Dulness over left lung, posteriorly and anteriorly, and over right lung anteriorly. Heart rapid and weak. Abdomen tympanitic, and gurgling in right iliac fossa. Muttering delirium. Diarrhea. Widal positive. February 8, better, but incontinence of urine and feces. Subsequently he gradually became weaker and died on the ninth day. Highest temperature 104° during first four days. Pulse 100 to 120. No autopsy.

31. M. W., black, female, aged 28, Philadelphia, cook, admitted February 20, 1899, died February 23, 1899. On admission patient too delirious to give an account of her illness. Expression of face vacant, tongue dry and brown, sordes on teeth. Pulse very rapid and small. Lungs show at right base, posteriorly, areas of dulness and crackling rales. Tenderness in splenic area and also in right iliac fossa. Spleen enlarged. Delirium and great restlessness. Incontinence of urine and feces. Vomiting. The abdomen became distended, the breathing labored and gasping, the face pinched, the pulse imperceptible. Death occurred at the end of two and a half days. Highest temperature, 104.2-5° on second day. Pulse, 120 to 160. Respiration, 44 to 76. No autopsy.

The mortality in 184 cases was 16.84 per cent; or, if we exclude one dying of rupture of the Fallopian tube from ectopic gestation, the mortality is 16.39 per cent. In seeking the cause for such a high mortality, the class of patients forming the great majority of the admissions to the Hospital must be born in mind. They are made up not simply of the poor, but of the homeless, neglected, dissipated, and outcast. Of the last 113 cases, 43 were born outside the limits of the United States, and 28 outside the limits of the State of Pennsylvania. Most of the

negroes came from other states, particularly Virginia. Moreover, 11 of those born in Pennsylvania were born outside of Philadelphia, so that only 33 of the 113 cases were born in Philadelphia. The significance of this I take to mean that more than two-thirds of the patients were either foreign-born, or belonged to the wandering class which is less likely to form fixed home ties, and hence cannot be expected to be so well cared for in sickness. I think it a very fair assumption that the great majority of these patients with typhoid fever never experienced good medical care until they came to the Hospital. Again, it is well known that the earlier a patient with typhoid fever comes under proper medical care, the better the prognosis, and conversely. Now more than two-thirds of these patients were admitted in the second week or later, and one-third in the third week or later. Of the fatal cases, six (6) were admitted during the first week; fourteen (14) after the disease had lasted about two weeks; seven (7) after it had lasted three weeks or longer, and two (2) after four weeks illness; three (3) were too delirious on admission to answer questions, and it is assumed that these three were in the second week. In two (2) cases the duration of the disease before admission could not be ascertained. Thus only one fifth of the cases (6) were admitted during the first week, and twenty-three (23) after the disease had lasted about two weeks or longer. Delay in sending these patients to the Hospital was all the more fatal because they were either ambulatory cases, or lacked proper care at their homes or boarding places. In Osler's series of 229 cases, the mortality was 9.6 per cent. Of the 22 fatal cases, 10 were admitted during the first week, 5 during the second, and three in the third, and two in the fourth. The percentage of deaths to patients admitted in the first week was 9.5; 6.2 for patients admitted in the second week; 12 per cent for the third and 25 per cent of those admitted in the fourth week. The statistics of the German Hospital, as reported by Dr. J. C. Wilson, cover 408 cases up to October 1, 1894, with a mortality of 7.8 per cent. These cases were treated by the Brand method of tub-bathing. In speaking of the contention of Brand that the influence of the treatment upon the mortality is proportionately favorable as it is instituted early in the course of the attack, Dr. Wilson says:—"Taking series 4 and 5 together, we note that of the 32 cases admitted not later than the fifth day, 1 or about 3 per cent terminated fatally. In 78 cases admitted prior to the tenth day, the death rate was 7.7 per cent; and in 18 cases admitted after the tenth day, the death-rate was 22 per cent."

As autopsies were obtained in very few of our cases, the causes of death have to be inferred from the clinical histories. The causes of death, following Osler's classification, were as follows:

1. **Asthenia**, a result either of the rapid or slow action of the toxins, or a sequence of the severe diarrhea—14.
2. **To intercurrent affections**—in the Hospital

cases principally to pneumonia, with or without nephritis, and in one case with empyema—8.

3. To accidents of the lesion, erosion of a blood vessel,—5, or perforation—3.

In one case the cause of death was a rupture of the Fallopian tube from ectopic gestation. There was also pericarditis. It will be noticed that half of the fatal cases occurred in negroes or mulattoes, although they constituted about one-fifth of the whole number of cases. This fact accounts in part no doubt both for the mortality and for the relatively large number of deaths from pneumonia; for it is well known that negroes offer less resistance to disease than whites, and that they are especially susceptible to pneumonia. On the whole, when it is borne in mind that the great majority of the patients who come to the Philadelphia Hospital are from among the poorest and most depraved in the city—patients therefore in many instances already weakened by bad hygiene, insufficient food, and vicious habits—the results obtained from the treatment and the nursing cannot but be regarded as highly satisfactory. Nevertheless the mortality from pneumonia, as a complication (8 cases), would have been lessened by treating the typhoid fever patients in a ward where no pneumonia cases were admitted. Such separation has not been accomplished yet. In future, also, some of the patients who have died from hemorrhage (5) or perforation (3) will be rescued by prompt surgical interference.

Complications and Special Symptoms:—Chills and fever:—Chilliness and chilly sensations of course occurred in many of the cases, (in 30 of the last 113) but in 8 cases there were marked chills which recurred and were followed by fever, and three simulated malarial chills, but no plasmodia were found in the blood. This agrees with Osler's statement that among 685 cases of typhoid, in not a single instance were the plasmodia found in the blood during the course of the disease.

Incontinence of urine and feces:—Incontinence of urine and feces occurred in 21 of the cases ending in recovery, and in 13 of the fatal cases; in two there was incontinence of urine alone. In one of the former the feces were passed while the patient was taking tub-baths. Dr. J. C. Wilson says he has never known an instance in which fecal incontinence occurred during the bath.

Nephritis:—Nephritis occurred in 22 of the cases ending in recovery, and in 7 of the fatal cases. Tub baths do not appear to influence unfavorably the course of the nephritis. In one instance, at least, in which the urine became scanty and contained casts and considerable albumin, under a continued use of tub baths, or perhaps one should say, in spite of a continued use of the baths, the urine became abundant and the nephritis improved.

Sweating:—Free sweating occurred in 14 of the cases.

Blood Stools:—Bloody stools occurred in nine cases ending in recovery, hemorrhage in seven cases and, as already mentioned in speaking of the fatal

cases, hemorrhage occurred in six cases, and hemorrhage followed by perforation once.

Diarrhea:—Twenty of the fatal cases were characterized by diarrhea, and in 38 of the cases ending in recovery (including the 9 who had incontinence) diarrhea or loose bowels were mentioned. In many of these cases, however, the diarrhea was not marked, and in a number of these existed before entrance to hospital, and at the time of entrance, subsiding after the patient had been put to bed and kept on suitable diet. Diarrhea certainly cannot be looked upon as characteristic of the disease as we see it at the present time.

Vomiting:—Vomiting occurred in 9 of the fatal cases.

Tuberculosis:—Three of the patients who recovered were tuberculous before the onset of the typhoid fever, and in one of the fatal cases tuberculosis also existed. There was no autopsy.

Boils:—Boils, I am sure, occurred oftener than the ward notes of the cases would lead one to suppose. In one case numerous boils were succeeded by ulcers which, for the most part, extended through the skin only, but in a few instances through the muscle also, becoming bed sores on the sacrum and hips. They were very sluggish and difficult to heal, owing to the greatly reduced vitality of the patient.

Pregnancy:—One of the patients was pregnant, but there is no record of abortion following, so that the presumption is, pregnancy was not interrupted, which is very unusual. Abortion occurred in three cases.

Orchitis:—Orchitis as a complication occurred in two cases, one of which has been reported by a member of the Staff (Dr. A. A. Eshner*) who also gives a valuable review of the literature of the subject. In the other cases the records unfortunately are imperfect; but the orchitis appears to have involved both testicles, and to have developed early in the disease. The patient was ill three weeks before admission to the hospital, where he was first assigned to the surgical ward. It may be that the orchitis was in origin independent of the typhoid fever.

Phlebitis:—Phlebitis occurred in three cases, but was not especially noteworthy.

Purulent Otitis:—This complication occurred in 15 of the cases, and appears to have been readily amenable to treatment.

Relapse:—Relapse occurred in 8 cases. These of course were relapses in the strict sense of the word, not merely recrudescences. One patient had three relapses. This patient developed typhoid fever about 15 days after confinement in the Maternity ward of the hospital. She remained altogether four months in the medical ward, and at the end of that time was transferred to the Gynecological ward for an Alexander operation.

The Gruber-Widal serum reaction was reported positive in 95 of the last 113 cases, in 13 it was negative, and in 5 the blood was probably not examined. This gives a percentage of 88 in which the serum reaction agreed with the final clinical diagnosis.

Other symptoms which are not common, and

* Philadelphia Medical Journal, May 21, 1898.

which occurred in a few of the last 113 cases are the following:—Retention of urine—5; petechial eruption—2; convulsions—3; and cellulitis of scrotum, tender toes (acroparesthesia), pleural effusion, insomnia, glossitis, tonsillitis, parotiditis, in one case each.

HYPODERMOCLYSIS IN PEDIATRIC PRACTICE.*

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Hypodermoclysis has most probably found its field of greatest usefulness in the hands of the surgeon to combat shock, uremia, toxemia and the various acute surgical procedures. The physician has also found it a remedy of great power in a large variety of cases. Its use, however, has been frequently abused. Like all new remedies that have been efficient, its application has been too widespread. Its reception has been so favorable that the too enthusiastic physician has made many indiscriminate uses of it. In this way many failures were the result. It is, in this manner, that many of the new remedies have received their death-blow. Its value has been overestimated. Its shortcomings have been based on too narrow experimentation. Failures crept in, that a recoil from its usefulness is unavoidable and oftentimes embarrassing to those who would adhere more closely to a fixed line of procedure. Its employment, however, has frequently saved life, and its judicious employment in many hopeless cases in trying times has been deeply appreciated. Its value in surgical and adult medical practice has been undoubtedly adjusted to its just merit.

During the past two years, I have been using hypodermoclysis in some of the ailments of early life and found it already of great power in properly selected cases. It is with the idea of showing its efficiency, as well as its limitations, when judiciously used, that this brief paper is devoted to the more clinical side of the subject. The cases I will cite will be better appreciated if a brief outline of the technic of hypodermoclysis as applied to diseases found in children is better understood. Unfortunately many physicians have abandoned its applications, because of frequent failures found by reason of improper selection of cases and a nebulous knowledge of the necessary technic. Thus many have made a mistake by using the solution too cold, producing a shock on the susceptible nervous system of a growing child. Frequently a non-sterile apparatus has been used, resulting in local inflammation. Others have used it too hot and thermic abscesses have been the result. The most frequent error is that the salt solution has been introduced so freely into the subcutaneous tissue that it has practically drowned the patient by being introduced faster than the excretories could eliminate or the tissues could distribute. Many have found the procedure irksome and as they have termed it "time-wasting." In conversation among physicians, a number of questions have arisen, which leads me to

believe that the technic has been wholly misunderstood, or the methods of application have been carelessly or unsatisfactorily carried out. In the administration of hypodermoclysis, you will find that it cannot be hurried; it requires time, care and some skill. Neither can you entrust it to inexperienced hands. Briefly my technic in the application to children is about as follows. In afebrile cases, such as are found in general atrophy, wasting as following the infectious diseases, the solution should be at least 115° or 120° and delivered to the tissues at 106°. This temperature must be sustained throughout the procedure. The injection may be made in very young children through a large hypodermic syringe or, if a suitable apparatus is obtainable, by gravity. I have found in young children the most satisfactory way of administering it is with the old-fashioned, now abandoned, large antitoxin syringe, which holds one to two ounces. This, after being thoroughly sterilized by boiling, is filled with the normal saline solution of the proper temperature and may be injected into the flanks or into the inner surface of the thigh, above the knee, or preferably near the great trochanter, on the outer aspect of the lower extremities, this being the area of the least sensibility in children. I have selected this spot as being the point of freedom from pressure when the child is lying down. Frequently it is necessary to numb the skin by the application of a piece of ice for a few minutes. In some cases I have used a common hand-ball atomizer, and sprav the spot with sulphuric ether, which numbs the skin sufficiently for the insertion of the needle, the only painful part of the operation. I might add that the low condition of the nervous reflexes in children that have been wasted by disease have never been such as to cause pain. Frequently I have timed myself in giving the injection, and it is generally advisable to consume five to ten minutes, to empty one to two ounces of solution in the sub-cutaneous areolar tissue. The gravity bottle, which at first was universally employed, I have not found very convenient, for a good many reasons. First, because the fluid enters so very slowly that the temperature becomes too low, that you lose the thermic influence for good. This loss of temperature, however, may be overcome by using the water-bath for the fluid and thus sustaining the heat, or by having the delivery tube coiled in a hot-water bag, continually sustaining the temperature. It is never necessary to introduce the fluid with a large syringe so rapidly to produce a swelling, which necessarily means pressure and pain, such a condition oftentimes resembling a hematoma. When the tissues are starved by the loss of blood from the hemorrhage or wasted by long sickness, they will drink up the fluid much more quickly than when the body is full of fluid and toxins, as we find in acute nephritis. In such cases the rapidity of inhibition of fluid must vary with the nature of the case. Oftentimes the tissues are overwhelmed by a large quantity of fluid as given to the patient rapidly, yet we wish to dilute and eliminate the toxic fluid chiefly through kidneys or skin. In such cases I precede the hypodermoclysis with a glycerin enema, which drains the tissues and affords a more rapid entrance to the

* Read before Philadelphia County Medical Society (Northern Branch) October 17, 1901.

subcutaneous injection. The quantity of fluid injected in young children has usually been too large. I have found marvellous results in the application of one to two ounces. My application of hypodermoclysis has been most useful in the following diseases of early life: anuria, usually found in the first three weeks of life, due to deposit of uric acid crystals in the tubules of the kidney, from various causes—surface-chilling, etc.; various forms of uremic coma encountered in the different stages of nephritis, following the eruptive diseases. Shock: shock resulting from intestinal intoxication; depression following any acute febrile disorders incident to any specific diseases, and atrophy following malnutrition.

The various stages of marasmus, the great stumbling block of the physician, offer a very hopeful and encouraging field for the application of hypodermoclysis, especially in the last stage, when all forms of food are refused by the digestive tube, evidently due to atrophy of the peptic gland to receive the pabulum. I have found the patient to respond to a marked degree to this remedy. I have been using concentrated sterile saline found in the market in one-ounce bottles. This properly diluted with boiled, sterile water offers the quickest form of preparation.

CASE 1.—The first illustrative case I will mention is that of a young child, ten days old, born of a weak mother. The child was in a moribund condition when I saw it, and had, as the attending physician represented it, hemorrhage from the penis, which was probably due to uric acid infarction to such an extent as to block up the tubules of the kidney sufficiently to produce frequent hemorrhage from the penis. The child was given one ounce of the normal saline solution three times daily, and after the first injection passed a perfectly clear urine, the general condition immediately changed for the better, and during the three days on which the injections were continued the child's vitality seemed to revive, it was able to nurse and the ordinary functional activity of its young life was brought into existence and continued uninterruptedly to a perfect recovery.

CASE 2.—Male child, three months of age. Was nursed by its mother for one month and during this period its growth was quite normal. The mother unfortunately lost her milk and the child was placed on the bottle, as closely adjusted to the wants of the child as modified milk could be, yet it quickly lost weight and drifted into a wretched condition of marasmus. When brought to my notice, the child's weight was somewhat less than at birth. Hypodermoclysis of one ounce of normal saline solution at a temperature of 120° (delivered into the tissues at 110°) was given every four hours during the day, and the child's weight increased. Coincident with the increase of body weight came a greater capacity for digestion and the child soon comfortably assimilated the carefully modified bottle. The whole organic life of the child, which had seemed nearly lost, was again set in motion, and the child filled out and exhibited all the evidence of returning life. The subcutaneous injection of the salt solution was continued faithfully for two weeks, slowly increasing the amount to two ounces, when enteroclysis was substituted as the less painful and less irksome procedure. This was continued for two more weeks, after which the child made uneventful progress.

CASE 3.—Female child, six years of age, wasted from long continued intestinal intoxication until it resembled a case of advanced phthisis. After a thorough purgation with sodium phosphate and a high enema, hypodermoclysis of eight ounces was commenced, alternating with three ounces of the solution by enteroclysis, with the happiest results. Gastric digestion was quickly restored, the tis-

suess filled up, and the normal bodily activity resumed by the substitution of proper food.

In conclusion we may observe that this method of treatment offers a very wide field of clinical usefulness. Some of the barriers that hinder its constant application are the appearance of a surgical procedure, which may intimidate young children or the family, and the great drain upon the attending physician's time in its application. Yet, in the face of all these obstacles, I feel that it is an unusually powerful remedy, and has given me far better results than any single therapeutic procedure heretofore tried in similar cases.

To recapitulate, its chief fields of usefulness are in hemorrhage in the new born, from the genitals or umbilical cord; in purpura; in cases of general wasting from intestinal disturbances; and especially the toxemias associated with the acute eruptive fevers, scarlet fever and diphtheria claiming an especially high degree of usefulness. In syphilis and in tuberculosis it is a therapeutic measure which aids very materially the uses of other means to effect restoration.

If I have succeeded in encouraging other members of the profession in the use of this therapeutic measure, which I have found so thoroughly efficient, then the object of the slight review encompassed in the paper will have been accomplished.

AMYOTROPHIC LATERAL SCLEROSIS: WITH REPORT OF A CASE.*

By THOMAS LUTHER COLEY, A. B., M. D.,

of Philadelphia.

Chief of the Medical Clinic and Assistant Physician to the Methodist Episcopal Hospital, etc.

The case, which I have the privilege of reporting, is an atypical one and therefore of more than usual interest. It does not seem to fit precisely in the accepted classifications. The diagnosis of the malady from which this patient suffered depended entirely upon the clinical picture presented; for it was not possible to obtain a post-mortem for verification. Therefore, however logically the symptoms may go to show the existence of combined system-disease, it will be well to emphasize the fact that the pathological confirmation of the diagnosis of spastic paraplegia and to a much less extent of amyotrophic lateral sclerosis is rare and that, very frequently, suspected cases prove to be disseminated sclerosis, transverse or focal myelitis, or syringomyelitis, etc.

This patient afforded the rather unusual example of having been under observation from the incipency of the disease, and carefully watched during the course of the malady. This is in marked distinction to the familiar experience in hospital practice, where the average cases of brain and cord disease have assumed usually full development when admitted, and the history of the earlier symptoms can be but inaccurately, if at all, set down. The rare affection from which this patient suffered had certain trophic changes associated

*Read before the Medical Society of the State of Pennsylvania, at the Philadelphia meeting, September 26, 1901.

with it, to which attention will be directed in the proper place.

Mr. S. M., aged 41 years, had been a patient of mine for two years for slight ailments, none bearing the condition present when I called to see him in December, 1897. At this time I found him suffering from an acute bronchitis and complaining of "rheumatic" pains in the calf of the right leg, as well as a dragging sensation and feeling of heaviness and lifelessness in both legs. The bronchitis soon disappeared and the patient's lungs were normal, as was the heart. He has always been fairly healthy, having escaped all the exanthemata of childhood. There is a history of three convulsions in his infancy, all ascribed to traceable errors of diet. When he was 12 years old, he fell from a heavily laden farm wagon into a newly ploughed field and the back wheels of the wagon passed over his abdomen at the umbilicus. Following this incident he was seriously ill for several weeks, but all the facts of the illness were not obtainable. He did not, however, suffer from any form of paralysis or bladder or rectal disturbance, and therefore it would appear that myelitis may be excluded. He recovered complete health, but always after this time experienced a sensation of stiffness of the erector spinae muscles, when he was greatly fatigued, and said that he felt as if there were an iron rod in his spinal column. He is one of a family of seven children; six of whom are living. Five are in good health. A sister is neurasthenic and has been for years a sufferer from ovarian neuralgia. His father had been a sufferer from locomotor ataxia for many years and died of intercurrent disease at 73. His mother died at 60 of carcinoma. His paternal grandfather died at 68 of phthisis, his maternal grandfather of capillary bronchitis at 88, his maternal grandmother of hemorrhage, and his maternal great grandmother of apoplexy at an advanced age. An older brother died of phthisis. The patient is unmarried, has led an exemplary life, is not addicted to the use of alcohol or tobacco, and there is no history of venereal disease. On examination there is no loss of co-ordination of the upper extremities which are in every respect normal. Station is good. The masseteric reflex (jaw jerk) can be readily elicited, but this being found frequently in health, is not of importance. The cremasteric reflex was much increased and elicited on the slightest provocation. Vision is 5/5 and there are no ocular changes. The pupils are somewhat large, $4\frac{1}{2}$ m.m., but respond actively to light and accommodation. The patellar reflex in the right leg is greatly increased. Ankle clonus can be elicited and the calf muscles are spastic. The foot is kept in a position of extension and slightly inverted. The left knee-jerk is also increased and the muscles of the calf are less tense than in the right leg. There is no ankle clonus. The finer movements can be executed with left leg (touching objects with great toe, etc.), but not with the right. The right leg unassisted can be placed across the left knee with difficulty. In walking the toes of the right foot drag the ground and the patient walks on the inner side of the foot. There are no signs of ataxia present. He was advised to use a cane in walking and was able to continue his business, that of book publishing, without interruption until March, 1898. In the blizzard of that date he was obliged to walk a long distance from his office to his home and suffered greatly from exposure to cold. From this time the spastic condition of the left leg became more marked, soon equalling the right and a condition of true spastic gait developed which was typical and which familiar condition I shall not describe at length. There was the usual tendency to tripping and he had several bad falls. The spasticity increasing, he was compelled in a few months to seek an invalid's chair (September 1899), but could still walk with great difficulty by grasping a chair for support. Sensation in the lower limbs continued normal and there was no involvement of the arms. A condition of edema developed in the paralyzed parts which was greatly benefited by massage.

There was no alteration of sensation save cramp-like seizures in the calves, worse at night, and some sense of formication at times. The tactile, thermal and pain senses were normal.

Up to this point and until December, 1899, the case pre-

sented a typical example of the symptom-complex spinal spastic paraplegia, and I believed I was dealing with this rare condition as a pure system disease. At this time the upper extremities showed signs of being affected. The patient first noticed this experiencing difficulty in guiding his pen while writing. The involvement was very rapid. The muscles were for a short time tense and the tendon reflexes were greatly increased. This condition gave way to a progressive wasting, beginning in the thenar and hypothenar eminences and advancing, fasciculus after fasciculus, until the whole muscular structure of the hand, arm and shoulder girdle, as well as the chest, had almost totally disappeared. For a number of months he was able to use his hands but with increasing difficulty. Along with the atrophy described a similar state soon obtained of the muscles of the head and neck. His upper arm could be spanned readily between the thumb and index finger. With the development of the atrophic condition, contractures of the hand appeared, giving rise to the characteristic claw hand. The upper arm rested tightly against the ribs, the lower arm was semi-flexed and in pronation, and could be placed in supination with difficulty. The involvement of the head increased the patient's pitiable state. When seated in his chair, a backward tilt of the head was assumed with the chin high in the air, and when efforts were made by the patient to move his head, they would invariably result in its dropping forward on the chest. This caused him many attacks of nervous dread on account of the sense of suffocation to which this position gave rise. Ability to move the head except to a slight degree laterally was quite impossible. About the first of March, 1901, bulbar symptoms appeared. They consisted in constant dribbling of saliva, difficulty in swallowing and marked interference with speech, which up to this time had been unaffected. The relaxed uvula hung low down and was constantly dripping with mucus. The tongue showed almost constant fibrillary twitchings, not worse when it was protruded. Swelling of the feet, before mentioned, had been present from an early period of the loss of power of the legs, and with the paresis of the upper extremities an edematous condition of the hands appeared. Sensation in the upper extremities as in the lower was practically normal. There were no areas of anesthesia, no loss of temperature sense, but the tactile sense was slightly dulled. The right leg and right hand respectively were first affected of the upper and lower extremities, but at the full development of the disease all the extremities were equally involved. The swelling of the hands and feet persisted until one week before death, when it disappeared rapidly. The patient died suddenly on the second day of July, 1901. The urine was examined repeatedly throughout the course of the disease and barring a slight albuminuria two weeks preceding death (but no casts were found) it had been normal. The urea estimation was also made several times with approximately normal results. Five careful estimations of the electrical reaction of the muscles to both the faradic and galvanic current were made. In the arms there was no apparent loss, either quantitative or qualitative, until the muscles had wasted completely, when no reaction could be obtained. In the legs no appreciable changes were observed. In this place I wish to mention the trophic lesions which were present in the hands and feet. Late in the autumn of 1900, after the arms were paretic, there was noticed a progressive enlargement, especially of the ends, but to some extent of the whole bone of the metacarpal, phalangeal and tarsal and metatarsal bones respectively. A considerable degree of edema was present and it was a difficult matter to differentiate between the swelling of the soft parts and the increase in size of the bones themselves. However, a few days before death the edema having disappeared, I was enabled to satisfy myself as to extent of the trophic changes. In health the patient had worn a seven and a quarter glove. Three days before death a measurement showed that he would have worn a nine and a quarter: a proportionate increase in size of the feet was apparent. Careful examination proved that there was no involvement in the long bones, the vertebrae or head, so that acromegaly or pulmonary osteo-arthritis were not to be considered. The latter was also excluded on the approximately normal condition of the patient's lungs.

The etiology of the condition from which this patient suffered may have had some causative relation with the fall from the farm wagon, although the number of years, which elapsed before the onset of the spastic symptoms, would tend to make this theory untenable. The exposure to cold furnishes, as in so many other cases of cerebro-spinal disease, some claim to etiological importance. For a number of years this patient complained of a peculiar stiff feeling in the back which, as we have said, gave rise to the sensation of an iron rod in his spinal column. It is important, however, to mention, that this was not a constant symptom, but only occurred after fatigue. The gait of the patient when I saw him in December, 1897, was not typically spastic, but there was a peculiar forward tilt of the body from the hips; the elbows were slightly projected from the body and there was a slight tendency towards tripping. By March, 1898, the full clinical picture of spastic spinal paraplegia had developed and this lasted until January 1899.

In this connection the statement of Bruns and Windscheid will bear repetition. These writers say it should not be forgotten that many diseases often reveal themselves for years by the spastic symptom complex, until finally a symptom which does not belong to it appears, and makes the primary disease known.

In this patient the involvement of the upper extremities gave excellent illustration of this point.

Again, primary spastic paraplegia is a very chronic and slowly progressive condition and this case progressed with comparative rapidity. Many cases observed among children (Marie) show complete arrest, and the patients are enabled to earn their livelihood and to live for many years, finally dying of intercurrent disease. Rare as primary spastic paraplegia is in adults, it is sometimes seen in general paralysis of the insane (Westphal).

It would appear that the pathologic process in the case we have described was at first limited to the lateral columns and that there was a final involvement of the anterior cornua at the level of the upper extremities.

The final picture was one of amyotrophic lateral sclerosis. The mode of onset in this case is very unusual. In the vast majority of cases the arms are first affected. Gowers says that the condition begins in the arms in nine-tenths of the cases.

As to the differential diagnosis, the condition is especially to be separated from syringomyelia and multiple sclerosis, although a number of other conditions might have presented some symptoms in common; yet others, which would have been absent, which have excluded these diseases.

Besides syringomyelia and multiple sclerosis, chronic myelitis, pachymeningitis, cervicalis hypertrophica, the spinal form of progressive muscular atrophy, the ataxic paraplegia of Gowers (combined lateral posterior sclerosis) peripheral polyneuritis might present some symptoms in common, and hysteria must also be considered.

Multiple sclerosis it may be said cannot be positively excluded with certainty. However, typical cases present, besides the characteristic symptoms of amyotrophic lateral sclerosis, scanning speech,

intention tremor and optic atrophy. When the areas of sclerosis are limited to the lateral columns, the symptoms are identical and a differential diagnosis is impossible until the multiple sclerosis makes further localization.

Syringomyelia also presents excessive tendon reflexes and amyotrophy of the upper limbs, but the muscular atrophy is usually localized and not at all symmetrical. There is also present a widespread non-typical hemianesthesia and more especially analgesia. Atrophic disturbance such as perforating ulcer, whitlows, dropping off of the phalanges, and readily fractured bones belong under this picture.

In the *combined forms of lateral and posterior sclerosis*, symptoms of incoordination are characteristic. The lower extremities, when the disease occurs in adults, are ataxic and parietic. The walk is uncertain and swaying. Paresthesia occurs together with weakness of the sphincters and loss of sexual power.

Chronic myelitis sometimes presents atrophy of the arms and spasms of the legs, but the disturbances of sensibility are much greater and especially the functions of the bladder and rectum.

In *transverse myelitis* there exists the ascertainable cause of the condition and the upper boundary of the paresis is stationary. Paraplegia is developed more rapidly and completely, there is vesical weakness and bed-sores appear. In this disease the condition of the reflexes (in this classification I quote Hirt) depends upon: 1. The state of the reflex arc in the spinal cord, and, (2) On the state of the fibres coming from the brain which have probably an inhibitory function. If the reflex arc is normal, but the conduction of the inhibitory fibres is interrupted, then the corresponding reflex is increased, while if the reflex arc is diseased, the reflex is lost, no matter whether the inhibitory fibres are intact or not. This holds for the skin as well as the tendon reflexes.

In case of lumbar myelitis, not only the skin but the tendon reflexes are diminished or lost in the lower extremities. Those concerned are the patellar reflex, the reflex arc of which corresponds to the cord between the second and fourth lumbar nerves and the tendon of Achilles reflex which corresponds to the first sacral nerve. The cremastic and abdominal reflexes are at the level of exit of the first lumbar and that portion of the cord between the fourth and seventh dorsal nerves respectively. On the other hand, in a dorsal or cervical myelitis a marked reflex action begins, caused by the inhibitory reflexes being cut off. For localization of myelitic processes neither bladder nor rectal symptoms can be used. They are always present at whatever level the lesion may exist.

Peripheral polyneuritis is characterized by amyotrophic symptoms in the arms with disturbances of sensation, but there is a decrease in the tendon reflexes. The spinal form of progressive muscular atrophy always begins in the muscles of the hands and is never attended by disturbances of sensation or by spasms of the legs.

The treatment of the case which I have described represents a series of disappointments.

Electrotherapy and massage seem to give some degree of comfort for a time. General tonic treat-

ment was pursued with indifferent results throughout the course of the malady. The greatest benefit was derived by the patient from the use of salt water baths early in the malady, and of the thermal cabinet later in the disease. After these baths the spasticity would be remarkably lessened for several hours, but nothing in the way of permanent relief could be obtained.

A CASE OF STERILITY IN THE MALE, DUE TO DEAD SPERMATOZOIDS—CURED BY GALVANISM.

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Chicago Medical Society.

It is generally believed that whenever lifeless spermatozooids are found in the semen, soon after ejaculation has taken place, the man is irreparably sterile (*impotentia generandi*). For this reason I believe the following case not to be without interest:

Last fall, a healthy looking, well-built woman, aged 30, called on me and asked to cure her sterility. She stated that she was married about 11 years and had always enjoyed fairly good health. One sister, married 8 years, was the happy mother of 3 healthy children, while another sister married 5 years was still barren.

She had been treated by several prominent gynecologists. The nature of the treatment she did not know, but consisted, no doubt (judging from her description), of tampons, antiseptic applications, etc.

I proceeded to systematically examine the woman. Nothing abnormal could be discovered save a sear in the *linea alba*. She explained that years ago a laparotomy was performed on her at Michael Reese Hospital—for what purpose Heaven only knows (for she claims to have been in good health all the time). The mucus in the cervix is faintly acid. Urine: No albumen or sugar.

The woman was told to send her husband.

He visited me the next evening. The following notes are copied from my record slip:

"Mr. J. F. Age, 32. Nativity: Russo-Poland. In U. S. 20 years. Religion: Moslem (orthodox). Business: Owner of ladies' tailoring establishment. Habits: Smokes 2-3 cigars a day. Drinks very little, has never masturbated, and previous to his marriage had but few times illicit intercourse with neighboring women. He never dealt with a prostitute. Since marriage, he never copulated more than a dozen times each month, if anything, less often. His wife is frigid, he enjoys the act, but is not very passionate. Can complete the act without difficulty. Patient looks anemic (conjunctiva and lips not blanched). He is suffering from a mild form of cerebro-spinal exhaustion (neurasthenia).

He denies syphilis, but tells a story about some discharge from the urethra, when single. From the conversation it cannot be made out whether it was an attack of gonorrhea, diurnal pollutions or prostaticorrhea. Penis and testicles well developed. Was told to bring specimen of semen."

So far the notes. The semen asked for was brought by his wife the following Saturday at 9.30 A. M. Sexual congress had taken place at 8.45 A. M., 45 minutes before. A drop was at once examined on the slide. Three or four spermatozooids were found in each microscopic field—but dead. There was not the slightest perceptible motion, even after the addition of saline solution. The spermatozooids were well formed, though. No pus cells were found in the semen.

I felt like abandoning the case, but fearing to commit an indiscretion, I told the woman that I want to see her

husband for further instructions. He came and was advised to have no intercourse for three months. Tonics were prescribed and hydropathic measures instituted.

An examination of the patient's semen after the lapse of that time showed no alteration in the man's condition, nor was even the number of the lifeless spermatozooids increased.

During the interval I have searched through many treatises on the genito-urinary apparatus, but found little illumination and less consolation.

I told the man the case looked hopeless, but that I would try electricity. He consented just like a drowning man grasping a straw. I admit that I simply lacked the moral courage to tell the man that nothing could be done.

The treatment consisted of negative, galvanic applications to the prostatic urethra, 5-12 milliamperes, each sitting lasting from 5 to 8 minutes. The indifferent pole was placed on the back. Twelve treatments were given, on the average of about two a week. After that a drop was again examined and I had hardly brought the picture in proper focus, when, to my astonishment, I saw thousands of spermatozooids wiggle and cross the microscopic field as lively as any I have ever seen.

My patient, who has become accustomed to look through lenses, did not believe me, looked himself, saw the spermatozooids and exclaiming: "I see them, I see them!" began to cry like a child.

His wife was examined by me a few days ago. I have every reason to believe that she is pregnant.*

The only explanation I have to offer is that Mr. F. really had an attack of specific urethritis which left his urethra in a damaged condition or perhaps inflamed ejaculatory ducts—not noticeable by ordinary physical examination and that the galvanic current produced a cure. Or was there a chemical abnormality in the tissues, killing the fertilizing principle of the semen, altered by the electric current?

I appreciate that it is not likely for a subacute inflammation to exist eleven years without restitution. Why the sudden increase in the number of spermatozooids? The limited literature at my command offers no explanation. I do not believe that scientists know all there is to be known about these phenomena.

I deserve censure for not having made an endoscopic examination of the man's urethra and for having omitted to instill a few drops of silver solution in the posterior urethra. The purpose of this article is to elicit opinions from competent surgeons.

General Staphylococcic Septicemia.—In 1895 Etienne reported two cases of general staphylococcic septicemia without visceral manifestations or dominant localization. At a recent meeting of the Medical Society of the Paris Hospitals (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 13, 1901) he reports five more cases. These are divided into the very acute, the rapid, and the prolonged forms of the disease. Three of the observations come under the very acute heading, due as a rule to secondary infection with staphylococci. Death occurs inside of a week. Under the rapid form one case is mentioned, which recovered after fever of over a month's duration. The last case was prolonged, lasting many months, followed by recovery. Bacteriological examination of the blood in every case gave pure cultures of staphylococci. In all cases there were great prostration, pallor, cyanosis, fever, irregular and rapid respiration and circulation; the liver and spleen were occasionally enlarged, and nervous symptoms sometimes develop. When death does not follow, the convalescence is very slow, improvement only becoming noticeable after some time. [M. O.]

* Since writing the article the woman was again examined and quickening admitted. I could not make out fetal heart sounds, but heard the characteristic bruit.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended November 30, 1901:

SMALLPOX—United States.

			Deaths.
		(Three.)	
CALIFORNIA:	San Francisco	Nov. 10-17.	1
ILLINOIS:	Chicago	Nov. 16-23.	4
INDIANA:	Evansville	Nov. 16-23.	2
LOUISIANA:	New Orleans	Nov. 16-23.	10
	Shreveport	Nov. 16-23.	3
MASSACHUSETTS:	Boston	Nov. 16-23.	37
	Cambridge	Nov. 16-23.	3
	Chelsea	Nov. 16-23.	1
	Everett	Nov. 16-23.	1
	Newton	Nov. 16-23.	1
	Somerville	Nov. 16-23.	1
MINNESOTA:	Minneapolis	Nov. 9-23.	9
MISSOURI:	St. Joseph	Sept. 1-Oct. 31	80
NEBRASKA:	Omaha	Nov. 16-23.	1
NEW JERSEY:	Camden	Nov. 16-23.	1
	Jersey City	Nov. 19-26.	9
	Newark	Nov. 18-25.	25
NEW YORK:	New York	Nov. 16-23.	6
OHIO:	Ashtabula	Nov. 16-23.	1
	Cincinnati	Nov. 16-23.	3
PENNSYLVANIA:	Allegheny City	Nov. 16-23.	2
	Lebanon	Nov. 16-23.	2
	Norristown	Oct. 12-Nov. 23	39
	Philadelphia	Nov. 16-23.	46
TENNESSEE:	Nashville	Nov. 16-23.	1
UTAH:	Salt Lake City	Nov. 9-23.	4
VERMONT:	Burlington	Nov. 16-23.	1
WASHINGTON:	Tacoma	Nov. 9-16.	1
WISCONSIN:	Green Bay	Nov. 17-24.	6

SMALLPOX—Foreign.

ARGENTINA:	Buenos Ayres	Sept. 1-30.	93
BRAZIL:	Pernambuco	Oct. 1-15.	74
CANADA:	Nova Scotia, Halifax	Nov. 16-23.	10
COLOMBIA:	Cartagena	Nov. 4-11.	3
	Panama	Nov. 11-18.	125
FRANCE:	Nice	Oct. 24-31.	2
	Paris	Nov. 2-9.	4
	St. Etienne	Oct. 18-31.	1
GREAT BRITAIN:	Glasgow	Nov. 9-16.	1
	London	Nov. 2-9.	297
RUSSIA:	Moscow	Oct. 26-Nov. 2	16
	Odessa	Nov. 2-9.	5
	St. Petersburg	Oct. 26-Nov. 9. . . .	4
	Warsaw	Oct. 26-Nov. 2. . . .	1
SPAIN:	Malaga	Oct. 26-Nov. 2. . . .	1
URUGUAY:	Montevideo	Sept. 21-Oct. 12 . . .	15

YELLOW FEVER.

BRAZIL:	Pernambuco	Oct. 1-15.	1
MEXICO:	Merida	Oct. 26-Nov. 2, several cases.	
	Valladolid	Oct. 26-Nov. 2, several cases.	
	Vera Cruz	Nov. 9-23.	41

CHOLERA.

INDIA:	Bombay	Oct. 22-29.	1
	Calcutta	Oct. 12-26.	55
	Madras	Oct. 19-25.	40
JAVA:	Batavia	Oct. 12-19.	25

PLAGUE—Foreign and Insular.

GREAT BRITAIN:	Liverpool	Nov. 7.	1
INDIA:	Bombay	Oct. 22-23.	191
	Calcutta	Oct. 12-26.	36
	Karachi	Nov. 13-20.	20
RUSSIA:	Odessa	Oct. 31-Nov. 9. . . .	1
HAWAIIAN ISLANDS	Honolulu	Nov. 8-10.	1

NEUROLOGISCHES CENTRALBLATT.

October 1, 1901.

1. Fecal Vomiting in Hysteria. L. BREGMAN.
2. Stab Wound of the Third Left Dorsal Nerve and Spinal Ganglion. A. WALLENBERG.
3. A case of Injury to the Pons Without Injury to the Skull. S. ORLOWSKI.

1.—Bregman reports a case of fecal vomiting occurring in a girl of 23 who presented the following symptoms: Tympanites, pain, vomiting, and for 10 days no fecal evacuation. The patient was etherized and examined, when all the phys-

ical signs promptly disappeared. The history showed that they developed after a fall in the street, consisted at first of spitting of blood, and then intestinal disturbances. During 6 months' observation in the nervous clinic she had a number of convulsions without complete loss of consciousness. She was capricious, egotistic and impatient. The abdomen remained distended, fecal evacuation could not be obtained by any form of purgative or enema; she vomited frequently food, blood or feces, although the last was sometimes absent from the vomit for weeks at a time. At the end of this time as a result of violent straining the patient had prolapse with copious bleeding. This produced a state of partial collapse, and the hemorrhage was only controlled by cauterization under narcosis. As the prolapse persisted it was resected, and the patient recovered completely, having normal evacuations of the bowels. She left the hospital, but soon returned suffering from disturbance of urination. Finally she developed a new prolapse of the rectum and became extremely anemic; there was profuse hemorrhage from the bowels, and the condition was very threatening. In addition to the symptoms mentioned she had from time to time aphonia, and there can be no question apparently that the case was one of hysteria. [J. S.]

2.—The patient, a policeman, was stabbed 3 times in the back. He had dyspnea, and expectorated a small quantity of blood; he complained of a feeling of intense anxiety in the region of the heart. Careful study of the case showed the existence of a narrow oval band of anesthesia on the anterior side of the left arm, indicating some injury to the third nerve. [J. S.]

3.—A man of 21 was brought to the hospital with a history that he had been injured in a quarrel on the street. A stab wound was found on the back of the head about the level of the external ear. The patient had paralysis in the right facial region, evidently due to injury to the peripheral portion of the facial nerves. There was slight paralysis of the abducens; convergent strabismus, and diplopia. There was loss of hearing on the right side; inability to stand or sit; complete loss of coordination in the right arm and leg; normal movements in the left arm and leg; anesthesia of the left half of the trunk and the left extremities. The right knee reflex was slightly diminished; the skin reflexes were normal. The patient improved slowly and the symptoms gradually disappeared, so that in a month he could stand and the sensory disturbances were less. The changes in the motor nerves of the eye and in the facial were permanent. It appears likely that the knife did not injure the skull but produced concussion involving the medulla oblongata. [J. S.]

Symphysiotomy with Living Child.—Professor G. Fleury reports a case of symphysiotomy performed upon a tiny woman of 20. She was 130 cm. high, and had already been in labor for two days. The face presented at the superior strait, the diameter of which was undoubtedly under 7 cm. A bag was inserted in the vagina and left inflated for two hours, when it was expelled, the amniotic fluid following. Symphysiotomy was done in three minutes, one incision opening the pelvis. Forceps were then applied without effect, and version was attempted in vain. Then the cord stopped beating. Finally the head was forcibly flexed, and the child born with forceps. He seemed dead, yet recovered in 10 minutes. The symphysis was sutured with cat-gut. For three days she showed no symptoms, then signs of septicemia appeared. She recovered, however, a week later, and left the hospital three weeks after the operation. Both mother and child are now well. Fleury states that he considers the after treatment the cause of the excellent results which he has obtained in performing symphysiotomy. (*Bulletin Medical*, June 22, 1900.) [M. O.]

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Penetrating Wounds of the Heart.—Nothing better illustrates the advance which surgery has made in recent years than the modern treatment of penetrating wounds of the heart. In another column of this issue of the Journal will be found a most interesting and instructive paper by Dr. Nietert, of St. Louis, who reports a case of stab wound of the left ventricle in which he exposed the heart and sutured the wound. It is unfortunate that this patient should have died of that most distressing post-operative complication, suppression of urine. The case presents many unique symptoms; in the first place the pleura was not injured and the patient at the time of operation was unconscious, a condition resulting from pressure upon the heart exerted by the blood in the inelastic pericardium. It is interesting to note that after the pericardium had been emptied the patient immediately regained consciousness and was able to converse with the operator. Nietert presents briefly the reports of twenty-two other cases of penetrating wounds of the heart, all of which were operated upon and seven of which recovered. Since ninety per cent. of such wounds which are not operated upon result in death, the mortality of the cases in which operative interference has been undertaken is very encouraging. This paper of Nietert's brings before us a subject of the utmost interest to all medical men, and we regret to say that there has been little written upon the subject by American surgeons.

Splanchnoptosis.—When Glénard, in 1884, wrote his classical paper on enteroptosis, he struck deeper than he thought. As we see it in these later days, his paper ranks in importance with the papers of Goodell on Premature Separation of the Placenta, Breisky on Kraurosis Vulvæ, and Hodgkin on Pseudoleukemia. At once the attention of the acute clinicians was directed to the new etiological and clinical factor, and many of the obscure pelvic and abdominal manifestations began to be traced to their point of origin. Gastropoptosis, splanchnoptosis, or enteroptosis, whichever term we may choose to select, assumed immediately an important place in clinical medicine, and this condition is now always looked for in individuals presenting

more or less protuberant abdomens, or who complain of gastrointestinal, pelvic, or reflex manifestations of obscure etiology. In the interesting and scientific paper by Dr. Robinson, which has been running through recent numbers of the Journal, we have an exceedingly satisfactory exposé of the whole subject. The author condenses the etiology of splanchnoptosis into the three factors of relaxation of the abdominal wall; elongation of the mesenteries with distal movements of the viscera and mesenteric insertions; and gastroduodenal dilatation resulting from obstruction in the colon and other portions of the bowel subsequent to prolapse of the intestine. An associated obstruction of the splanchnic circulation with irritation of the pelvic plexuses of sympathetic nerves will account for the diverse reflex manifestations that are attendant upon the disease. The suggestions of Dr. Robinson as to the treatment of this complicated condition are most valuable and timely, and the entire paper is one well worthy of careful perusal.

Adami vs. Koch.—In the *Canadian Journal of Medicine and Surgery*, for November, 1901, Adami publishes a letter in which he refers to the habit that Koch has of neglecting to give credit to observers who work along the same lines that he himself does. Adami refers to a paper which he read at the meeting of the Canadian Medical Association, at Toronto, on August 30, 1899, in which he claims to have thrown doubt upon the frequency of infection with tuberculosis through milk. This paper was published in the *Canadian Journal of Medicine and Surgery*, for December, 1899, and in the **Philadelphia Medical Journal**, for December 30, 1899. In an editorial in the *Canadian Journal of Medicine and Surgery*, for November, 1901, it is shown that while Adami's position, in 1899, is not identical with Koch's position concerning the transmissibility of bovine tuberculosis to man, in 1901, yet Adami deserves credit for throwing doubt upon the frequency of the transmission of tuberculosis from cattle to man. We have reread Adami's paper and note that he asks this question: "If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human

race?" In answer to this question, the author points out that while the consensus of opinion requires an affirmative, there is a very small amount of reliable evidence upon which to base this opinion. He distinctly stated that cattle were relatively insusceptible to tuberculosis from human sources. But, after referring to the work of Still, Demme, the Cattle Commissioners of Massachusetts, Ernest and Ollivier, he concludes the discussion of this question with the following statement: "Thus the evidence, while not absolutely convincing, is strongly in favor of the view that tuberculosis can be conveyed through the milk of animals extensively diseased, and this being the case we cannot sit with hands folded and regard the extension of bovine tuberculosis with indifference, but must make such regulations as will diminish the possibility of such infection." While Adami deserves credit for his work, his contention evidently was not the same as that of Koch and he may be very glad that it was not, because Koch's opinion is by no means universally accepted. Koch's position in the scientific world has caused his statement to be accepted literally by many of the unthinking and thus he has delayed the advance in the battle against tuberculosis. On the other hand, a man in such an assured position as that held by Koch can afford to give credit where credit is due; but he cannot afford to ignore the work of such a man as Theobald Smith, for example. It would be no discredit to Koch to acknowledge indebtedness to American observers, if not for actually pointing out new lines along which to work, at least for having conducted similar experiments successfully and independently.

The Boo-Hoo Fever.—The annual report of the Surgeon-General of the United States Navy is an interesting volume, and not the least interesting part of it is a paper by Dr. George A. Lung. This surgeon was medical officer with the First Regiment of Marines in the Peking Relief Expedition, and he has submitted a report that is a contribution to genuine literature. Dr. Lung has the descriptive talent well developed; and we doubt not that some future historian of war, with an eye for realism not unmixed with the picturesque, will seize upon his narrative as a bright particular chapter in the annals of the Chinese episode.

When we consider for a moment what it was that Dr. Lung saw and described, we can readily appreciate that there was much to engage his facile pen. The long and exhausting march over the heated plain in a strange and distant land, and the unknown hazards with a cruel and relentless foe, were such as to try the health and rack the nerves of even the most buoyant of American troops. The

peculiar circumstances, the extreme hardships and the unknown perils of the expedition conduced to some unusual affections, which Dr. Lung describes. Most noteworthy among them perhaps was the characteristic heat exhaustion, with subsequent derangements of the nervous system.

This heat exhaustion, in spite of the untoward circumstances, does not appear to have been of a severe type. The temperature of the atmosphere on some days was as high as 104°, and the country was ill supplied with shade or with pure water, and yet the soldiers succumbed in but few instances to genuine heat stroke. The affection rather was a heat exhaustion, from which prompt and even surprising recovery was the rule. The symptoms were extreme fatigue, mental depression, weak circulation and partial or complete unconsciousness. In some few cases there were convulsions, a hard pulse and delirium. The onset was sudden, the patient often falling in his tracks. The most remarkable feature was the rapidity with which the victims recovered with practically little treatment. With a little rest and a little assistance the sick men would be taken along; by night they would be better, and in the morning they would take their places in the ranks. Djarrrhea and emaciation were common on the march.

Dr. Lung observed a peculiar emotional instability in these patients. There was a marked tendency to weep. When the patient applied for treatment and began to discuss his symptoms, his lip would tremble and tears would run down his cheeks, all the while he was conscious that he was acting rather ridiculously. The paroxysm was uncontrollable. Dr. Lung likened it to the so-called "boo-hoo" fever which is said to occur in the Hawaiian Islands. We could readily imagine that the depressive emotions might make great havoc among troops under such trying circumstances. Melancholia and nostalgia are not uncommon military psychoses; and to Dr. Lung we owe the description of another, but one which fortunately had neither a high mortality nor many severe or lasting consequences.

A Question of Responsibility.—We publish elsewhere a newspaper criticism of the medical profession. The *New York Times* is a thoroughly sane and responsible journal and its comments are worthy of note. It is rather difficult, however, to understand what the *Times* would have the medical profession do in reference to the prevalence of tetanus after vaccination and after the use of antitoxin for diphtheria.

Apparently it thinks that there should be a great medical convention called at once to deliberate on

the subject. This is not our idea, nor the idea of those best qualified to judge of this grave matter. The medical profession is thoroughly alive to the gravity of the situation, but it also recognizes thoroughly that investigation can be conducted only by experts, and that the process must be slow and careful in order to be complete and convincing. This is a matter for laboratory work, not for medical conventions. The fault in the St. Louis laboratory was the fault of one or of a very few persons, and in no wise discredits scientific medicine. On the contrary, it proves both the doctrines and the practice of preventive medicine when these are properly applied. The medical profession is no more responsible for that individual fault than for the fault of a drug clerk who dispenses a poison by mistake.

We agree with the *Times*, however, that public confidence must be restored by a full investigation and criticism of all these cases, and we believe the way is already being led by those most competent to do so.

Phthisophobia.—According to a newspaper report a stir has been raised in New York over the refusal of the immigrant authorities to admit a tuberculous Irish immigrant. A Philadelphia lawyer, it is alleged, will endeavor to bring the case before the United States Supreme Court. If he does so, we have little doubt how it will be decided. The question involves the abstract right of this country to exclude undesirable immigrants, and the Supreme Court is not likely to decide against such a natural right. As a purely legal or academic question, we should suppose there was but one solution of it possible.

Practically, however, there are many difficulties in the way of controlling what may be called undesirable immigration. We referred to some of them last week. There are certain considerations of humanity, at least, that should be entertained, and there are problems in the etiology, pathology and diagnosis of disease that will tax the capacities of the average immigrant commissioner beyond reason.

We are promised much legislation by Congress on the subject this very winter, but all the legislation in Washington cannot convert an immigrant bureau into a college of medicine. To diagnose individual cases of disease may be easy enough, but to detect heredity and, above all, to break up families, are not easy or nice problems.

An irate medical critic in New York has coined a new word. The crusade against tuberculosis is dubbed by him "phthisophobia". For him the fear of the tubercle bacillus has become a craze, and the claim that pulmonary tuberculosis is a "dangerously

contagious" disease, is an exaggeration. There may be some thoughtful heads in the profession who will agree with him that the pendulum of opinion has swung rather far.

The Fetal Heart.—Considerable interest cannot fail to attach to the clinical observation made not long since by the eminent Italian obstetrician, Professor Rivolta. It was his good fortune to be present at a birth of more than usual importance from a scientific point of view. The woman, who was suffering from placenta prævia, the hemorrhage occurring at the fifth month of gestation, was hastily delivered of an apneic and exanimate fetus. The fetal thorax was opened immediately and the pericardial sac freely exposed. A curious discovery was then made which, if it be found to represent a normal state of affairs, would revolutionize in part our knowledge of the fetal circulation. It has generally been believed that, with the exception of the two characteristic fetal conditions of patent foramen ovale and the guiding Eustachian valve, the fetal heart behaves, when in action, precisely as does the adult heart, that is, as pertains to its method of contraction. Until compelled to leave the fetus to attend to the after-treatment of the mother, Professor Rivolta was privileged for about the space of eight minutes to observe the pulsations of the exposed fetal heart, and was surprised to note that the contractions of the four heart-cavities were not as in the adult. The rate of pulsation, when first noted, was twenty-four beats per minute, and at the end of the observation this had fallen to seventeen beats per minute. The order of rotation was as follows: Beginning with the pause, the right auricle contracted first, being immediately followed by the left auricle, the wave of contraction in both cavities moving from above downward; a brief pause followed and then, the auricles still being in systole, occurred the contraction of the right ventricle and immediately afterwards that of the left ventricle. The cardiac impulse began with the ventricular systole and reached its maximum at the height of the systole, that is, when the ventricle was empty. The heart was practically bloodless during the time of the observation; hence it is probable that the production of the impulse did not arise from the amount of blood in the ventricular cavity, but was purely muscular in origin, a contraction of the fibers of the ventricular walls. Notwithstanding this absence of blood, the heart showed the same impulse, the same rotation on its longitudinal and transverse axes, and the same rising of the apex and descent of the conus arteriosus and base of the aorta, as if there were the usual full blood-stream in the cardiac cavities. It is unfortunate that the condition of the mother pre-

vented a close observation of the fetal heart until complete cessation of its action. Aside from the interest attached to an actual observation of a pulsating heart for a comparatively protracted period, the unusual sequence of events, unusual as far as our knowledge goes, is most suggestive. We have been informed by eminent embryologists that but little is known concerning the action of the fetal heart other than the points already mentioned, and that it has always been believed that the contraction of the cavities followed the rule in the mature heart. The observation of Professor Rivolta will doubtless stimulate other obstetricians to a closer observation of this matter. It may be that many of the prematurely discharged fetuses of five-and-a-half to six months, apparently giving no signs of vitality, would reveal for short periods after birth cardiac contractions which would well reward the time given to the examination of their thoraces.

Chicago has established an unevitable reputation as a suicide center. Her population, 1,698,575, represents one forty-fifth of the population of the United States, but her suicides for the past year were 385 as against 5340 for the whole country in 1900. Hence, Chicago, having only one forty-fifth of the population had one-thirteenth of the suicides of the nation. According to the *Philadelphia Press*, the suicide-rate for Chicago is four times as great as that for London. Life in all its phases is fast and furious in Chicago, and these melancholy figures help to tell the story.

Current Comment.

THE HEALTH OF OUR TROOPS.

With reference to the subsequent sanitary history of our troops, I again point with pride to the reports in the present volume relating to health conditions in the United States, and especially in our island possessions. I believe that new levies of troops serving in a tropical country have never, in the history of the world, had so good a health record as that shown by these reports for the troops stationed in the Philippine Islands, in Cuba, and in Porto Rico. My recent inspecting trip to the Philippine Islands has convinced me that when proper sanitary regulations are enforced, the health of troops stationed in these islands will be quite as good as if they were stationed in our own "Gulf States." I would say further, with reference to this trip, that I found wherever I went well-equipped hospitals, ample and efficient medical attendance, and an abundance of medical supplies of all kinds.

—Report of The Surgeon-General, U. S. A.

MORTALITY IN THE CONCENTRATION CAMPS OF SOUTH AFRICA.

The death rate of these camps has given rise to somewhat harsh criticism of the policy of the British Government in establishing the same, and of its assumed neglect

in not keeping them in a good sanitary condition. The mortality is stated to be excessively high; indeed, among children, if accounts be true, appalling.

The *London Daily News*, a journal of pro-Boer sympathies, gives a most ghastly description of the state of the camps, and the British public seem inclined to take up the matter and to insist upon a thorough investigation.

Manifestly, the question as to how to dispose of the Boer women and children, during the progress of the war, is a most difficult one for the British authorities successfully to solve; but certainly every effort should be made to render these camps as healthful places of abode as circumstances will allow.

—The Medical Record.

THE VACCINE SCARE AND MEDICAL RESPONSIBILITY.

In view of the incalculable injury which has been done to the cause of progress in preventive medicine by the widespread popular distrust of vaccine virus and antitoxin sera resulting from the occurrence of tetanus and less dangerous diseases in those vaccinated and inoculated, the apparent apathy of the medical profession is difficult to understand. It would seem that every consideration of professional pride and business interest should have brought together the physicians of every community of this country and Europe to study the subject, investigate the essential facts, and take such steps as are best calculated to restore public confidence on the only basis on which it can rest secure—a belief that the physicians understand the subject and have adopted measures to exclude from use by reputable practitioners organic preparations which are open to suspicion. If they have done this, or taken any steps in that direction, the public has not heard of it.

This condition of affairs calls for immediate action and authoritative declaration by the societies representing the medical profession. If the growing popular distrust of these organic preparations cannot be checked and confidence restored, the most beneficent protective agents known to science will be so thoroughly discredited in the popular esteem that incalculable evils will follow. It is not a momentary sensation which will subside when some new fad catches the popular fancy. Those who think so are living in a fool's paradise. To correct the mischief already done, and which should never have had a beginning if the medical profession had done its duty in the matter, will take a good deal of time and much hard work.

—The New York Times.

TRAGEDIES OF A GREAT CITY.

The report of the Coroner of Chicago for the twelve months ending November 30 reveals some of the tragedies of which a great city is so prolific a source. In the course of the official year the Coroner was called upon to investigate 4841 deaths, in 2419 of which inquests were found unnecessary. The leading causes and the number of sudden or violent deaths ascribed to each are shown in the following table:—

Suicides	385	Elevator accidents	27
Railroad accidents.....	290	Suffocation	29
Falls	206	Lockjaw	15
Homicides	103	Accidental and undetermined drownings	135
Street car accidents	72	Accidental shooting	11
Burned	98	Machinery accidents ...	20
Accidental and undetermined drownings	135	Lightning	12
Accidental and undetermined asphyxiation ..	60	Accidental shooting	11
Heat prostrations	38	Kicked by horses	10
		Scalds	43
		Hydrophobia	8

—The Philadelphia Press.

Correspondence.

LET THE BUYER BEWARE.

By HENRY LEFFMANN, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

The tendency toward paternalism in our government is shown pretty clearly in the laws against food adulteration. Not only are the texts of the acts specifically restrictive, but the interpretation put on these texts by commissioners and judges mostly inclines toward a stringency which the community at large neither asks for nor appreciates. It may be a question whether the promoters of such laws and rulings are not going too fast; in other words, whether a much higher responsibility should not be put upon the public, especially as to the importance of discretion in the matter of price. "*Caveat emptor*," "let the buyer beware," is an established maxim of law and a wise one; the person who pays the lowest price cannot complain if the lowest quality is furnished. Indeed a very large proportion of common food adulterations is brought about by the desire of the public for so called cheap products. In most cases these are cheap only in name. It is unfortunately true, that a high price is not necessarily a guarantee of high quality, but nevertheless the careful and discriminatory purchaser can avoid to a great extent deception and imposition.

We are led to make the above observations by the reading of a report of one of the State Experiment Stations, from which we learn that some of the cheap baking powders have been found to contain about twenty-five percent of ground rock (somewhat similar to soapstone). There can be no question of the dangerous character of the adulteration, yet its existence and continuance are dependent on the thoughtlessness or indifference of buyers. There are high class baking powders in the market made by responsible firms, and there is no reason why the inferior grades made to "raise the dough" only in the slang sense should meet with sale. Even when the ground rock is not present, almost all of the cheaper powders are found to be inferior in gas producing power upon which the value of the powder depends. Here is one point at least in which the cream of tartar powders surpass the alum and phosphate powders.

COLLECT YOUR FEES IN ADVANCE.

By G. G. WHITE, M. D., and W. A. MILLER, M. D., of Elkader, Iowa.

To the Editor of the Philadelphia Medical Journal:

A case just settled in the District Court, Clayton Co., Iowa, shows wantonness in forensic medicine. The plaintiffs had rendered medical services to the defendant who refused payment on the ground that the bill was ambiguous and that he was overcharged.

The defendant established as his defence that the services were of a confidential character and by statute found in Sec. 4608, Code of Iowa, plaintiff had no right to testify as to the nature of the malady until the defendant waived that right, which he refused to do.

As the services rendered were mostly for the treatment of venereal diseases, there was no way in which the doctors could have proven their bill or value of services. Attorneys for plaintiff advised settlement, whereby the physicians had to sacrifice part of their bill, the law not allowing the right to prove its valuation.

The above case is one to which we have been unable to find anything similar. We were ignorant as to the law not allowing us to prove our services. Our attorneys were unable to find a ruling in Court that would have given us this freedom, whereby we could have been allowed to testify as

to the valuation of our services in this case and collect our well earned fees.

We should be pleased to receive any light upon this point, or any knowledge relating to a similar case. Hereafter our fees for such services will be collected in advance.

NOTE ON A CASE OF TRUE EASTERN LEPROSY.

By MARION FREUND, M. D., of Itoselle, N. J.

To the Editor of the Philadelphia Medical Journal:

Some of the medical journals have had a good deal to say in one way or another about the hypothesis that the leprosy which is to be met with in Hawaii and elsewhere on the Pacific, is due to the eating of fish, more or less decomposed. May I say a word as to my own observations? They are not upon any extensive experience, but they are supported by those of others.

I do not believe the theory. I have had patients who had never tasted fish; and leprosy abounds in localities where fish is never eaten. More than this, it is seldom seen among certain tribes among whom fish is a staple of diet. Of course, I admit that some of the Hawaiian tribes are the most egregious liars, and as soon as a leper comes to understand that this malady is attributed to a fish dietary, he is none too slow to aver that he never has tasted of a morsel of the food. This is the syphilitic's plea over again! Still, I know that there are leprosy patients who have neither subsisted on fish, nor partaken of it to any extent; while there are others who seem to delight in decomposing fish, and who use ptomaines as a preferred condiment, who never have the disease.

I cannot believe the hypothesis, but if I may say it, I think that there is a bit of etiology to get hold of, though, perhaps, at the expense of broaching another hypothesis! At any rate, permit of a note on a case.

It was at Caygayan, P. I., April 1901. I had been treating more than one hundred and sixty cases of fever and ague among the natives, since February, and had had most excellent success, using sander eucalyptol in large doses. Quinia the patients stoutly refused, declaring that it was a poison. Before the American advent, Spanish practitioners, who had given quinia until the tinnitus aurium was manifest, had been assassinated on the plea that the peculiar ringing in the ears was "the making of insanity!" One morning a woman came to me to request a visit to her husband. She stated that he was "somewhere in," meaning that he was among the hills. I saw in a moment there was something odd about the case, and especially as she would not accompany me. She merely alleged that he had the fever and ague, and his business had kept him from home, "somewhere in," several months. She "wanted him cured, so that he might return." She was importunate, and I went. As I inquired my way, I was continually told that the man was known, and that he "had stinking feet." This was uttered in a significant way, but I gained no significance from it, even after I found the patient, and found that he had the intermittent very severely. He was in bed all alone in a hut, and after prescribing much the same as I had for others, I told him that if he would follow my treatment he would be out in a few days. "Then," I said, "come into the village and see me." On my return, I told the wife that she might expect him home inside of a week. For reply, she crossed herself, and fled.

It was hardly an hour before my man brought me in a ewer filled with water, and directed my attention to a sealed envelope, immersed in it. I took it out, shook off the water, and opened the soaking letter. It was from a priest, and begged that "even though I was so distinguished as to know that I could cure leprosy, to have mercy, and not let the cured man come to town." Leprosy? I sent for the woman. Yes, the man had it. He had been "somewhere in," banished for months; but—and O, the paths of

It!—she knew he had had the fever and ague before he was taken down, and—without any idea of treating leprosy—coveted the cure of the primary malady. The next two days were saints' days, and I did not travel; but on the third I journeyed to my patient's hut. I found that so far as the intermittent was concerned, he was "better than he had been in years." He continued the treatment, and was soon able to resume his wood-cutting. When I left the islands, though still isolated, he was hard at work, and it was said that his was the only case of leprosy that did not have the fever and ague complicating.

Contagious? I did not take it. I have my disbeliefs. But as for the hypothesis? In all cases of leprosy there are continued attacks of fever and ague. How far is this etiological? How far will the treatment of the intermittent overshadow the leprosy? And as for the Fish! Well, the leprosy patient, when isolated, is fed almost solely on fish and forbidden a vegetable diet!

Reviews.

A Text-Book of Surgery, by Dr. Hermann Tillmanns, Professor of Surgery in the University of Leipzig. Translated from the Seventh German Edition by Benjamin T. Tilton, M. D., Instructor of Surgery, Cornell University, and John Rogers, M. D., Instructor of Surgery, Cornell University. Volume 1, the Principles of Surgery and Surgical Pathology with 516 illustrations. D. Appleton & Co., New York, 1901.

The fact that Tillmanns' Surgery has passed through seven German editions indicates the popularity it has attained at home. It is already well known to, and valued by most American surgeons, as the third German edition was translated into English seven years ago. The text-book is issued in three volumes, the first of which, the subject of the present review, embraces not only the principles of surgery and surgical pathology, but contains chapters on diseases and injuries of special tissues, tumors, general surgical technique, and bandaging. Two sizes of type are used, the precise reason for which we are unable to discern, as many essential facts are given in the smaller, and much unimportant matter in the larger print. The subjects are treated in an unusually exhaustive manner, especially the chapter on anesthesia, from which we notice, however, the absence of medullary narcosis, but the effect of this completeness is marred by a promiscuous arrangement which resembles the construction of a German sentence. Hemorrhage is presented in four fragments, the control of bleeding during operations on page 53, the methods of arresting hemorrhage on page 92, hemophilia and bleeding under accidents during operations on page 62, and the varieties of hemorrhage together with its results on page 463 in the chapter on wounds of the soft parts; cellulitis separates inflammation of the veins from phlegmasia alba dolens; asepsis and antiseptics are discussed with the preparation of a patient for operation, and antiseptics are described together with the methods of applying dressings; and the subject of inflammation is sundered by injuries, healing, shock, and delirium tremens. The text is written in good clear English with only now and then a touch of Teutonicism. With a view to the American undergraduate certain words and phrases could be made clearer, such as sponges for "wipes," pyogenic membrane for "abscess membrane," non-jawed forceps for "forceps for holding bone," curetting for "scraping out," silicate of sodium for "water glass," contusions for "bloodless or subcutaneous injuries," and the strength of HgCl₂ should be expressed in parts instead of percentage. Many editorial notes could have been inserted, especially in the chapter on bandaging.

The work is copiously illustrated. Indeed, this profusion of pictures is excessive. Anthrax bacilli are depicted in 3 instances, anthrax threads in 3, anthrax spores in 2, anthrax cultures in 2, the microorganism of symptomatic

anthrax in 2, and tubercle bacilli in 4. Certain illustrations are used a second time; the following figures are identical: 255 and 335, 256 and 321, 260 and 299, 265 and 304, 351 and 379, 370 and 384, and 383 and 482. This does not detract from the value of the book, for the illustrations are all excellent, but it is sacrificing space to inflation.

Much that is obsolete has been eliminated from this edition, but we still find a detailed description of hospital gangrene, a full account of Lister's spray and his original dressing, and a reference to neurectasy for the cure of tetanus.

Tillmanns practices asepsis rather than antiseptics, operates by the dry method, does not use gloves or a mask, excises every chancre as early as possible, does not lay enough stress on the incision of punctured wounds, believes complete resection of tubercular joints in children should be given up, used dry dressings for skin grafting, and hardly gives Calmette's antivenine and the antitoxine of tetanus enough prominence.

The work infiltrates practical medicine more than American surgeries, teems with common sense, is fully flush with the times, and deserves a place on every surgeon's shelf.

[F. T. S.]

Pediatrics.—The Hygienic and Medical Treatment of Children. By Thomas Morgan Rotch, M. D., Professor of the Diseases of Children, Harvard University. Third Edition, Rearranged and Rewritten. Illustrated by Numerous Engravings in the Text and by Colored Plates. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. xxi, 1021.

The third or "new edition, rearranged and rewritten," is, as the author remarks in the preface, practically a new book. The most striking changes, those which catch the eye first, are a judicious pruning of the illustrations and the adoption of the "text-book" rather than the "clinical lecture" style of writing; these are to be heartily commended. The most extensive chapter, as in the former edition, and the one to which the majority of those who consult the book will turn, is the one relating to feeding, and Dr. Rotch writes here with the authority of a teacher and the earnestness of a pioneer. He advocates strongly the use of the milk-laboratory, and while the subject of home-modification is thoroughly diseased, yet its difficulties are perhaps unduly emphasized. In the section on the use of whey in percentage feeding, it would have been fitting to give credit to Westcott for his original work in this line. Congenital heart disease is given space commensurate with the growing importance of the subject, and the section on diseases of the blood is well up to the present status of knowledge. The author has chosen the skin-diseases treated of with a common-sense appreciation of the varieties seen in pediatric practice. In the way of adverse criticism, which is perhaps superfluous to a third edition, the value of the book would be greatly increased by a more extended discussion of the diseases of the nervous system with greater detail of treatment. We regret also to see so eminent an authority favoring, even in a qualified way, the use of phenacetin in pneumonia. The changes in this edition are such as will insure for it quite as hearty a reception as that accorded to its predecessor. [A. H.]

A Text-Book on Diseases of the Ear, Nose and Throat. By Charles J. Burnett, M. D. E. Fletcher Ingals, M. D., James E. Newcomb, M. D. With numerous illustrations. Philadelphia and London: J. B. Lippincott Company, 1901.

This volume, beautifully bound and printed, contains 715 pages, 220 of which are devoted to the ear. It represents a modern condensation of the system, edited some years ago by Dr. Burnett, and it, too, will be regarded as a standard work.

The first six chapters on the anatomy and physiology of the ear are written in a technical way, discussing the

subject thoroughly and clearly. Some stress is laid upon the development of the organ in embryo. Under Instrumental Examination of the Ear, the author says of catheterization of the Eustachian tube, "This is not easily done; but fortunately it is an operation rarely, if ever, needed, and should never be performed except by an expert in aural surgery." Also, "Inflation by Politzer's air-bag, like inflation of the tympana by the Eustachian catheter, must be used with the greatest caution. It is rarely needed as a therapeutic means and should never be applied except by an expert." Preference is given to the use of Selgele's speculum, a modification of which Dr. Burnett has invented.

The chapter on "Tests of Hearing," on Catarrhal and Purulent Otitis Media, and on cerebral complications are all excellent. The pages devoted to the "Role of the Middle and Internal Ears in the Mechanism of Ear Vertigo," show the author at his best. The operation of Incision, devised by Dr. Burnett for the cure of this condition, has given markedly good results. Blake's blood-clot method of closing the incision in mastoid operations, is recommended. The parts devoted to the Nose and Throat are clear expositions of the views and methods of their several authors. Many of the points in technique have been elaborated from their own experience and are spoken of in detail. The treatment of tuberculosis of the larynx includes the best of the methods of recent years. The author believes that creosote is a most valuable drug in this affection. [W. G. B. H.]

A Laboratory Handbook of Urine Analysis and Physiological Chemistry. By Charles S. L. Wolf, M. D., 12mo, 195 pages and index. W. B. Saunders & Co., Philadelphia, 1901. \$1.25 net.

Books of this class are fairly abundant, and cover about the same ground, differing principally in the extent of the descriptions and the character of the industries. The present work is of the brief type, but contains a large amount of practical clinical chemistry, physiological chemistry proper receiving but little attention. Good accounts are given of all the important methods of examining blood, gastric juice and urine, the last mentioned topic taking over half the book. It is to be regretted that since the term "glucose" is applied to the dextrose of dietetic urine, no attention is called to the fact that it is not identical with commercial glucose; in fact, the word "dextrose" does not occur in the index. The illustrations are not all of merit, but a well executed uncolored plate of absorption spectra, and a plate of Vogel's color scale, add value to the book. The literary style is satisfactory and the typography well done, but the index is scanty. [H. L.]

Partial Ophthalmoplegia with Measles.—Simonin (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 27, 1901. No. 27.) reports the case of a soldier, aged 21, with measles, in whom partial external ophthalmoplegia, dissociated and transitory, of peripheral origin, appeared on the third day, with the eruption. Double convergent strabismus was marked, with ptosis of the upper left eye-lid, and left sided diplopia. After five days these symptoms began to fade, and had disappeared by the twentieth day. Paralyzes are more common in measles than in any other of the infectious fevers; but as a rule they occur during convalescence. Simonin reported this case on account of its rarity. [M. O.]

Symmetrical Adenolipomatosis in Women.—Launois and Bensaude state that symmetrical adenolipomatosis is generally seen in men. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 27, 1901. No. 22.) In the three cases reported in women the disease is not typical. They then report a typical case of symmetrical cervical adenolipomatosis in a woman aged 34, who had been ill only six months. They also report three unpublished cases occurring in men. They believe that the condition is lymphatic in origin. The enlarged lymphatic glands undergo fatty degeneration, and adenolipomatosis results. The question whether it is tubercular or not remains unsolved. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

University of Pennsylvania.—The University of Pennsylvania has been the recipient of several gifts in the last month; \$25,000 for the use of the new medical laboratories from Dr. Richard V. Mattison, '79 Medical, and Mr. Keasby, and \$5000 to the new Engineering Department from Dr. John S. Wentz, '64 Medical.

Society Meetings Next Week.—The following sections of the College of Physicians of Philadelphia will hold meetings next week, at 8.15 P. M. Tuesday evening, December 17, Section on Ophthalmology; Wednesday evening, December 18, Section on Otology, and Thursday evening, December 19, Pathological Society.

New Municipal Hospital.—It is rumored that the Council's sub-committee to which has been delegated the power of recommending a new site for the Municipal Hospital favors the lot of ground on the Asylum Pike, next to Second street, partly in the new forty-second ward, and partly in the old thirty-fifth ward. The plot contains forty and one-quarter acres of ground, and is well adapted for such an institution. The price asked for the ground is \$125,000. A mass meeting was held in Olney at which resolutions were adopted in opposition to the erection of a pest-house, or Municipal Hospital, on any of the proposed sites in that vicinity, instructing the ward's representative in Councils and in the City Committee to use every effort to prevent the same.

Scarlet Fever.—Owing to the prevalence of scarlet fever near Hazleton, Pa., it was necessary to close the public schools at Drums, a few miles west of Hazleton. Over 150 cases were reported last week.

Smallpox in Philadelphia.—Only seventy-two new cases of smallpox were reported for the past week. This is forty-one less than the week before, when 113 cases were reported. There was also a decrease in the death rate, only eight being reported, as compared with fourteen for last week. The total number of smallpox cases reported during the year is 840, and the deaths 119. There are now 285 cases under treatment in the city. House to house vaccination by a corps of physicians appointed by the Bureau of Health began December 7. The preliminary work was done in the Chinatown district the previous afternoon. Over forty physicians met at the Sixth District station house to make preliminary reports and to receive official badges and vaccine. Dr. W. M. Angney, who represents the Bureau of Health, explained the object of the meeting, and then made way for Hiram Porter, Director English's representative, who impressed upon the medical men the necessity of tact in their work, referring especially to the fact that although this vaccination was most necessary for the prevention of smallpox, it was by no means compulsory. The Board of Health has determined that all school children must be vaccinated, including those attending private, parochial, Sunday, or other schools. Visitors are no longer allowed in the hospitals or prisons of the city, nor are articles of food permitted to enter the institutions.

Children's Hospital.—At a meeting of the staff of the Children's Hospital, Philadelphia, held December 5, Dr. John H. Jopson was appointed visiting surgeon, replacing the late Dr. Samuel Ashhurst.

Scholarships Awarded.—Four students of the University of Pennsylvania have been awarded scholarships by the Institute for Medical Research, founded by John D. Rockefeller and endowed by him with \$200,000. Those receiving the scholarships were Dr. George H. Gildersleeve, of the hygienic laboratory; E. B. Vedder, C. M. Duval and Dr. F. P. Gray, all of the pathological laboratory. These scholarships were given in accordance with the plans adopted for the carrying on of the work of medical research, which called for the expenditure of \$20,000 a year, divided so as to provide for forty scholarships in different institutions of the country. Appointments are made for one year from candidates recommended by heads of laboratories of accredited standing, and only persons pursuing investigations on some important and specific subject in pathology, bacteriology or hygiene are to be chosen.

Allegheny County Medical Society.—Dr. A. C. Abbott, professor of hygiene in the University of Pennsylvania, will

deliver an address before the Allegheny County Medical Society December 17, upon hospital construction and management.

New Serum for Tetanus.—Dr. A. Leteve, of the Pathological Department of Mercy Hospital, Pittsburg, Pa., has discovered a successful serum treatment for tetanus. After a year of experimenting on lower animals he has tested his theory on human subjects, a middle aged man, a middle aged woman and a boy ten years of age, who were given injections of the serum. They were restored to health within five or six days.

Smallpox in Pennsylvania.—Smallpox has lately spread to Bangor and Downingtown, and five cases have been reported at Sellinsgrove. The Commissioners of Plymouth Township have ordered that no peddlers or collectors be allowed in the township. The Wilkesbarre street cars have ceased to run to Plymouth, the only communication still being maintained is for sending provisions to the smallpox-stricken town. Officers will be stationed on the bridges on all the roads, and no one will be allowed to pass unless carrying a special certificate, and these will be issued only in extremely important cases. This quarantine may cause considerable loss to Plymouth, as several hundred citizens of that town work in Wilkesbarre. Smallpox hospitals are being erected in Pottstown and West Chester. There are already eleven cases reported at Royersford, the latest victim being a physician.

Scarlet Fever at an Orphanage.—Thirty-seven cases of scarlet fever have appeared among the 200 inmates of the Methodist Episcopal Orphanage at Bala and the institution has been placed under quarantine. Investigation has failed to reveal how scarlet fever was brought into the institution, but thorough disinfection of the drainage system has been made and the disease is believed to be under control. No deaths have occurred.

NEW YORK AND NEW JERSEY.

Smallpox in New Jersey.—No new cases of smallpox have been reported in Camden. Thirteen patients are now in the hospital, which accommodates only twelve men. The Camden Board of Health is considering the advisability of enlarging the hospital. Although there is but one case of smallpox in Gloucester, a municipal hospital is to be erected. To avoid the possibility of an injunction, and spurred on by the constantly increasing list of smallpox cases, the authorities of Orange erected an isolation hospital in the middle of Heywood avenue, between Mosswood and Berkeley avenues, in that city, in the hours between midnight Saturday and Monday morning last. Ten patients are occupying cots there. Twelve cases of smallpox in the village of Sayerville have caused a rush to be vaccinated. There are two handkerchief factories in the neighboring village of South River, and many of the Sayerville people work there. On the recommendation of physicians the management of the factories served notice upon the employes from Sayerville that they must not return to work until the epidemic was under control. This order affects about three hundred hands, most of them the support of families.

Scarlatina in Millville, N. J.—Scarlatina is so prevalent and so severe in Millville that much alarm is felt. The Board of Health is making efforts to prevent the spread of the disease, and it will be necessary to close the schools. Two children died last week, and another is dangerously ill.

Smallpox Not Reported.—Assistant Sanitary Superintendent Black, of Brooklyn is investigating the failure of two physicians to report five cases of smallpox last week, one of which resulted fatally. On Friday, December 6, a woman 41 years old died of smallpox. Dr. John E. Walsh, of the Health Department, called at the house after the death and found three children ill with the disease. The house is an apartment house containing six families. On the first floor Dr. Walsh found a baby also suffering with the disease. This child was under the care of another physician. All the children were sent to North Brother Island.

A Bequest.—By the will of the late Dr. Henri Gullbault the Metropolitan Hospital and Dispensary will receive \$3000.

Health Boards to Meet.—The Associated Health Authorities will hold a meeting at Woodbury, N. J., on Tuesday, December 17. Dr. Benjamin Lee, secretary of the State

Board of Health of Pennsylvania, will discuss Smallpox, Dr. Charles W. Karsner will read a paper on Vaccination, and Dr. E. S. Cooke, Chief of the Bureau of Disinfection, Philadelphia, will speak on Fumigation and Prevention.

Dr. Henry Adjutant General.—On December 7th, Governor Odell appointed Dr. Nelson H. Henry Adjutant General of the State, to succeed the late Brigadier General Edward M. Hoffman, the appointment to take effect January 1, 1902.

Appointment of Dr. Pritchard.—Dr. Wm. B. Pritchard has been appointed consulting neurologist to the S. R. Smith Infirmary, Staten Island.

WESTERN STATES.

New Building for Contagious Diseases.—The St. Paul City and County Hospital intends erecting a new building for contagious diseases to cost approximately \$50,000. The building, which will be two stories high, will be so built that, to go from one floor to the other, one must go outside the building. Each story will contain four wards and a number of rooms. Each department has a room in which the doctor or visitor leaves his clothes, and then enters another room where the sterilized robes are kept. The first floor is for diphtheria, the second for scarlet fever. Disinfecting rooms, diet kitchens, baths, etc., will all be modern in construction. The building will hold 120 patients.

Tuberculosis.—It is stated that an average of one person dies each day from tuberculosis in Los Angeles, California.

Trinity Hospital, Milwaukee.—Four free beds have been established at Trinity Hospital for poor patients, and it is expected that two others soon will be provided. The free beds will be used by students of the Milwaukee Medical College for clinics. An effort will be made to claim exemption from taxation on the ground that free beds are maintained.

The Cincinnati Hospital Laboratory, under the direction of Dr. J. E. Greiwe, assisted by Drs. A. H. Friedländer, W. H. Crane, A. B. Devers, Frank Fee, J. W. Rowe, H. J. Whitacre, has recently started a post-graduate course in pathology and clinical microscopy.

A Heart Wound Sewed.—A negro was stabbed in the heart at Chester, Ill., and Dr. H. L. Nletert, Superintendent of the St. Louis City Hospital, where the patient was taken 24 hours after being cut, sewed up the wound, making several stitches. The patient is now well on the road to recovery.

SOUTHERN STATES.

A Reappointment.—Secretary Long has decided to reappoint Surg.-Gen. William K. Van Reyepen on the expiration of his term, December 18, and to postpone the promotion of Dr. P. M. Rixey. Dr. Van Reyepen is to succeed himself for a short time in order to secure the advantage of increased rank and pay which would be afforded him after serving 40 years in the navy. Dr. Van Reyepen, however, does not expect to serve until the retiring age next November, and will give way soon in order that the President's promise to Dr. Rixey may be fulfilled. Dr. Rixey will continue as White House physician until he is made surgeon-general.

Maryland Public Health Association.—The Maryland State Public Health Association held its fifth semi-annual meeting in Rockville, December 3 and 4. Papers were read by Drs. W. S. Thayer, L. Erich, J. Bosley, J. M. Klger, R. Stokes, E. M. White, J. S. Fulton and L. O. Howard.

Violets for Cancer.—A practical test of the efficacy of violet leaf infusion as a cure for cancer will shortly be made at the Baltimore University Hospital where a case of undoubted cancer of the breast in an advanced stage is under treatment. Many prominent Baltimore physicians and surgeons, when questioned as to their opinions of the virtues of violet leaves in cancer cases, ridiculed the idea. Others thought that if the patient was taken in an early stage of the disease, when the affection was purely local and the dreaded germs had not been absorbed into the system or affected the vital organs, a cure was possible. Exactly what the medicinal properties of violet leaves are could not be learned. Druggists and chemists, when asked, professed total ignorance of the subject. In the

backwoods of the South ponticles of violet leaves and the leaves of other flowers are used as a remedy for cancer, and, it is said, many cures are effected.

North Texas Medical Association.—The semi-annual meeting of the North Texas Medical Association was held at Greenville, December 10, 11 and 12.

Proposed Municipal Hospital, Washington.—Plans for the new Municipal Hospital have been issued by the District Commissioners. As planned, the institution will be of the most modern type and the group of structures contemplated will cost several million dollars. Congress has already provided for the site and appropriated \$5000 for the competition for plans. All competition sketches will have to be in the hands of the Commissioners by February 8, 1902. Three architects will be chosen through a preliminary unpaid competition as the competitors in the final paid competition. The unsuccessful architects in the final competition will each receive \$1000.

Typhoid Fever in Oysters.—Oyster shippers from Back River desire an investigation relative to an order promulgated by the commandant of Fortress Monroe prohibiting the sale of Back River oysters on government property. The claim made by the authorities is that they contain the germs of typhoid fever.

New Recreation Building.—A new recreation building for the use of the patients of the Sheppard and Enoch Pratt Hospital has been completed on the grounds of the hospital, near Towson, Baltimore County, Md. It is about 1000 feet distant from the main building, and is two stories high with a basement. The interior of the building is divided into two sections, one for the men and the other for the women patients. In the basement are bowling alleys, extending the entire length of the building, and a lounging room. Arrangements have been made for a shuffle-board, and the basement will also contain a storage-room, janitor's quarters and boiler and fuel apartments.

Suit for Libel.—In the Circuit Court of King George County, Va., suit for libel has been brought by Dr. F. F. Ninde against some citizens. Last winter Dr. Ninde was employed by the supervisors to vaccinate and attend small-pox cases. Later some of the citizens claimed that the disease was not smallpox and the newspapers criticised the doctor, charging him with a scheme to defraud the county. The jury failed to agree and another trial has been ordered.

To Treat Deformities.—A new department, that of orthopedic surgery, has recently been established at the hospital of the University of Maryland for the treatment of deformities, joint and bone diseases. The new department is equipped with the newest apparatus used in the treatment of such cases. Children and adults who are suffering from any deformity or have been crippled from birth or are crippled from any disease of the bones or joints, will be treated. This department will be under the direction of Dr. R. Tunstall Taylor.

Next Year the Medical Fraternity of the United States Army and Navy and National Guard will assemble in Washington. This organization of the military surgeons of the United States is a notable body. Surgeon General Blood, of Boston, is the first vice-president. Surgeon Sternberg, of the United States Army, was the original president. Within the last year it has mustered 61 new members from Massachusetts, and the Brigade and Regimental Staff is deeply interested. There were 500 members prior to the Spanish War, and while that number fell off slightly, there has been a reaction, till to-day the number approaches the maximum.

A National University.—Senator Depew introduced a bill in the Senate December 9th, to establish the University of the United States, for post-graduate work. It is reported that Andrew Carnegie will give \$10,000,000 to carry on the work, and a message from the President on the subject is expected shortly.

MISCELLANY.

The Statistics of Suicide.—Self-destruction is on the increase. An English alienist has investigated this subject, with discouraging results. Some forty years ago the average number of suicides was, in Sweden one to every 92,000 inhabitants; in Russia one to every 35,000 inhabitants; in the United States one to every 15,000 inhabitants; and in London and St. Petersburg one to every 21,

000 inhabitants. In France there were for every 100,000 inhabitants, from 1841 to 1845, 9 suicides; and from 1846 to 1850 10; from 1861 to 1870 13; from 1871 to 1875 15, from 1876 to 1880 17; in 1899 21; in 1893 22, and in 1894 26. From 1826 to 1890 the proportion of suicides in Belgium has augmented 72 per cent.; in Prussia 411 per cent.; in Austria 238 per cent.; in Sweden and Denmark 72 per cent. and 35 per cent. respectively, and in France 318 per cent. Recent figures show that suicide is more common in the French army than in any other European force. Out of 1000 soldiers fifty die by suicide, and of every 100,000 men in the army about twenty-seven commit suicide every year. In the United States the increase will probably reach 300 per cent. Two peculiarities are shown in the recently published figures of suicides in American cities, the recession of natives of Germany from the head of the list, and an increase in the number of suicides among colored people. In the last report published in New York City it was seen that there were more suicides by natives of the United States than by those of Germany, though the disparity was very small. The change is explained by the fact that while the number of German men who commit suicide is larger than that of male suicides of any other country, suicide by German women is comparatively rare. The suicides of colored people have been more conspicuous in the large cities of the South than in the Northern cities where the colored population is small. Colored residents of farms or small towns seldom commit or attempt suicide; it is in the large cities, where the struggle for existence is under conditions most unfavorable to colored men, that a few of them overcome their repugnance to such an act of violence. In proportion to the total population, suicides among Englishmen residing in the United States are much more frequent than among residents of Irish birth. Among male natives of France and Switzerland in the United States the rate of suicides is high; among women from France or Switzerland suicide is practically unknown. In respect to the total number of suicides compared with the population, Chicago and San Francisco rank highest among American cities. Baltimore and Richmond are low on the list.

Wind and Temper.—There is a close relation between wind and temper. While a cold breeze has a bracing effect, constant hot winds are regarded as a curse. In Egypt crimes are commonest when the hot khamseen blows, and the Arabs revolt in Algeria during the sirocco. The solano, which now and then rushes across the Mediterranean in fiery blasts from Africa, upsets everyone in Spain; and in Cuba the fierce hot wind is such a pest that a family living in Havana made it a rule not to speak while the wind was blowing, to avoid family quarrels.

Cigarettes in Iceland.—Cigarette-smoking has lately broken out with excessive virulence among boys and girls in Iceland. A proposal to cope with the nuisance is being considered by the municipal authorities of Reykjavik. It will, if adopted, empower any male or female adult to box the ears of a juvenile offender, annex his or her weed and impound the stock of cigarettes.

Smallpox in Cartagena.—Over 500 cases of smallpox were reported in Cartagena, Colombia, November 7th. While at first of a mild type, the epidemic has lately become more virulent. The U. S. Consul believes that many deaths ascribed to other causes were due to smallpox. A few cases of black smallpox have occurred.

Hemophilia.—When a female of the "bleeder" family is pregnant, the development of the malady in her offspring has been prevented by the administration of calcium chloride, 2.0 grams a day during the last three months of pregnancy.

Left-Handedness.—Lüddeckens claims that this is not a habit, but is always due to physiological causes, often an expression of the influence of heredity. Normally the blood pressure is greater in the left cerebral hemisphere than on the right side. When this pressure is stronger upon the right side, left-handedness results. In one case reported, in which the pressure was equal in both hemispheres, an alternating preponderance of one or the other side occurred, depending upon blood pressure variations. The term left-handedness is unsuitable, since phenomena are noted upon one entire side of the body, as Lüddeckens noticed in the case of his young son. He believes that all

attempts to overcome left-handedness should be stopped, since a high degree of efficiency upon that side may be acquired.—*Zeitschrift für Psychologie und Physiologie der Sinnesorgane*.

Mosquitoes and Malaria.—A communication from Algeria states that a careful watch was kept for the first appearance of anopheles, to determine if it coincided with the first cases of malaria. The mosquitoes began to arrive June 15, and between June 26 and July 10 seven soldiers, who had arrived during the winter, were received at the hospital affected with malarial fever, the first malarial patients of the year.

Chinese Death Rate.—Examination of statistics relating to the population of Hong Kong reveals an extraordinarily high mortality among the Chinese. It seems hardly possible to believe that out of every 1000 possible Chinese born in the colony, only 72 survive the first year of existence. However, the reports on statistics show this. The European infant mortality in Hong Kong is high, but that of the Chinese points to an absolutely criminal neglect. Definite sanitary regulations are gradually improving the condition of Hong Kong, but apparently it needs other steps also if the Chinese population is to be preserved.—*The Hospital*.

Obituary.—Dr. Patrick S. O'Reilly, at Bay St. Louis, Miss., November 19, aged 57 years—Dr. John Hammond Lovatt, at Florence, Kan., November 23, aged 60 years—Dr. Peter Faling, at Gasport, N. Y., Nov. 23, aged 62 years—Dr. Jefferson C. Cawood, at Knoxville, Tenn., November 28, aged 71 years—Dr. H. R. Bohn, at Biloxi, Miss., November 8—Dr. Henry Clarke, Houghton at New York City, December 2, aged 64 years—Dr. James E. Gibbons, at Baltimore, Md., December 2, aged 58 years—Dr. I. Newton Evans, at Hatboro, Pa., December 3, aged 74 years—Dr. David McDill, at Leavenworth, Kas., December 4, aged 41 years—Dr. James R. Deane, at Newton Highlands, Mass., December 6, aged 68 years—Dr. Rives Walker, at Bristol, Va., December 6, aged 45 years—Dr. John B. Norton, at Boston, Mass., December 8, aged 27 years—Dr. William White Harris, at Wilmington, N. C., December 9, aged 82 years.

GREAT BRITAIN.

The Cause of Cancer.—Dr. James Braithwaite, of London, advances the theory that excess of salt is one of the four factors which cause cancer. It is essential, but is inoperative without one or two of the others. Excess of salt may arise from too much meat. He considers that other factors are overnourishment, an impure condition of the body resulting, owing to the non-use and non-oxidation of food. Some local irritant or stimulant, such as friction from the stem of a pipe or irritation from some micro-organisms must always be present. Cancer is seldom seen among Jewesses, possibly from the difference of diet. Savages, so far as is known, are exempt from cancer, and they get no salt. All the domestic animals, except the pig, are subject to cancer, and salt is given to sheep, cows and horses, but never to pigs.

Guy's Hospital.—Mr. J. Pierpont Morgan, who has already given \$25,000 for the electric installation of St. Paul's Cathedral, has contributed the same amount to the renovation fund of Guy's Hospital.

Many Children Burned.—Dr. Wescott, Coroner of Hackney, a suburb of London has drawn attention to the yearly record of 600 children burned to death in London. The Government is considering the advisability of legislation which would enable Coroners to fine and imprison persons who leave children alone with fire, or with material for making a fire, if children are thereby burned to death.

A Bequest.—By the will of the late William Langlands, over \$50,000 was left to the institutions of Glasgow.

St. Thomas's Hospital.—Dr. C. J. Cullingworth, obstetric physician to St. Thomas's Hospital, who reached the age for retirement last June, was invited to continue in office for three years more. Dr. Walter Tate was elected additional obstetric physician in the hospital, in charge of 21 beds, thus diminishing the amount of Dr. Cullingworth's work. Dr. Cullingworth will retain charge of seven beds.

Hospital Sunday Fund, Melbourne.—Over \$30,000 has been collected and distributed throughout Australia in the past year by the Melbourne Hospital Sunday Fund, which recently held its 28th annual meeting.

A Donation.—The White Star Steamship Company has endowed the charities of Liverpool and Belfast to the extent of \$100,000 in memory of the late Thomas Henry Ismay, founder of the line, who died November 23, 1899.

English Notes.—Upward of seventy London physicians have expressed their approval of a society recently formed by women which holds periodical examinations in the theory and practice of massage and issues certificates.—Of the 552,000 yearly deaths in Great Britain 20,278 are due to violence.—The Middlesex County Council is calling a conference of district councils to consider the question of establishing a county small-pox hospital.—In every 1000 British men there are thirty-five widowers; in 1000 British women there are thirty-eight widows.—The census figures for all Great Britain show that, since 1821, 1041 people attained the age of 100 years and upwards. Of these 716 were women.—It is stated that the average height of English male subjects has increased one inch during the last fifty years.

New Hospital, Simla.—The new Walker Hospital at Simla, which is rapidly approaching completion, is a wooden building of very sombre appearance. In case of fire, but few bedridden patients could escape.

Whooping-Cough in British New Guinea.—An epidemic of whooping-cough is causing great ravages among the young population of British New Guinea. The high rate of mortality of the disease is attributed to the superstitious practices of the natives who consult the local sorcerer in preference to the doctor.

Sir William MacCormac.—Sir William MacCormac, Bart., president of the Royal College of Surgeons, died suddenly at Bath, December 4th. His health had caused anxiety for some time. He arose as usual but, feeling ill, returned to bed and died a quarter of an hour later, from heart disease. Sir William MacCormac was the most distinguished surgeon in the United Kingdom. Born in 1836, in Belfast, he was educated in that city, Dublin and Paris, taking many degrees in surgery. He was appointed a member of the Senate of Queen's University and Examiner in Surgery. Later he became surgeon and consulting surgeon to the Belfast Royal Hospital. As surgeon-in-chief of the Anglo-American Ambulance he saw much service in the Franco-German war of 1870, being present both at Metz and Sedan. He served, also, in a similar capacity in the Turko-Servian war of 1876. For twenty years he was one of the senior surgeons, and lecturer at St. Thomas's Hospital in London, and was consulting surgeon at other institutions, as well as examiner in surgery for the University of London, and the army and Indian medical services. He was the author of a great number of treatises on various subjects, most of which were contributed to different medical journals or societies. In 1899 he delivered the Hunterian oration before the Royal College of Surgeons. He was one of the few foreign honorary members of the St. Petersburg Academy of Medicine. At the time of his death Dr. MacCormac was serving his fifth term as president of the Royal College of Surgeons and his celebrity was world wide.

CONTINENTAL EUROPE.

VIENNA LETTER.

(From Our Special Correspondent).

At the meeting of the "Wiener Medicinisches Doctoren-Collegium" held November 4, Dr. Hochsinger discussed glandular fever, an infectious disease occurring in children from 5 to 8 years of age, causing unilateral, painful, swelling of the cervical and submaxillary glands rarely going on to suppuration. Constitutional symptoms are marked, and the outcome is usually favorable. When there is disease of the naso-pharynx, fever also occurs. He considers glandular fever a secondary disease, generally following some infection of the naso-pharynx. Glandular fever must be differentiated from tubercular adenitis. As treatment he advises ichthyol externally and antiseptics internally.

At the Gesellschaft der Aerzte in Wien, November 8, Professor Neumann presented a rare case of a dermatosis caused by moderate doses of Fowler's solution which was given for furunculosis. The patient was excited, eye-lids reddened, scrotum covered with crusts, and vesicles appeared on his thighs, hands and feet. After the arsenic

had been stopped for two weeks, only hyperkeratosis remained. Dr. Lang showed a case of lupus in which he was using the Röntgen and the Finson ultra-violet rays. Dr. Heibauer reported a severe case of ankylostomiasis in which thymol failed, while extract of felix mas cured the condition, the opposite of what generally occurs. Dr. Schiff presented patients with epithelioma and rodent ulcer which had resisted all treatment for seven years, cured by the Röntgen rays. Dr. Füchsig demonstrated a preparation showing a perforation from the esophagus into the trachea, following the ingestion of lye.

At the Wiener Medicinisches Doctoren-Collegium, November 11, Dr. Bum described the pathology and treatment of writer's and musician's cramp. The causes of these neurcises are neuropathic family history, uric acid diathesis, alcoholism, overwork, false technique, and injuries. He advises warm applications, massage, exercises, etc. Writing must be stopped. Bum believes the most favorable prognosis can be made when the spastic form occurs. Dr. Kornfeld discussed gonorrhea and marriage, commenting upon the frequency of blenorhea and its sequelae in women.

At the Gesellschaft für Innere Medizin, November 21, Dr. Schlesinger reported a most interesting case of myiasis intestinalis, a disease of the digestive tract caused by the larvae of flies. The condition was first described in 1806. A positive diagnosis was made late in the disease. The larvae are swallowed in water or upon food. The ordinary vermifuges are of service in the treatment, though surgical intervention may be necessary. Professor Weichselbaum demonstrated a specimen showing the changes produced by the larvae.

The Gesellschaft fuer Innere Medizin, formerly the Wiener Medicinische Club, held its first meeting November 7th with Prof. Nothnagel as president, and Professors Neusser and von Schrötter as vice-presidents.

Retirement of Prof. von Krafft-Ebing.—According to the *Hochschul Correspondenz*, Dr. von Krafft-Ebing, professor of psychiatry in the University of Vienna since 1889, will on April 1, 1902, return to Graz, where he formerly lived. Prof. Julius von Wagner-Jauregg is spoken of as his probable successor.

The Nobel Prizes.—The five Nobel Prizes, consisting of a little over \$40,000 each, which are awarded annually in accordance with the provisions of the will of the late Alfred Nobel, the inventor of dynamite, were awarded December 10. Mr. Nobel left an estate valued at almost \$9,000,000, and his will directed that the interest on the capital should be awarded as prizes to those persons who should have contributed most materially to benefit mankind during the year immediately preceding. The income from this amount, which was divided into five equal parts, was awarded as follows: To the person having made the most important discovery in the science of physics, to Prof. Röntgen; to the person having made the most important invention or discovery in the domain of chemistry, to Dr. Van Hoff; to the person having made the most important discovery in physiology and medicine, to Prof. Behring; to the person who had produced the most distinguished idealistic work in literature, to Armand Sully-Prudhomme; and to the person who has labored the most or best for the fraternizing of nations and for abolishing or diminishing standing armies, and for the formation of peace congresses, to Dr. Henri Dumant and Frédéric Passy, equally. The prizes were distributed by the Crown Prince of Sweden and Norway in Christiania, and all the winners were present except Sully-Prudhomme.

University Notes.—Lille: The widow of Dr. Morisson, former professor of pathology in the Lille Medical School, has bequeathed \$2,000 to the Lille Hospital.—Paris: Dr. Brouardel, professor of anatomy, has resigned as dean of the Medical School, a position which he has held for fifteen years. Dr. Debove, professor of clinical medicine, has been elected to take his place. The friends of Professor Brouardel will present him with a medallion which Roty is to engrave.—Berlin: Dr. Willibald Nagel, of Freiburg, has been appointed director of the physical department of the Physiological Institute, replacing the late Professor Arthur König.—It is also announced that the third medical clinic, under the leadership of Professor Senator, is soon to be housed in a large modern building next to the new

surgical clinic on Ziegelstrasse.—Professor M. Litten celebrated his 25th anniversary as a teacher on November 17th. The "Gesellschaft für Innere Medizin" has decided to admit female doctors of medicine as members.—Dr. Martin Lieker, of Leipzig, has been made custodian of the Museum of Hygiene.—Marburg: Dr. Ernst Romberg has recently been appointed professor of medicine.—Breslau: Dr. Richard Stern has been made professor of medicine and director of the medical polyclinic.—Munich: Dr. Max Stumpf has been made professor of gynecology and obstetrics, Dr. Karl Seydel professor of surgery, Dr. Gustav Klein professor of gynecology, and Dr. Richard Barlow professor of dermatology.—Bonn: On November 14th Professor von La-Valette St. Georges celebrated his 70th birthday.—Erlangen: Prof. Gustav Specht has become head of the medical department, with Prof. Ernst Graser as second assistant.—Leipzig: On October 25th Dr. Sattler, professor of ophthalmology, celebrated his 25th anniversary in practice.—Dr. Wilhelm His, Jr. has resigned his professorship, and has been appointed physician to the Municipal Hospital in Dresden.—Halle: Dr. Ziemke, of Berlin, has been appointed professor of medical jurisprudence.—Cologne: Dr. Lent celebrated his 70th birthday November 16th.—Kiel: The new insane asylum has just been opened with Dr. Siemering as its director.—Berne: In the middle of October Prof. Pfüger celebrated his 25th anniversary as professor.—Vienna: The City Council has decided to erect a monument to the late Professor Albert in the Centralfriedhof, near those of Hoffmann and Billroth.—An Institute for the treatment of skin diseases by the Finson light treatment will soon be founded under the leadership of Professor Lang.—Dr. Heinrich Albrecht has been made professor of pathological anatomy, as has also Dr. Richard Kretz.—Dr. Franz Kienast and Dr. S. Federn celebrated their 70th birthdays November 20.—On November 5th Professor von Reuss celebrated his 60th birthday. Addresses were made by Professor Monti and Dr. Jänner.—Graz: Dr. Otto Drasch has been made professor of histology and embryology.—Budapest: The Department of Hygiene, left vacant by the death of Dr. Josef Fodor, has been filled by the appointment of Prof. Leo Liebermann, with Drs. Gustav Riegler and Szekely as assistants.—Dr. Emanuel Herczel has been made professor of surgery.—St. Petersburg: A lady, Dr. N. Sieber-Schumow, has been temporarily appointed to fill the place of the late Professor Nencki as head of the department of biological chemistry in the Imperial Institute of Experimental Medicine, St. Petersburg.—Moscow: The Russian Government has decided to establish a Virchow Institute in Moscow.

Temperance in Turkey.—At the bottom of the wonderful physical vitality of the Turkish race is the universal abstinence of the common people. They are the most abstemious race on the earth and the healthiest. The soldiers, peasants, merchants, and members of the learned professions never touch alcohol, although the upper classes of Constantinople drink considerably.

A Special Electric Lamp.—It is stated that Dr. Sophus Bang, of Copenhagen, manager of the laboratory of Professor Finsen, the introducer of the light cure for lupus, has invented a special electric lamp, which gives but a feeble light, but is extremely rich in chemical rays. It is stated that the bacteriological power of this lamp is ten times as great as that of the ordinary arc lamp. Its cost is only about \$15.

Bees for Rheumatism.—Some years ago an Austrian physician advanced the theory that the virus of the bee sting is an infallible remedy for acute rheumatism, a fact which receives unquestionable confirmation from a custom of the country people in Malta. Bees are plentiful in this island, and their stings in such repute that resort to this primitive method of inoculation has been a common practice in severe cases of rheumatism, for generations, with most satisfactory results.—*Mediterranean Naturalist*.

Pneumonia at present leads all diseases in the number of deaths in the United States. Consumption and heart disease come next.

Obituary.—In Tübingen, Professor Carl von Liebermeister, chief of the medical clinic, died November 24, aged 69 years.—In Prague, November 17, Dr. Edlar von Jirus, professor of pharmacology in the Bohemian University, died, aged 61 years.—Dr. Ledresseur, professor at the University of Louvain, died recently, aged 55 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

November 23, 1901.

1. A Lecture on Chest Complications in Abdominal Disease. J. MITCHELL BRUCE.
2. The Action of Iodides on the Heart and Circulation. RALPH STOCKMAN and FRANCIS J. CHARTERIS.
3. Three Cases of Rupture of the Left Ventricle. GEORGE A. RORIE and JOHN FINDLAY.
4. Atheromatous Ulceration of the Heart, etc. D. E. ANDERSON.
5. Acute Rheumatism; Hyperpyrexia; Post-Febrile Mania; Recovery. D. HAMILTON KYLE.
6. Tortuosity of Both Internal Carotid Arteries. G. H. EDINGTON.
7. Suprarenal Extract as a Hemostatic Extract. W. THELWALL THOMAS.

1.—In some obscure cases, the signs of pleurisy with effusion will often indicate the existence of perigastric abscess. In other cases, the appearance of a pleural friction over the base of the lung often points to tuberculosis, involving the pleura and the lung, secondarily to the peritoneum. Peritonitis associated with acute pleurisy and other complications within the chest is frequently the result of perityphlitis originating in appendicitis. Indeed, the chest is sometimes invaded in perityphlitis after successful surgical treatment of the primary disease, including removal of the appendix. In some instances of appendicitis, severe inflammation occurs within the thorax, characterized by a large serous effusion in the right pleural cavity. Purulent inflammation may occur, producing an abscess at the base of the right chest. This abscess may rupture into the bronchi with discharges of quantities of foul pus. In other intrathoracic complications of purulent perityphlitis, including septic endocarditis, the line of infection may be traced back through the liver and portal vein to the appendix. Secondary affections of the right pleura and lung occur in abscess of the liver. In inflammatory affections of the gall bladder and bile ducts, and in other morbid conditions. In all obscure diseases within the abdomen, particularly diseases of an inflammatory kind, let it be a clinical rule to examine the chest with especial care. Let such physical examination of the base of the chest in obscure and anxious abdominal cases be repeated as often as the examination of the abdomen itself. In the course of the investigation of a case of disease of the chest, such as a pleurisy or a basic cavity, we often discover evidence of disease within the abdomen. In such a case the disease below the diaphragm may prove to be the primary pathological condition. Let it be a rule of practice, therefore, in every instance of pleurisy and pulmonary disease, or of difficulty in connection with the interpretation of pulmonary symptoms, particularly at the base of the chest, to complete our examination with a careful inquiry into the condition of the stomach, the liver, the intestines, the other abdominal viscera, and the peritoneum, itself, remembering that affections of the chest often originate below the diaphragm. On the other hand we should never neglect to examine with particular care the state of the abdomen with respect to distension and pressure in every case of acute pulmonary disease. Invasion of the pleura and lung from the abdomen is simulated by secondary affections of the same parts in puerperal septicemia originating in the pelvis. Every patch of dulness and crepitus at the base of the chest is not, however, significant of invasion of the lung or pleura. Bruce cites many instances of the passage of infective materials from the abdomen into the pleura, and he asks: May not this be the usual route by which the pleura is invaded by the tubercle bacillus? [J. M. S.]

2.—Rosenbach expressed the opinion that iodides are of no value in the treatment of aneurysm, and that they are even harmful in arteriosclerosis, but the great bulk of medical opinion and experience is directly contrary to this. That iodides exercise a beneficial action in many of these cases seems to be proved by the experience of their almost universal use in practice. Stockman and Charteris have made systematic observations on the blood-tension and

pulse-rate of numerous patients who, for one reason or another, were taking potassium or sodium iodide. These observations were made with von Basch's sphygmomanometer and Gärtner's tonometer. They used only the iodides of sodium and potassium, generally in doses of 15 to 30 or 40 grs. per day, although a few patients had up to 180 grs. and one man was taking 300 grs. Some of these cases had healthy circulatory systems; others suffered from renal or cardiac disease, aneurysm, arteriosclerosis, and bronchitis. One of them had very severe iodism, others had it slightly. In no case did any fall in the blood pressure occur, or any change in the rate or the rhythm of the heart. Even the man who suffered so severely from iodism maintained his arterial tension unimpaired, although he said he felt very depressed and ill. In these cases the depression seems to be due to the coryza and partially to an action on the nervous system. Iodides neither directly weaken the heart nor dilate the arterioles. In animals iodine or the iodides, when given by the mouth, do not alter the dynamical conditions of the circulation. When given intravenously, potassium iodide exerts the marked depressing potassium action on the heart, whereas sodium iodide is practically without this effect. [J. M. S.]

3.—Rorie and Finlay report the case of a male, aged 58, who suffered from mania with delusions, for which he had been in an asylum for 40 years. He died suddenly without cause. At the necropsy a tear was found in the anterior wall of the left ventricle one inch in length, running in the line of the muscle fibres. The heart muscle was found to be in an advanced state of fatty degeneration, and also showed fatty infiltration. A second patient was a female, aged 58 years, who had been in an asylum for 8 years, suffering from alcoholic dementia. She died suddenly. At the necropsy, the heart was found to be fatty and on the anterior aspect of the left ventricle there was a small, irregular tear, about $\frac{1}{4}$ inch in length. A third patient was a man, aged 79 years, who was suffering from senile mania. He had a quarrel with another patient and died suddenly a short time after. At the necropsy a small fissure was found on the posterior aspect of the heart. It was exactly one-half inch in length. The heart as a whole was very fatty. [J. M. S.]

4.—Anderson reports the case of a man, aged 62 years, who had been suffering from pain in the chest and dyspnea for 5 days. There was no history of tubercle or syphilis. About a year previously he had an acute attack of pleurisy, to which he nearly succumbed. His urine at that time contained albumin, but that abnormal constituent subsequently disappeared. Temperature was 99.6°; pulse 104; respirations 31. The heart sounds were distinct, the first sound was prolonged at the apex, but no bruits were heard. The urine contained albumin. The patient died suddenly. At the necropsy the heart was found to be hypertrophied and dilated, with much fat on its outside. The coronary arteries were atheromatous. There was a perforation as big as a small crowquill on the posterior wall of the left ventricle, which corresponded with a ragged funnel-shaped ulcer, the size of a shilling, which had given way at its apex. About an inch lower down there was another, smaller ulcer, which extended as deeply as the visceral layer of the pericardium. The branches of the coronary artery near these ulcers were blocked for about $\frac{1}{3}$ inch by thrombi of an atheromatous nature. Evidently these had been the cause of the ulceration. The mitral valves showed old vegetations. The aortic valves were competent but contained small particles of chalky material. The aorta was dilated and very atheromatous. [J. M. S.]

5.—Kyle reports the case of a man, aged 32 years, who had rheumatic pain in the right wrist, both knees and right ankle. He was delirious and semiconscious and presented tremors. His temperature was 106.4°. The next day his temperature was 108°; and he was semiconscious and delirious, with tremors and twitching all over his body. The first sound of the heart was slightly muffled; but there was no friction or murmur. In spite of the hyperpyrexia, he recovered. [J. M. S.]

6.—Edlington reports a case of tortuosity of both internal carotid arteries. One of the bends of the vessel was situated external to the posterior pillar of the fauces at the level of the middle point of the tonsil. [J. M. S.]

7.—Thomas reports the case of an infant, aged 13

months, who sustained a tear of the lip from the upper jaw to the extent of an inch. Bleeding was severe and for the following 3 days at periods of 12 hours, the wound had to be cleaned of blood clot and redressed, owing to hemorrhage. The writer packed the wound with gauze impregnated with powdered **suprarenal extract** and ordered the administration of 1 gr. of the extract every 4 hours. No further hemorrhage occurred. A man, aged 23 years, had bled freely on receiving any slight wound, ever since he could remember. After a chisel wound, which bled freely every time it was dressed, freshly-powdered suprarenal extract was packed in the wound and 5 grains of the extract were administered every 4 hours. The hemostatic action was marked. [J. M. S.]

LANCET.

November 23, 1901.

1. Inaugural Address on the Etiology of Beri-Beri.
PATRICK MANSON.
2. The Harvelan Lectures on Twenty-five Years' Experience of Urinary Surgery in England.
G. BUCKSTON BROWNE.
3. Anatomical Preparation-Making as Devised and Practised at the University of Edinburgh, etc.
J. BELL PETTIGREW.
4. A Note on Neisser's Test for Diphtheria Bacilli.
L. COBBETT.
5. Some Practical Points in the Treatment of Cases of Fractured Pelvis with Ruptured Bladder and Cases of Ruptured Urethra. C. J. BOND.
6. Sulphur in the Treatment of Dysentery.
G. E. RICHMOND.
7. The Treatment of Congenital Hip Displacement, etc.
H. A. REEVES.

1.—Manson delivered the inaugural address "on the etiology of beri-beri" before the Epidemiological Society of London, on November 15, 1901. In his address he points out the prevalence of beri-beri in the tropics and states that in the search for the cause of this disease confusion must be avoided by a clear conception of the term beri-beri. He defines beri-beri as "a form of multiple peripheral neuritis which occurs epidemically and is specially characterized as compared with other forms of peripheral neuritis by proneness to edema and to implication of the neuro-muscular system of the central organ of circulation; by complete absence of the trophic skin lesions, of paresthesia of the muscles of the head and neck, of marked implication of the organs of sight, hearing, taste, and smell, and of the mental faculties." Immunity is not induced by an attack of this disease. Two sets of theories have been advanced as giving rise to the same: (1) The dietetic theory; (2) the microbe theory. Manson is inclined to the view that the disease is due to a germ whose nidus is located outside of the human body and that the disease is dependent upon the toxic products elaborated by these micro-organisms. He states that beri-beri resembles the intoxication resulting from alcoholism, the germ of which is the yeast plant, the solutions of sugar the nidus, alcohol the toxin, and the important pathological effect peripheral neuritis. He further states that there is a fair degree of proof that the germ producing beri-beri clings to people, as the disease is sometimes transported from one place to another, and he also states that it clings to places, as certain buildings and ships often remain infected for a long period. He also cites instances which support this view. [F. J. K.]

2.—In the second Harveian lecture Browne discusses the treatment of prostatic hypertrophy. Auto-catheterism should be advised in all cases unless this procedure is exceedingly difficult. In speaking of the cases of acute retention the lecturer says "there are no cases of prostatic disease in which it is impossible to pass a catheter into the bladder." Cases in which regular catheterism is impracticable are very rare; they should be subjected to suprapubic cystotomy, calculus removed if present, and any obstructing outgrowth from the prostate enucleated. Castration and vasectomy do no real good and are fraught with grave dangers. [F. T. S.]

3.—Pettigrew outlines his anatomical autobiography and describes how he won two prizes, one for a dissertation

on "The Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart, and the second for a thesis on "The Nerves and Ganglia of the Vertebrate Heart." To facilitate the dissection of the muscular fibres, the heart was stuffed with oatmeal and boiled for several hours to rid it of the cellular tissue, fat, etc. The cardiac nerves were traced by teasing the fat from them under hot water, and then boiling the heart in ether to remove any remaining portion of fat. (To be continued).

[F. T. S.]

4.—Cobbett discusses "Neisser's test for diphtheria bacilli." From facts at our command, he thinks it probable that diphtheria is spread by those who have come in contact with the sick and acquire the bacilli without becoming ill themselves. These individuals are not generally recognized as infections, but carry the disease. In the course of his bacteriological studies diphtheria bacilli would undoubtedly have been missed, had it not been for the employment of Neisser's stain. He found this staining method very valuable, but not infallible in distinguishing diphtheria from pseudo-diphtheria bacilli, and on the other hand, Hofmann's bacilli sometimes showed very minute polar bodies. He has devised a modification of Neisser's stain which consists in applying to one edge of a mounted cover slip a drop of 5% acetic acid, and by means of a small piece of filter paper the fluid passes under the glass. It is not necessary to move the slide from the stage of the microscope. It will be noticed that loose bacilli are swept under the cover slip with the current of fluid, then everything is blotted out for a second by a blue cloud, and finally the diphtheria bacilli, if they be present, are to be seen showing characteristic polar bodies giving the same reaction as Neisser's stain except that the bodies of the bacilli are not brown, but pale blue. Cobbett reaches the following conclusions regarding the diagnostic value of Neisser's stain: "Neisser's stain, therefore, fails to show polar bodies in a small proportion of true diphtheria bacilli; and it shows minute and doubtful polar bodies in a few Hofmann's bacilli. This fact detracts very little from the value of the stain as a differential test, because the exceptions to the rule are so few. We must, then, hold that a good positive reaction is positive evidence that the bacilli are diphtheria bacilli, that a definite negative reaction is valuable evidence, but not alone conclusive, while a poor or doubtful reaction is not of much value either way." [F. J. K.]

5.—Bond has seen several cases of fractured pelvis on the hunting field due to the horse rolling on the prostrate rider. When injured the bladder is usually ruptured in the anterior portion below the peritoneal fold by a projecting spicule of bone. When the urethra is crushed, it is generally due to the pubic rami being forced together like the blades of scissors, the horse falling on the side of the rider. When the bladder is ruptured, the seat should be sutured; when this is impracticable owing to the position of the wound, the bladder should be drained by a tube passing through the suprapubic wound, through an incision in the membranous portion of the urethra and emerging from the perineum. If the urethra be torn and suture be practicable, the bladder should be drained by a tube brought out behind the line of suture. In some cases in which the torn ends of the urethra are separated a great distance, the distal spongy portion with its supporting corpora cavernosa may be detached from the pubes and the gap thus closed. [F. T. S.]

6.—Richmond highly recommends sulphur in the treatment of dysentery, which he has had occasion to employ in a number of cases. Reports of five cases are mentioned which illustrate the efficiency of this drug. He thinks that sulphur is an ideal intestinal antiseptic because of its solidity and absorbability, and concludes that whatever may be the nature of this disease, this drug seems capable of controlling and curing dysentery. [F. J. K.]

7.—Reeves believes the open operation for congenital dislocation of the hip to be unjustifiable, the results are most unsatisfactory and the dangers to life and limb are real. He reduces the head of the femur into the rudimentary acetabulum and holds it there by an apparatus which makes extension on the lower extremity. The patient is allowed to go about with crutches. [F. T. S.]

MEDICAL RECORD.

December 7, 1901.

1. Some Observations on the Borderland Between Medicine and Surgery. GEORGE WOOLSEY.
2. The Expectant Treatment. ROBERT H. BAKEWELL.
3. The Psychic Half. J. ALLEN GILBERT.
4. Spasmodic Bronchostenosis. ALBERT ABRAMS.
5. The Hemorrhagic Diathesis in Relation to Operation on the Nose and Throat. E. HARRISON GRIFFIN.
6. The Treatment of Xanthoma of the Eyelids. FRED. J. LEVISEUR.

1.—George Woolsey presents some observations on the **borderland between medicine and surgery**. He mentions the condition of carcinoma of the stomach, and deals at length with its differential diagnosis. He then discusses the surgical means for its relief. It is not alone, he states, that surgery affords the best treatment in the malignant diseases, but also in perforating ulcer, and benign obstruction of the pylorus. The operations, gastroenterostomy and pyloroplasty are described. Appendicitis is considered a surgical disease, and the writer states that it is unfair to the surgeon to delay asking him to operate until the condition is so desperate that the result or even the expediency of the operation is very doubtful. He states that the leukocytosis which the blood count may afford may be an aid in the question of deciding upon operation, but he does not believe this is to be depended upon, for so many conditions may cause it to vary. The question of the mortality in cases of appendicitis is then considered, and means suggested to diminish, what the writer calls, an "unnecessary element of mortality." [T. L. C.]

2.—Robert H. Bakewell contributes a paper on the **expectant treatment**. He describes his experiences as medical physician of health in the Colony of Trinidad. He took charge of 111 cases suffering from a severe form of dysentery, and he lost only 4 out of the 111 cases treated with opium. He states his terror of the mortalities of some modern treatments in contrast with some of the older forms, especially dealing with the diseases typhoid fever and diphtheria. He says the effect of the teaching of the expectant treatment during his student days was to make him and his fellow students medical agnostics, who believed in nothing but the recuperative powers of nature, but he states that they were compelled to relieve pain and other urgent symptoms, and found that besides rest, food, and the simple applications of the expectant method, there were powerful drugs that unquestionably expedited a cure, when a cure was possible, and relieved suffering even when death was inevitable. But instead of using the enormous dose or their predecessors, they tried the minimum dose that would produce the desired effect, laying more emphasis on rest and sanitary measures, and urging preventive measures as far as possible. [T. L. C.]

4.—Albert Abrams discusses what he terms **spasmodic bronchostenosis**. He wishes to dissociate the condition of bronchostenosis as ordinarily interpreted, from the bronchostenosis which is a transitory condition, it being nothing else than asthma without paroxysms. In bronchospasm, associated with bronchitis, there are present all the symptoms of the latter affection plus a spasmodic cough which is exceedingly distressing to the patient and usually resists the conventional expectorants. If the spasmodic element predominates in bronchitis, the sputum is scanty and viscid. On auscultation of the chest of a patient with bronchitis in whom is associated bronchial spasm, there are in addition to the usual rales of bronchitis, dry, squeaking, and groaning sounds, which are chiefly expiratory with prolonged and accentuated respiration. In differentiating the rales of bronchial spasm from those of bronchitis, he administers a few drops of nitrate of amyl. Such inhalation will temporarily dispel rales due to bronchial spasm, while on the rales of bronchitis no effect is produced. In spasmodic bronchostenosis independent of bronchitis, iodide of

potassium is virtually a specific. He states that many of the so-called stomach coughs are due to bronchial spasm. He recommends the following formula for the treatment of spasmodic bronchostenosis:

R

Iodide of potassium	5 drachms.
Tincture of lobelia	10 drachms.
Spirits of glonoin (1 per cent.)	16 minims.
Elixir bromide of potassium	to 4 ounces.

Mix. A tablespoonful three times a day after meals. This dose may be gradually increased if necessary.

[T. L. C.]

5.—E. H. Griffin contributes a paper on the **hemorrhagic diathesis in relation to operation on the nose and throat**. He states that these cases will tax the ingenuity of the surgeon to the utmost, and will greatly shake his belief in all astringents after he has tried one after another to control this class of hemorrhage, and found them all to fail. Even the suprarenal extract he will discard in a true case of hemorrhagic diathesis as useless, and wonder where it received its reputation as a hemostatic. He states that in these cases it is so often impossible to obtain a history of bleeding until after an operation has been performed, and the surgeon is face to face with the fact that he has operated on a hemorrhagic case. A number of cases are on record in which the unfortunate possessor of this diathesis has lost his life through the error of not informing the surgeon that he bled, and bled profusely, after the slightest cut. He cites several cases which illustrate the difficulty of controlling such conditions. [T. L. C.]

6.—F. J. Levisur discusses the **treatment of xanthoma of the eyelids**. He regards the treatment of internal medication as useless. Excision is recommended by the majority of authors and is practiced exclusively. The galvanocautery is recommended in preference to the Paquelin cautery on account of the absence of radiating heat, but the destruction which is produced is too far-reaching, and, therefore, somewhat beyond the control of the operator. The same may be said of the caustics. He recommends **electrolysis** which possesses none of the disadvantages of other methods. Local anesthesia may be produced by the galvanic current on the negative pole. The intensity of this anesthesia is in direct proportion to the voltage of the current. A current of one-half milliamper and thirty volts will render a spot of the size of a pea anesthetic in two or three minutes. After that the amperage of the current may be increased without causing pain. [T. L. C.]

MEDICAL NEWS.

December 7, 1901. (Vol. LXXIX, No. 23.)

1. A Case of Suture of a Stab-Wound of the Heart, with Remarks on and a Table of Cases Previously Reported. GEORGE TULLY VAUGHAN.
2. When and How to Introduce the Stomach-Tube. MARK I. KNAPP.
3. The Pathology and Treatment of Bilocular Stomach, with a Report of Two Cases. CHARLES GREENE CUMSTON.
4. Some Unusual Localizations of Tuberculosis. FREDERICK A. BALDWIN.
5. Nephrectomy for Severe and Prolonged Mononephrous Hemorrhage. GILANVILLE MacGOWAN.

1.—G. I. Vaughan reports twenty-six cases of **sutured stab-wound of the heart** in which there were nine recoveries and seventeen deaths, a mortality of 65.38 per cent. The situations were as follows: 1, left auricle; 12, left ventricle; 8, right ventricle; and 5, not given. From the above it will be seen that the ventricles are more apt to be wounded than the auricles, and the left ventricles more frequently than the right. Of the recoveries, two were wounded in the right ventricle; two possibly non-penetrating and one in the apex. From the table appended to his article, the following conclusions are drawn: (1) The time has arrived when a wound of the heart should be operated on with as little hesitation as a wound of the brain, with the expectation under corresponding conditions

of getting equally good results. The mortality must inevitably be high—not from the operation, but from the injury—especially if all cases, including desperate ones, be undertaken. Selection of cases who have survived five or more hours after receiving the wound would give a good percentage of recoveries, but such selection is not to be recommended; (2) In all cases of wounds in the region of the heart, with symptoms threatening life, an exploratory operation should be done by making an osteoplastic flap, dividing the fourth and fifth costal cartilages at their attachments to the sternum and the ribs about one inch external to their attachment to the cartilage, somewhat according to the method of Roberts. This flap turned up as a door on a hinge, gives a good view of the pericardium and can easily be enlarged if more room is required; (3) while early and speedy operation is often essential to success, yet the importance of asepsis cannot be too strongly emphasized on account of the great danger of pericarditis and empyema. If there has been hemorrhage, a quantity of physiological salt solution, approximately equal in amount to the blood lost, should be injected into a vein while the surgeon is operating on the heart, if it has not been done sooner. [T. M. T.]

2.—M. I. Knapp does not think that such diseases as heart, lung and aortic diseases, general diseases, pregnancy, etc., contraindicate the use of the stomach tube, if properly handled. He advises the operator to stand at the right side of the patient, putting his left arm around the back of the patient's neck. This accomplishes two things: (1) the arm gives the patient an agreeable support to his neck; (2) with the arm around the back of the patient's neck, the operator has the most robust patient under his physioleal control. Then attempt to introduce the tube, which has previously been immersed in water—no other lubricant is necessary. With the left arm around the back of the patient's neck, the proximal end of the tube is held between the thumb and index of the left hand—the tube running through the palm of this hand and the opening of the tube away from the operator. This left hand is kept close to the patient's mouth. The tube, held this way, insures the operator against any of the stomach contents spurring upon him. The distal end of the tube—that part which goes into the stomach—is now taken between the thumb and index finger of the right hand, in the manner in which a pen is held, and introduced into the patient's mouth, which must not be opened any wider than is absolutely necessary letting the tube pass all the time between the flexed third and fourth fingers of the left hand. The object of this last procedure is to limit the side motions of the soft tube and prevent kinking; it gives a certain degree of stiffness to the soft tube. As soon as the tube appears to have reached the posterior pharyngeal wall, the patient is told to swallow and keep breathing deeply. The tube is now fed into the stomach, the end still passing between the third and fourth fingers of the left hand. It is not necessary to have the patient protrude his tongue, or for the operator to put his finger as a guide into the patient's mouth. The cyanosis of the patient need cause no alarm, as it is due only to a momentary cessation of breathing caused by the effort to expel the tube, in which the patient might succeed if the tube were not held with the right hand. [T. M. T.]

3.—C. G. Cumston divides bilocular stomach into two forms, congenital and acquired. The congenital form is distinguished from the latter in that it is usually free from adhesion with the neighboring organs and that the stricture is longer and is not formed of cicatricial tissue but of the normal structures forming the walls of the organ. This form resembles very closely the stomach of various rodents. The cardiac part of the stomach is usually larger than the pyloric. The strictured part connecting the two pouches is glossy white and longer than in the acquired form. Microscopically, no cicatricial formation can be discovered, and only atrophy of the gastric mucosa, more particularly of the glandular tubes, can be seen. Gastric ulcers have been found at stricture, always secondary, and probably produced by the pressure of the food passing through the narrow part of the organ. In the acquired condition symptoms arise which can be divided clinically into two groups. The first are simply those to which a gastric ulcer gives rise; after the lesion has existed for many years, or after several recurrences have taken place, the second group of symptoms appears and indicates bilocular stomach. In diagnosis very little can be ascertained by inspection,

but by palpation much can be learned. The epigastric and umbilical regions are often painful on pressure, and not infrequently a resisting mass can be made out, above which a high pitch percussion sound may be elicited, while on both sides of this high pitched area of percussion a tympanitic sound is obtained. Much importance has been attributed to the splashing sound which is frequently met with in the region of the umbilicus, but it is in no way characteristic of this condition. On percussion an interesting phenomenon is a tympanitic note over the pyloric pouch, while over the cardiac pouch there is elicited a dull note. In bilocular stomach the gastric contents show an absence of free hydrochloric acid or a trace. The acids of fermentation have been present in some cases. Where the gastric ulcer is recent, there is hyperacidity of the gastric contents. The absence of free hydrochloric acid and the fermentation are generally due to the existence of a chronic gastritis. An operation should be undertaken when a patient presents continued pain, repeated vomiting and other dyspeptic disturbances, or when symptoms, such as increasing emaciation and cachexia make their appearance. The author states that no operation can be decided upon before the abdomen is opened and the condition of affairs thoroughly ascertained, and it is only after the surgeon has become perfectly familiar with the anatomical conditions present that he can select the operation most applicable under the given circumstances. [T. M. T.]

4.—F. A. Baldwin gives some unusual localizations of tuberculosis which have come under his notice: (1) Tuberculosis of the hypophysis; (2) tuberculosis of the intercostal tissue near the sternum, with secondary tuberculosis of the axillary lymph glands; (3) primary tuberculosis of the Fallopian tube, with a large tuberculous abscess in the ovary; (4) tuberculosis of the thyroid gland; (5) tuberculosis of the uvula; (6) an adenomatous polyp of the cervix uteri showing tuberculosis. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

December 7, 1901. (Vol. LXXIX, No. 23).

1. Ulceromembranous Angina Associated with the Fusiform Bacillus (Vincent). A report of twelve cases in Children.

JACOB SOBEL and CHARLES HERRMAN.

2. Appendicitis. JOHN B. DEEVER.
3. Report of a Case of Interstitial Pregnancy.
R. H. PIERSON.
4. The Daily Medical Inspection of Schools. D. S. LAMB.
5. On a New Principle in Nephropexy. CARL BECK.

1.—J. Sobel and C. Herrman report twelve cases of ulceromembranous angina in children under ten years of age. The situation of the ulceration was found in six cases on the right tonsil; in four on the left, and in two on both. In one case both tonsils were involved simultaneously, while in the other the left tonsil became affected two days after the right. Similar ulcerations, either independent of or in connection with the tonsillar ulceration, may occur on the tongue, cheeks, and gums. In the authors' cases the ulceration was limited to the tonsils excepting one case. Any portion of one or both tonsils may be affected. The size of this ulceration varies from that of a small finger nail to the greater part of the tonsil. The shape is irregularly circular or oval. As to its character, it appears to have a worm-eaten floor, the edges being on a level with or slightly elevated above the tonsillar surface. Tonsillar inflammation is usually very moderate; when more marked the ulcer appears somewhat deeper and the destruction of tissue greater than they really are. Within the first 24 to 48 hours it appears membranous. The color differs, being either a yellowish, greenish gray or a dirty light brown; but all have in common the sloughing base with the level or slightly raised edges. The depth varies from $\frac{1}{8}$ to $\frac{1}{2}$ inch, sometimes extending to the floor of the tonsil. There is some elevation of temperature—from 101° to 103.4° F. As a rule, there is no temperature. The submaxillary glands are generally enlarged, and always so on the side of the lesion. The symptoms are entirely local, fever, as a rule, rarely being so high as to produce constitutional disturbances. Generally the symp-

toms complained of are pain in the throat and difficulty in deglutition. The diagnosis, for convenience, is divided into (a) clinical; (b) microscopical; (c) bacteriological. Clinically, it must be distinguished from diphtheria, confluent follicular amygdalitis and other tonsillar inflammations. In distinguishing from diphtheria, for all practical purposes, it may be stated that the affection is ulcerative and not membranous; from confluent follicular amygdalitis, by the absence or mildness of constitutional symptoms, by the superficial character of the former, and by the presence, perhaps, of follicular spots on one or the other tonsil. A positive diagnosis can only be made by the microscopical appearances. The smears are stained with Ziehl's solution of carbol-fuchsin in the proportion of one to three of water. Microscopically will be seen the characteristic fusiform bacilli and spirilla in large numbers. The bacillus is about twice as long as the Klebs-Löffler bacillus and somewhat pointed at the ends. Some are bent in the shape of a crescent, others are arranged end to end, others at an acute angle, some arranged in pairs or groups and others scattered about without any particular order or grouping. The authors have found the bacillus distinctly motile. A bacteriological diagnosis is not reliable. The prognosis is invariably favorable. As to treatment, apply to the necrotic mass a solution of silver nitrate, three to five per cent. Lugol's solution is more efficient, but also more disagreeable. Siredey recommends chromic acid applied directly to the lesion. Alkaline mouth-washes, solutions of potassium permanganate, etc., should be given when necessary.

[T. M. T.]

2.—J. B. Deaver, in his article on **appendicitis**, states that if the three cardinal symptoms—pain, tenderness and rigidity—are kept in mind, the early diagnosis in nine cases out of ten is very easy. The sudden abdominal pain, general or localized to any part of the abdomen, is the first symptom—this after a short time localizing to either McBurney's point or to a point over the tip of the organ, which may be almost anywhere in the abdominal cavity. Tenderness is not that elicited by carelessly applied pressure or tight clothing, but a tenderness confined to a small area elicited by the pressure of a single finger. Pressure on other parts of the abdomen often causes pain under McBurney's point. Tenderness is more often localized to McBurney's point than is the pain. Rigidity is nearly always present from the onset, but this can sometimes only be demonstrated by the most gentle touch. He advocates early operation, and says the ideal time to operate is in the stage of appendicular colic before inflammation has taken possession of the vulnerable tissues composing the organ. [T. M. T.]

3.—R. H. Pierson reports a case of **interstitial pregnancy** in which the gestation originally occurred in that portion of the tube within the thickness of the uterine wall, the interstitial portion. As the ovum matured it forced open the uterine end of the tube and produced the above condition. To diagnose this condition prior to abortion and exploration is extremely difficult or impossible. In the case mentioned the careful digital exploration of the uterus, under suitable antiseptic precautions, did no harm and brought to light conditions least suspected. If placenta forceps had been used and the membranes simply twisted from their site, in all probability the tubal portion of the placenta would have remained to become a medium for the growth of septic germs. Two questions arise in considering this case: (1) what was the relation of the uterus to the tubal cavity while the fetus was in the uterus? (2) what would have been the result if the pregnancy had not been interrupted? From the condition of the tubal orifice, its distensibility, and the fact that the tubal cavity held so much placental tissue, when the uterus was distended by the presence of the fetus, the ring was much larger than at the time when first observed. Contractions of the uterus had contracted this ring. As gestation progressed and the uterus enlarged, it is possible, by the time the pregnancy was completed, the relations would have been nearly those found in the normally pregnant uterus, and the labor at full term would have occurred and a satisfactory result would have taken place without interference of any kind.

[T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 5, 1901. (Vol. CXLV, No. 23.)

1. Hernia Epigastrica and Fatty Tumors in the Epigastrium. HOWARD A. LOTHROP.
2. One's Health in Egypt. F. GORDON MORRILL.
3. The Similarity of the Early Symptoms of Simple Abdominal Contusion and One Accompanied by Severe Intestinal Injury; the Need of Exploration Celiotomy as an Early Routine Measure.

JOHN T. BOTTOMLEY.

4. The Scope of Vaginal Section in the Treatment of Pus in the Pelvis, with a Report of Eighty-Two Abdominal Sections without Mortality; and Eighteen Vaginal Sections with One Death, Due to Accidental Causes. EDWARD REYNOLDS

and L. V. FRIEDMAN.

5. Prostatic Calculus Removed Through Perineal Section. CHARLES G. LEVISON.

1.—Embryological defect, weak abdominal parietes, trauma and the preperitoneal fat and the terminal vessels and nerves are the causative factors of **hernia in the epigastrium**. The abdominal wall becomes weakened and less able to withstand increased abdominal pressure at the points generally corresponding to the site of the passage of vessels through the anterior sheata of the rectus muscle or the immediate vicinity of the linea alba. It is probable that most epigastric herniae are preceded by a condition which, at one time, could be considered only as a fatty tumor, The tumor may give rise to no disturbance whatever. Symptoms may appear after trauma or they may be insidious and progressive. The symptoms are those of gastrointestinal disturbance, pain and intestinal indigestion. A fatty tumor or epigastric hernia will not disappear spontaneously; it may give rise to symptoms at any time. If symptoms are present, operation is indicated. [J. M. S.]

3.—We have no certain means of distinguishing between a **simple abdominal contusion** and one complicated by **severe intestinal injury**, except through an exploratory incision. This, to be of most avail, must be done within a very short time (3 to 5 hours) after the receipt of the injury. Having no other certain method of diagnosis, and the promptness of the operation being the feature necessary for its success, Bottomley believes that exploratory laparotomy, combining as it does opportunity for a certain diagnosis and the best possible treatment, if severe injury be present, should be a very early routine measure in all but the most trivial cases of contusion of the abdomen. [J. M. S.]

4.—Reynolds and Friedman were impressed with the considerable mortality necessarily incident to the abdominal extirpation of recently infected tubes and other collection of **pus in the abdomen**, and with the therapeutically good results of thorough **vaginal drainage** in such cases, that they adopted the rule that, in all cases of inflammatory masses in the pelvis which presented acute symptoms, and in which there had been a fairly continuous temperature, averaging 100° or more during the attack for which the patient sought treatment, they would confine operation to thorough drainage by the vagina, without attempting the removal of the affected viscus. [J. M. S.]

5.—Levison reports a case of **prostatic calculus removed through perineal section**. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 7, 1901.

1. Clinical Observations in Pericarditis. FRANK BILLINGS.
2. The Pathology and Pathogenesis of Pericarditis. JOS. McFARLAND.
3. Etiology of Pericarditis. ROBERT B. PREBLE.
4. The Extraction of Cataract Without Iridectomy. S. D. RISLEY.
5. Temporary Clearing of a Cataractous Lens. HIRAM WOODS, JR.
6. The Enucleation of the Eye in Two Minutes by a New Method, With Demonstration. A. T. MITCHELL.
7. The Role of the Endothelium in Inflammation. E. R. LeCOUNT.
8. Fear as an Element of Nervous Diseases and Its Treatment. JOHN PUNTON.

9. Ten Cases of Infectious Multiple Neuritis, with Two Deaths. W. A. JONES.
10. The Increasing Sterility of American Women. GEORGE J. ENGLEMAN.
11. Appendicectomy Surgical History. H. MERRILL RICKETTS.

1.—Billings discusses the "clinical observations in pericarditis." The constitutional disturbances of a primary general infection sometimes obscure the local manifestations of pericarditis and occasionally symptoms and signs of dry or plastic pericarditis are absent. He mentions that pericarditis with effusion may be accompanied by irregular remittent and intermittent types of fever. We are also informed that pericarditis with effusion is usually recognized in the post-mortem room and not clinically. Pericarditis occurring in the course of croupous pneumonia is, as a rule, more fatal than when it occurs during acute rheumatic fever. Rheumatic fever holds the first place in the etiology of pericarditis. Rheumatic pericarditis is sometimes characterized by sudden precordial pain or post sternal or epigastric distress and with dyspnea, and by an increase in the frequency of the pulse rate. At other times this condition may be ushered in by a few days of premonitory languor, anorexia, constipation, and slight disturbances of temperature and respiration. The onset of pericarditis in the course of rheumatic fever is difficult to recognize and requires the most careful daily scrutiny. The pericardial friction rub is usually the first sign of pericarditis. Endocarditis and myocarditis may accompany pericarditis in the course of rheumatic fever. The author reports a case of rheumatic pericarditis, also one of pyocarditis and a case of tuberculous pericarditis. The article is concluded by a discussion of the cardinal signs—the pericardial friction rub, the outline of precordial dullness, and the condition and position of the apex beat—and other signs. [F. J. K.]

2.—McFarland writes on "the pathology and pathogenesis of pericarditis." In this article he discusses this subject from the standpoint of the etiology, bacteriology, the morbid anatomy, and the prognosis. McFarland states that pericarditis is most common between the ages of 15 and 30, occurring more frequently in men than in women and affecting all classes of societies. Primary pericarditis is an extremely rare condition, while, on the other hand, secondary pericarditis is frequently a complication of the infectious diseases. Pericarditis may arise as the result of trauma or from lymphogenous or hematogenous metastasis. It has been known to occur in the course of rheumatic fever, pyemia, septicemia, pneumonia, chorea, endocarditis, tuberculosis, scurvy, blood diseases, malignant diseases, and in a few other infectious diseases. Streptococci, staphylococci, pneumococci, bacillus pyocyaneus, bacillus of Friedländer, and the bacillus tuberculosis, have been found in the purulent form. The tubercle bacillus is commonly associated with the hemorrhagic form. McFarland describes the morbid anatomy of the following varieties: Pericarditis sicca, sero-fibrinosa, purulenta, adhesive chronica, hemorrhagica, tuberculosa. The heart-muscle is always affected in pericarditis, the degree of this change depending upon the form of pericarditis. [F. J. K.]

3.—Preble discusses "the etiology of pericarditis." He carefully reviews the literature of this subject and reaches the following conclusions which we quote in substance: (1) Cases of acute pericarditis clinically primary occur, but are rare; (2) diseases to which pericarditis appears as a complication are in order of their frequency: pneumonia, 34%; rheumatism, 28.36%; chronic diffuse nephritis, 11.2%; tuberculosis, 10%; sepsis, 4.7%; aneurysm, 2.6%; typhoid, 1.7%; (3) the more extensive a pneumonia, the greater the danger of this complication; (4) the danger is somewhat greater with left than with right-sided pneumonia; (5) where only one lobe is involved the danger is least with a right upper-lobed pneumonia and greatest with a right middle or left upper-lobed pneumonia; (6) with an unilobar pneumonia the chances of a pericarditis are 1 in 40; with a bilobar or trilobar, 1 in 10; with quadrilobar, 1 in 5, and with a pneumonia of the entire left lung, 1 in 8; (7) the mortality of pneumonia with pericarditis is 92.4%; (8) rheumatic pericarditis is complicated by endocarditis in 60% of the cases, i. e., three to four times the normal rate of endocarditis; (9) the danger of pericarditis complicating rheumatism is the greater the younger the individ-

ual, and is somewhat greater with males than with females; (10) So far as acute pericarditis is concerned, the site and extent of endocarditis are apparently of no importance; (11) pericarditis appears as a complication of all forms of nephritis, but particularly the chronic diffuse with contraction; (12) It is an extremely ominous thing, for 22, i. e., 84.6% of the cases died; (13) It is still uncertain whether the pericarditis is toxic or infectious; (14) tuberculosis excites only one-tenth of the cases, and when one considers the extreme frequency of tuberculosis, pericarditis must be regarded as a rare complication; (15) pericarditis may be a part of a generalized acute tuberculosis, but is more often the result of a chronic tuberculosis of the lungs or mediastinal glands; (16) septicemia and pyemia contribute a very considerable number of cases of pericarditis. The primary focus may be remote or close to the pericardium; (17) aneurysm of the aorta causes 2.6% of all the cases, a very high figure when one recalls the comparative infrequency of aneurysm; (18) typhoid fever, which is rarely complicated by inflammation of the serous membranes, other than the peritoneum, contributed 4 cases, which is 1.7%; (19) the cases of obliteration of the pericardium are due to the following causes arranged in order of importance: Endocarditis, tuberculosis, chronic nephritis, aneurysm; (20) more than one-half of the cases in which the cause was clear, were due to endocarditis, or rather to some cause common to both the endocarditis and the pericarditis, and more than one-half of these cases showed a combined aortic and mitral endocarditis; (21) relatively six times as many cases of obliteration of the pericardium occur with aortic and mitral endocarditis than with either lesion singly; (22) tuberculosis causes but few cases of oblitative pericarditis; (23) pericarditis, accompanying nephritis, is not always fatal, but may apparently end in the formation of adhesions." [F. J. K.]

4.—See page 1140, Philadelphia Medical Journal, June 15, 1901.

6.—Dr. A. T. Mitchell, in his article on enucleation of the eye, comes to the following conclusion: (1) The method causes so much less traumatism than others that it is available where enucleation has to be done with least possible injury; (2) where grave reasons obtain against anesthesia, a quick operation is the only one that can be considered; (3) cosmetic considerations are met as well by other procedures; (4) an operation done quickly, with a few clean cuts, deserves comparison with the same thing most of us have seen the general practitioner take an hour of hacking and probing to do.

7.—LeCount believes that endothelial cells play an important role in inflammatory reactions. He concludes that proof is still lacking to show that fibrous tissue is developed from the endothelial lining of blood vessels.

[F. J. K.]

9.—Jones reports "10 cases of infectious multiple neuritis with two deaths" which occurred in the city of Minneapolis between the 15th of February and the 15th of March, 1901. He reminds us that influenza was epidemic at the time of the occurrence of these cases, and suggests that the influenza bacilli were responsible for the neuritis, especially as six of these cases occurred within one week. The majority of the cases was not typical, only one or two corresponding to the usual descriptions found in text books. Motor symptoms were prominent in some of the cases. There was also a minimum degree of muscular atrophy. Absences of trunk pain, tenderness, paresthesia, and anesthesia, were frequent. [F. J. K.]

AMERICAN MEDICINE.

December 7, 1901.

1. A Century of Vaccination. FLOYD M. CRANDALL.
2. The Diagnosis of Smallpox. JAY F. SCHAMBERG.
3. Tetanus Appearing in the Course of Vaccinia, etc. ROBERT N. WILLSON.
4. Vaccine Production and Vaccination. GEORGE G. GROFF.
5. Report of a Case of Compound Comminuted Depressed Fracture of the Skull, etc. G. W. SPENCER.

6. Shall Massage of the Stomach be Recommended? Etc.

MARK I. KNAPP.

7. On the Use of Gärtner's Tonometer.

LEROY CRUMMER.

1.—F. M. Crandall contributes a paper on: **A Century of Vaccination.** He summarizes lessons taught by the experience of more than a century as follows: 1. The first lesson cannot be better stated than in the words of the Berlin Board of Health: "Vaccination in infancy, renewed at the end of childhood, renders an individual practically as safe from death from smallpox as if the disease had been survived in childhood, and almost as safe from attack." 2. The duration of the immunity conferred by vaccination is variable. In many individuals vaccination in infancy, and revaccination in childhood is sufficient for life protection. In a limited number immunity is lost in five or six years. It is never possible to know with certainty to which class an individual belongs. In the face of an epidemic, therefore, vaccination of all who have not been vaccinated within five or six years, is giving what the lawyers call the benefit of a reasonable doubt. Every one who has been vaccinated in infancy and childhood, should be vaccinated not less than once in adult life. 3. The immunity conferred by vaccination is in direct proportion to the thoroughness with which it is performed, and this is shown with considerable accuracy by the character and number of the resulting scars. 4. Vaccination in infancy alone is not sufficient to wholly prevent smallpox among the adult population. 5. Optional vaccination has not proved sufficient to protect the community from smallpox. Compulsory vaccination is a measure warranted by more than a century of experience. 6. The mild compulsion enforced in this country, by requiring vaccination or evidence of its recent performance upon admission to the public schools, should have the hearty support of parents and physicians alike. [T. L. C.]

2.—Jay F. Schamberg discusses the **diagnosis of smallpox.** Five figures illustrating several degrees of severity of the eruption accompany the article. He deals with the prodromal symptoms, constitutional symptoms, distribution of eruption, character of the lesions, manner of eruption, course of eruption, as the question of differential diagnosis. The pustular syphilid, particularly that known as the varioliform syphilid, may resemble smallpox strikingly. The history and initial symptoms, and the fact that the syphilitic eruption comes out in successive crops; that the palms of the hands and soles of the feet, which are constantly beset with lesions in smallpox, are rarely attacked in the pustular form of syphilis, are points which will aid in the diagnosis. The confounding of smallpox with *impetigo contagiosa* can only rise from the misunderstanding of the nature of the latter disease, which is a purely local dermatosis resulting from inoculation of the skin with pyogenic microorganisms. The eruption is usually limited to the neck and face, although occasionally a few lesions may be present upon the hands. The trunk and lower extremities are, as a rule, entirely free, and the lesions do not ordinarily exceed a dozen in number. A diagnosis should not be based upon any one feature of the disease, but upon the entire picture presented. [T. L. C.]

3.—Robert N. Willson reports a case of **tetanus appearing in the course of vaccinia.** The patient was a girl baby of 11 months, who was vaccinated four weeks before she was seen by the writer. The vaccination was successful and ran a moderately severe course, and when last seen by the physician first in attendance, the ulcer was clean, still discharging serum, but free from any signs of secondary infection. Just four weeks after the first vaccination, symptoms of tetanus appeared. 10 cc. (= 500,000 units) of antitoxin were given and repeated the next evening. The child died the third day after the beginning of the tetanic symptoms. The curettings of the vaccine ulcer at the time of the first visit showed a profuse growth of *staphylococcus albus* in pure culture on blood serum, agar and bouillon. Of the latter there was no clouding but a mouldlike growth

on the top of the medium. No growth of the anaerobic bacilli was obtained, and none were discovered in cover-slip preparations made directly from the wound itself. Willson discusses several cases which have recently come to light of tetanus infection, and states that in every instance, and contrary to the rule of tetanus, the so-called secondary infection has appeared at a very late date, from the twentieth to the twenty-eighth day from the time of vaccination. All of these cases, including one reported still more recently from the Philadelphia Hospital, have been fatal, which is contrary to the rule, providing that the tetanus toxin was in fact introduced at the same time with the vaccine virus. In all cases the specific antitoxin was employed, and in Willson's case carbolic acid as well as chloral and the bromids by the rectum, but without permanently favorable result. In his own case a mixed infection was present in the vaccination wound when first the tetanus symptoms appeared. The cases observed up to this time point to the failure of the physicians regarding the danger of using the shield rather than a protective dressing, and the probability of secondary infection if the wound is left to the sleeve and atmosphere. [T. L. C.]

4.—George G. Groff discusses **vaccine production and vaccination.** He states that it was the experience of the army surgeons in Porto Rico during the Spanish-American war, that glycerinated virus, produced in one public laboratory, seemed absolutely inert. For 10 years he has been under the conviction that whenever epidemics of smallpox occur, the virus supplied to physicians is much more attenuated than when no epidemics exist. He also states that one of the questions of some difficulty to decide is the fact that when a sore arm exists, there may be a division of opinion as to whether or not it is a genuine vaccine vesicle. He inquires what percentage of such typical vesicles, scabs and scars is obtained from the numerous brands of virus now on the market. The epidemics in the State of Pennsylvania which have gained ground, he declares to have been due to the failure on the part of the physicians to diagnose the disease. In the 800,000 vaccinations made in Porto Rico by the military government, with virus produced on the ground, neither the scab, the lymph from the sore, nor the granulating tissue under the scab were used; only the product containing the virus. [T. L. C.]

6.—Mark I. Knapp concludes after a study upon the subject of **massage of the stomach**, that this treatment after the methods of *effleurage* and *tapotement* was a benefit in all six cases; each patient felt better, but he believes that this feeling of improvement was mostly psychic. The motility of the stomach was not only not increased by the massage but was actually delayed in every instance; and the influence on the secretion of hydrochloric acid certainly was not in accord with the theoretically accepted view, as the HCl. showed a tendency to diminish rather than to increase. He employed the form of massage known as *petrissage* once or twice and found that it could be employed only in patients with lax, thin abdominal walls, the stomach being either much dilated or in a very ptotic condition. He concludes by recommending stomach massage for its psychic effects only. [T. L. C.]

7.—Leroy Crummer presents a paper on the use of **Gärtner's tonometer.** He summarizes the value of the instrument as follows: In diagnosis.—In eliciting the tension in cases in which the mean blood-pressure is symptomatically changed—either increased or decreased. In prophylaxis.—In keeping track of the blood-pressure in those cases in which it is important to have the earliest possible knowledge of the break in the compensation, i. e., in the valvular lesions and in kidney diseases. In prognosis. In building our prognosis, in acute cases, on a maintenance of the power of the heart—read directly by means of this instrument. Therapeutically. As a measure of the effect of drugs or other treatment given for the production of changes of arterial tension. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 40.

1. The Significance of Elastic Fibres in Pathology, Especially in Regenerative Processes of Growing Tissues. B. GROHE.
2. A Case of Tumor-Like Hyperostosis of the Skull. A. SCHILLER.
3. A Case of Brain Abscess in the Temporal Lobe Following Chronic Suppuration of the Middle Ear, Cured by Operation. HOELSCHER.
4. Diplococcus Semilunaris Accompanying Tuberculosis. E. KLEBS.
5. A Case of Cesarean Section in an Osteomalacic Pelvis. H. MARX.
6. A Foreign Body in the Nose. GROSS.
7. A Case of Pseudoleukemia with Intermittent Fever and Simultaneous Glycosuria. A. GOLDSCHMIDT.
8. Country Practice. PETERS.
9. Comparative Investigations upon the Value of Forced System of Inhalation. K. EMMERICH.
10. Memorial to Alvin v. Coler.
11. From the Medical Witch Kitchen. A Contribution to the History of Medicine in the Middle Ages. J. MARCUSE.

1.—Grohé, after a careful review of the literature of the elastic fibres describes some experiments performed by himself upon young rabbits. He produced fractures in the bones, and then after healing had taken place, which was retarded as much as possible, the tissue was hardened, decalcified and sectioned. The results showed that ordinarily complete tear of the fibro elastic occurred, partly due to mechanical violence, partly to the extravasation of blood. Then the cells of the fibro elastic began to proliferate very rapidly, and in the callous these fibres were often found everywhere. In one case in which the radius and ulna had grown together, an extraordinary number of minute fibres were found between the connective tissue and the muscle. This proliferation of fibres occurred not only in external but also in the medullary callous. The origin of these fibres appeared to be from the old elastic tissue. [J. S.]

2.—Schiller describes the case of a man of 30, whose skull was deformed by several large protuberances. These had existed since his birth, and had formed an impediment to parturition. X-ray examination of these showed them to consist of bone. Up to his 19th year he had suffered severely from headaches, but after that time had had no further disturbance. There were no deformities in the bones of the face. This condition probably represented a congenital tumor-like hyperostosis of the bones of the skull. Although in these conditions the prognosis is usually bad, in view of the fact that no symptoms have occurred for 11 years, the patient may be regarded as likely to remain unaffected. [J. S.]

3.—Hölscher reports the following case. A boy of 14 with chronic otitis media of the right ear, severe pain in the right occipital region, and in the forehead. There was some fever and chills. The cause was supposed to be a polyp of the external meatus which was removed without relieving the symptoms. On the 5th day a radical operation was performed, opening the tympanic cavity of the ear, and examining the sinuses of the dura. These appeared to be normal; the condition of the patient, however, was very unfavorable and 2 days later, in addition to severe pains in the head, horizontal nystagmus was noticed and the following day slight paralysis of the left side of the face. On the 8th day a considerable amount of pus was discharged when the tampon was removed. The wound was enlarged and examination of the dura showed the presence of softening in the temporal lobe. The dura was therefore incised and a considerable amount of pus and necrotic brain matter was discharged. The patient rapidly improved after this and ultimately recovered. The interesting points in this case were the persistent absence of choked disk, the sudden increase in the rapidity of the pulse as soon as the abscess was evacuated and the brain pressure reduced. The case shows the importance of a thorough operation at the beginning. [J. S.]

4.—Klebs has discovered a form of micro-organism that is nearly always associated with tuberculous processes. It occurs in the form of a diplococcus and grows upon gly-

cerine agar as a very delicate, transparent brownish colony, then as these grow larger they become slightly darker in the centre. Microscopically it appears as 2 biscuit shaped microorganisms with the broad surfaces very close together, occasionally forming pseudo-tetrads. It is fairly large, the double form attaining a diameter of 3 micra. It is only found outside the cells; is best stained with 2% solution of safranin T, and only partially by Gram's method. If the growth is very luxuriant it forms chains. They have a very remarkable catalytic activity which can best be detected by pouring over the cultures a 2% solution of hydrogen peroxide. It is pathogenic for men and animals, causing a phlegmonous form of infiltration. He believes that its presence in tuberculosis is of grave significance, and reports a case in which in spite of energetic treatment with various bacillary extracts death ultimately occurred, because the diplococcus was present in considerable numbers. It is found not only in the sputum, and on the tonsils, but in tuberculous lymph glands and tuberculous joints. [J. S.]

5.—Marx reports the case of a woman, 42 years of age, who, with 2 previous pregnancies had had severe pains in the lumbar region. After the 3d she noticed that the pelvis was growing smaller, and on the occasion of the 4th parturition it was found that, as a result of osteomalacia, the true conjugate had been reduced to 5.1 cm. Cesarean section was therefore performed, a living child extracted and the incision in the uterus closed by sutures. The patient made an uninterrupted recovery. [J. S.]

6.—Gross reports the case of a boy of 9, who, at the age of 5, had inserted a shoe-button in the left nasal cavity. In the course of time a chronic and excessively fetid discharge appeared from the nose, excoriating the edges of the alae and of the upper lip. Examination was painful even under cocaine, but enough was discovered to recognize the presence of a large encrusted foreign body covering the septum and a part of the lower turbinated bone. In order to remove this it was necessary to chloroform the patient, when it was found that it was apparently a bony structure about the size of a hazel nut. When opened, the shoe-button was found in the interior fairly well preserved. After the removal Gross curetted energetically the surrounding structures, and the patient made a perfect recovery. [J. S.]

7.—Goldschmidt reports the case of a man infected with syphilis from his wet-nurse. At the age of 54 he developed glandular swellings in the neck and axilla. A diagnosis of pseudo-leukemia was made. In the course of the disease he developed on one occasion icterus. There was moderate enlargement and tenderness of the liver; there was an attack of erythema and the characteristic recurrent fever of Ebstein. The patient emaciated rapidly, and there was extreme tenderness of the legs. During this period he developed glycosuria which was not affected by the character of the food ingested; was not associated with increased quantity of urine, but seemed to cause considerable thirst. Four years after the first symptoms he had improved somewhat and the fever was still irregular. He developed ascites and moderate leukocytosis. Shortly before death the swelling in the glands disappeared. An autopsy was not made. On 2 occasions antistreptococcal serum was injected, but both times without result. [J. S.]

8.—Peters gives a brief description of several influenza epidemics that occurred in Petersthal and were studied by him and his colleagues. He also mentions some very interesting cases, one a man of 80, who had symptoms of complete intestinal obstruction cured by injections of atropine. Another, a case of pleurisy, which was relieved by drinking considerable quantities of Wernerer spring water; 2 cases of carcinoma of the pylorus which died under the manifestations of acute symptoms after having worked until a day or two before death, and a case of meningitis not relieved by lumbar puncture. [J. S.]

9.—Emmerich contributes a very violent diatribe against Wasmuth, who criticised his experiments with inhalation apparatus. He contends that the experiments were properly done and his results accurate. [J. S.]

10.—Buttersack gives a brief sympathetic and laudatory account of the career of Alvin von Coler, who had done so much to improve the organization of and to elevate the scientific work of the medical corps in the German army. [J. S.]

11.—Marcuse gives a brief account of the life of

Turneysser zum Thurn, a quack who followed in the footsteps of Paracelsus, and for a time succeeded admirably, amassing considerable wealth. Then as the result of an unhappy marriage he was brought to poverty and distress, which points the moral and adorns the tale. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

October 19, 1901. (XIV Jahrgang, No. 41).

1. Rudolf Virchow's Eightieth Birthday.
ANTON WEICHELBAUM.
2. The Spinal Cord of Children and Syringomyelia.
JULIUS ZAPPERT.
3. Degenerative Changes in Renal Epithelium.
KARL LANDSTEINER.
4. Renal Changes in Hereditary Syphilis.
OSKAR STÖRK.
5. The Histology of the Pancreas. EMIL STANGL.
6. The Finer Changes in the Pancreas in Diabetes Mellitus. A. WEICHELBAUM and E. STANGL.
7. Ciliated Epithelium in Gastric Cancer and its Metastases. F. KUEHLS.
8. The Branchiogenic Organs in Man. J. ERDHEIM.
9. The Evolution and Involution of Decidual Tissue in the Peritoneum. C. STRAVOSKIADIS.
10. The Origin of Rupture of the Fallopian Tube.
OTTO T. LINDENTHAL.
11. The Etiology and Pathology of Epidemic Cerebro-spinal Meningitis. H. ALBRECHT and A. GHON.
12. Metastatic Ophthalmia in Epidemic Cerebro-spinal Meningitis. WINTERSTEINER.
13. Friedländer's Bacillus the Cause of Brain Abscess.
MILAN SACHS.
14. Influenza with Diphtheria. KARL LEINER.
15. The Etiology and Histology of Endocarditis.
JULIUS BARTEL.

1.—Weichselbaum reviews Virchow's life and works.

2.—Zappert examined about 200 spinal cords in embryos, new born infants, and children under two years of age. He found that hemorrhage into the posterior horns of the cervical cord, while not frequent after difficult labor, seems a characteristic condition. Simple hydromelia is not pathological, yet a complicated cavernous condition may develop in the spinal cord from simple hydromyelia. In one case, a child of 19 months, a progressive widening of the central canal occurred, combined with an increase of the neuroglial tissue, a distinctly pathological condition. In a case of anencephalus, congenital hydromelia occurred in the cervical region, as in syringomyelia. After reporting with histological detail several cases, Zappert concludes that a surely congenital neuroglial hyperplasia was not found in any case, but that there seems to be some relation between this infantile syringomyelia and other abnormalities of the cerebral nervous system. Thus it is seen that syringomyelia may be congenital and traumatic.

[M. O.]

3.—Landsteiner has studied the degenerative changes occurring in the kidney epithelium in the infections and intoxications. His methods of study are given in detail with several diagrams. He concludes that no parallel can be found between the deposition of fat in the renal epithelium and the destruction of the protoplasm of the kidney epithelium. Albuminous cloudiness may exist without fatty degeneration, but with outspoken fatty degeneration, the "little rods" of the kidney structure are not necessarily changed. Different types of fatty renal cells were observed. [M. O.]

4.—Störk examined the kidneys of 20 hereditary syphilitic embryos and children. After describing the fetal development of the kidney, he shows that neogenous zones should not be noted after the ninth month of fetal life. From his investigations, the kidneys of infants with congenital syphilis not only showed delayed development, neogenous zones being seen after birth, but also were abnormal in the form or arrangement of their component parts. In these cases the histological findings pointed to probable specific nephritis. He calls these abnormalities "secondary vegetative disturbances due to syphilis." [M. O.]

5.—After reviewing the literature of the subject fully, Stangl gives the histological findings in the pancreas of numerous cases, and reports his investigations in animals. He concludes that the fat droplets found in the pancreas

are noted first in the second half of embryonic development, and then only in very small numbers. After birth, however, with digestion, they rapidly increase in size and number, until the twentieth year of life, when they increase more slowly. They are distinctly visible in old age and are supposed to be the normal products of the cells. When they occur in excess in old age, they are the expression of the decreased vital energy of the cells.

[M. O.]

6.—Weichselbaum and Stangl describe the changes found in the pancreas in 18 cases of diabetes mellitus. The patients varied from 14 to 75 years in age, while the disease had existed from three weeks to 19 years. Atrophy of the parenchyma was noted macroscopically in 17 cases, many lobules being very small. The inter- and intra-lobular connective tissue had become lipomatous in 7 cases, while hyperplasia of the connective tissue was noted but once. In seven cases over 50 years of age the intima of the tiny pancreatic blood vessels was sclerotic. The islands of Langerhans were less in number and much smaller than normally. Fat droplets are seen in the normal pancreas. Only in these cases they are irregularly distributed in the tubular epithelium, while they appeared in large quantities, regularly arranged in the atrophied islands of Langerhans. They conclude from their researches that these changes are not due to pancreatitis or granular atrophy, but to a genuine atrophy from some unknown cause, especially affecting the islands of Langerhans. [M. O.]

7.—Kühls reports the autopsy upon the body of a man of 50, in whose stomach a cancer with ciliated epithelium was found, and this was noted in the metastases in the retroperitoneal lymph-glands, lungs, and suprarenal capsules. While this condition is very rare, Kühls explains it by referring to the embryonal gastric epithelium of the lower animals, where cilia are normally found.

[M. O.]

8.—From the examination of the neck of a case of total absence of the thyroid gland, Erdheim concludes that cysts are more apt to occur in the lower remnants of the branchial arches than in the upper; that it is still doubtful whether the cysts found in the reported cases of thyroid aplasia originated from the third or fourth branchial arch, that the cysts noted in Erdheim's case produced no thyroid tissue, since their origin was probably not the lateral branchial arch, but a remnant of the fourth median branchial arch; and that in cases of total thyroid aplasia, the lateral arch remnants are probably as plastic as the median. Besides, he concludes that while in the new-born infant these arches are solid, they form trabeculae by the second year; that large, light cells are only noted up to the third month, since they grow smaller after that; that the oxyphilic cells of Welsh only appear after the tenth year; that fat cells appear in the connective tissue in the fifth year, and increase gradually; that about the second year fatty droplets first appear in the epithelium; and that hemorrhages appear from time to time, well encapsulated. Finally, among the anomalies in the development of the thyroid gland, cystadenomata of the lingual duct are relatively frequent. [M. O.]

9.—Stravoskiadis has examined 28 specimens at different periods before pregnancy was completed and after parturition. Free decidual tissue was noted in the 18 cases of pregnancy, upon Douglas's pouch, the walls of the rectum, uterus, tubes, and broad ligament. The earliest was noted in the fourth month of pregnancy. It rises from the connective tissue of the serosa, not from the endothelium. Regressive changes are noted before parturition and for two months afterward, hyaline degeneration with cyst formation being seen. In some cases chalky bodies remain. Such findings are of great value in the diagnosis of a previous pregnancy, with abortion or parturition. [M. O.]

10.—Lindenthal studied a case of ruptured Fallopian tube in a young woman of 26, who died after laparotomy for ruptured tubal pregnancy. Pregnancy had taken place about 1 cm. from the uterine end of the tube. The growth of the embryo was stopped by hemorrhage, while the cells of Langerhans continued to proliferate and finally ruptured the tube, causing fatal hemorrhage. No decidual tissue was found. Excellent histological diagrams illustrate this article. [M. O.]

11.—Albrecht and Ghon describe the pathological con-

ditions found in cerebro-spinal meningitis. The micrococcus of Weichselbaum is generally noted in cases of true cerebro-spinal meningitis, the purulent exudate being seen in stripes or plaques, spread over the cerebellum, the convexity of the cerebrum, and the base of the brain. The meninges are thickened and shrunken, especially about the foramen of Magendie. The characteristics of the micrococcus of Weichselbaum are fully described and the literature of the subject is reviewed. Similar cocci have been found in the nose, throat, etc., of patients with meningitis, but they are not the true micrococcus of Weichselbaum. The micrococcus meningitis cerebro-spinalis is very rarely found in cases of mixed infection, though a few such cases have been reported. These seem to follow lumbar puncture. [M. O.]

12.—Wintersteiner reports a case of irido-cyclitis in a man of 26, suffering from cerebro-spinal meningitis. Thrombo-phlebitis of the retina followed, with optic neuro-retinitis. Such metastases as ophthalmia due to the micrococcus of Weichselbaum are very rare. [M. O.]

13.—Sachs reports a case of brain abscess in a man of 51, caused by the bacillus of Friedländer. This was confirmed by inoculation in mice, guinea pigs, and rabbits. Brain abscess is rarely due to the bacillus pneumoniae of Friedländer. [M. O.]

14.—Leiner reports eleven cases of diphtheria in which influenza bacilli were also found. Diphtheria with influenza seems more often fatal than is diphtheria alone, especially when that has been treated with antitoxin at once.

[M. O.]

15.—Bartel gives the autopsy reports in 23 cases of endocarditis. Five patients showed acute verrucose endocarditis with superficial bacteria; seven were subacute verrucose endocarditis with organized vegetations in which bacteria were embedded; five were old ulcerative endocarditis with deformity and calcification of the valve leaflets; and six were fresh endocarditis in tuberculous, cancerous, or old people. Bartel concludes that every verrucose endocarditis is mycotic in origin. The amount of vegetation found probably depends mainly upon the duration of the endocarditis and the resisting power of the individual.

[M. O.]

NEUROLOGISCHES CENTRALBLATT.

September 16, 1901.

1. The Variation in the Course of the Pyramidal Tract. E. STRAUSSLER.
2. Pathohistological Examinations of the Central Nervous System in a Case of Sachs' Family Amaurotic Idiocy. E. FREY.
3. Further Contribution to the History of the Tay-Sachs Family Paralytic Amaurotic Idiocy.

II. HIGIER.

1.—The subject, a man of 66, died 58 days after an attack of apoplexy followed by left hemiplegia. There had been some improvement in the paralysis before death. By the Marchi method, degenerative changes were found in the lateral and anterior pyramidal tracts. The fibres in the anterior tract were atypical in the distribution, they left the periphery, then returned to it and spread themselves over the ventral surfaces of the cord. The fibres in the lateral columns involved a part of the cerebellar tract in the dorsal region. The specimen shows anomaly in the course of the pyramidal fibres.—[J. S.]

2.—The patient, a boy of 1½ years, had been born in the membranes. His teeth appeared at 11 months, but he never learned to speak nor to walk. At the age of one year he was, however, able to sit up and use his hands to feed himself. From that time he had emaciated and became completely idiotic, had never recognized his mother, and shortly before death there was some edema of the face. The physical signs indicated rachitis. There was profuse salivation and great difficulty in swallowing. The eye-grounds showed slight atrophy of the disk, and a marked disturbance in the region of the macula lutea. There were spastic contractures of the limbs. The patient was unable to sit up, and when the attempt was made, the head fell upon the chest and the chest upon the thigh. The reflexes were greatly exaggerated. The child turned toward light and seemed to be frightened by

noises. Just before death he developed opisthotonus, convergent strabismus, and, as a final symptom, eclampsia. Microscopically there was degeneration of the pyramidal column throughout the whole spinal cord. In the lower dorsal region there was degeneration of the posterior columns, and there was some degeneration of the anterior cornua, particularly pronounced in the cervical region. The columns of Clark were normal. In the medulla and pons the chief changes were in the fibres of the pyramidal tracts, which had lost their medullary sheaths to a considerable extent. In the brain the same thing was true of the fibres in the internal and external capsule, and in the median and lateral part of the cortex. There was also marked degeneration of the fibres from the cortex of the frontal lobes, and a slight degeneration of the fibres in the occipital lobes. In hematoxylin preparations, pronounced changes in the pyramidal cells could be detected; morphologically the brain was normal. By the Marchi method, with the addition of confirming the degeneration already described, considerable recent alterations were found in the cortex of the brain. Frey concludes the case indicates that the degeneration occurring in this form of idiocy is not congenital, but post natum, therefore it is not due to a defect of development—the normal arrangement of the convolutions in the brain excluding this—but to some condition that causes degeneration in the cortices of the hemispheres, and gives rise to the degeneration of the cells and fibers. [J. S.]

3.—Higier reports 2 additional families in which cases of the amaurotic type of family idiocy occurred. The first patient was one of 9 children, 2 of whom were dead; the six living children suffered with a lisp and stuttered. At the age of 4 months the child could sit up; at 6 months it could stand, and was able to recognize its mother. At 7 months the first tooth appeared. After this time the physical and psychical development of the child ceased; there was gradual cessation of spontaneous movement or interest in the surroundings, and, as a result of progressive weakness, inability to sit up. The muscles were weak but reacted normally; there were no contractures. The knee reflexes were variable. Babinski's toe reflex was always present on both sides. The child was easily frightened by noise and suffered from time to time with hunger. It could not fix any object; there was divergent strabismus, although apparently no interference with the muscles of the eyeballs. The optic nerves were pale; the macula lutea changed to an intensive bluish gray. This represents a case of the disease without distinctive hereditary influence. The second case, a girl of 12 months, was a child of first cousins; there was some neuropathic heredity, and of 5 older brothers and sisters, 2 suffered from exactly the same disease, both being blind and idiotic at death. The present disease commenced at the age of 7 months, at which time the child could stand up and feed itself. It then began to emaciate, became idiotic, lost the power of fixation and could not recognize its mother. There was slight contraction of the limbs, slight increase in the reflexes, and great weakness of the muscles. The eye-grounds could not be examined owing to withdrawal of the child from the clinic. The same family furnished the 3rd case, the 4th of that family affected. The patient when observed was 13½ months old, and was the child immediately succeeding the 2nd case. At the age of 8 months it seemed to be entirely normal. From this time it became weaker, and took less interest in its surroundings; it lay quietly most of the time, seldom crying, and frequently laughing without cause. Contractures were not present. The reflexes were normal; the child was easily frightened by noises; the pupils reacted to light; but there was no fixation. There was horizontal nystagmus. The region of the macula lutea was replaced by a white oval spot, and the optic nerves showed commencing atrophy. The disease appears to be degenerative and not inflammatory. There is no solution of the question why the child remained normal in all respects for 8 months. The changes in the eye were probably secondary to changes in the brain. A remarkable fact is that the disease seems to occur only among the Jews. Of the 26 families reported, all but one or two were Jewish. The same thing is true of intermittent claudication, of which Higier has seen 23 cases, 22 of them Jews.

ARCHIV FUER VERDAUUNGS-KRANKHEITEN.

Band 7. Heft 3.

1. On the Absorption of Albuminous Bodies From the Mucous Membrane of the Large Intestine. As Demonstrated by the Use of Thymus Clysters.

J. MOCHIZUCKI.

2. The Diagnostic Importance of Microscopic Examination of the Blood in Carcinoma of the Stomach, and in Round Ulcer of the Stomach, with Special Consideration of the Digestive Leukocytosis.

R. RENCKI.

3. The Importance of the Costa Fluctuans Declina.

W. ZWEIG.

4. Gastric Ulcer or Gall-Bladder Disease?

A. HESSE.

5. Investigations Concerning the Digestive Properties of the Digestive Juice of the Small Intestine.

O. SIMON and ZERNER.

1.—The previous work concerning this question is first referred to, and the decision reached that there has been no thoroughly satisfactory proof of the absorption of albumins through the mucous membrane of the large intestine. The method undertaken to show that this does occur was the daily administration of an enema containing thymus gland; this was first boiled and then cut fine. Table salt and a little laudanum were given with the injections. The patient also received food by the mouth. The method of demonstrating that there had been actual absorption was to estimate the uric acid and phosphates in the urine; since it was shown that the uric acid and phosphates increase in the period during which the thymus was given. Mochizuchi decided that there had been absorption of the nucleo-proteids which had caused increase of the uric acid and phosphates in the urine. He also shows that there was increase in the nitrogen in the urine during the period in which enemata were given, hence he decided that there was also absorption of the proteid elements of the nucleo-proteids. He believes this demonstrates that certain albuminose bodies may be absorbed in this way, and that it is therefore possible to administer an important part of our nourishment by means of the bowel. [D. L. E.]

2.—Rencki in this portion of his paper discusses the changes in the hemoglobin and red blood cells occurring in new growths of the stomach, and in gastric ulcer. He uses the ordinary methods of studying the blood. In 15 cases of new growths in the stomach there was observed in 13 instances a decided increase in the red blood corpuscles. The lowest count was 2,680,000; the average was 3,875,000. In the early stages of the disease normal blood counts were observed in several instances; hence the count of the red blood corpuscles has no diagnostic importance, except that the statement that the red blood cells do not go as low as they do in pernicious anemia, is usually correct, but that this is not always true has been shown by cases of carcinoma of the stomach in which the blood count has been reported as low as 350,000. The hemoglobin in these cases of carcinoma varied between 90% in one case, and as low as 25% in other cases. The average was 65%. The hemoglobin, as others have observed, is usually decreased to a greater extent than the red blood corpuscles. In ulcer the average count of red cells was 4,539,000 in 14 cases. In one case, however, a count of 1,300,000 was obtained. The number of red cells depends upon the course which the ulcer runs. If there is frequent and severe hemorrhage of course the red cells sink very low. One important observation was the discovery of megoblasts in large numbers in one case of ulcer, a point which speaks strongly against the view that these are distinctive of pernicious anemia as against secondary anemia. The hemoglobin showed marked variation; from nearly 100% down to 19%. The conclusion concerning the red cells and the hemoglobin reached in this article is that there are no characteristic changes in either disease. Reduction of the hemoglobin below 60% is by no means characteristic of carcinoma, nor is the presence of nucleated red blood cells at all distinctive of ulcer. When, however, the red blood count is comparatively high and the hemoglobin is low, it speaks against anemia due to hemorrhage, and hence it speaks to a very slight extent in favor of carcinoma and against ulcer. [D. L. E.]

3.—Zweig gives an interesting discussion of Stiller's

sign, (movable 10th rib), which the last-mentioned author, as is well-known, considers a very characteristic sign of either existing or imminent neurasthenia. Zweig discusses the results obtained by those who have investigated cadavers, which speak strongly against this view of Stiller's, and which show its frequent presence in those who have had no signs of general neurasthenia, and, more particularly in those who have no signs of enteroptosis. His clinical results were also contrary to Stiller's view. He found that 49% of those persons who had movable 10th rib had evidence of nervous dyspepsia. Atony of the stomach was present in only a much smaller proportion of cases. This is contrary to Stiller's belief that atony is a certain accompaniment of enteroptosis and movable 10th rib. Movable 10th rib was found in exactly one-half of the 100 cases examined, these cases being examined in routine order, and not especially chosen. It was found almost as often in men as in women; in some cases it was found when the patient complained of absolutely no gastric symptoms. It does, however, seem to be to some extent a sign of the existence of nervous dyspepsia, but it is certainly not a definite sign of general neurasthenia.

[D. L. E.]

4.—Hesse gives an interesting discussion concerning the difficulty of making a diagnosis between gastric ulcer and disease of the gall bladder, basing his discussion chiefly upon the facts that have previously been presented by Naunyn, Kehr, Lindner and Kuttner. He believes that in a very considerable proportion of cases it may be entirely impossible to make a diagnosis between gastric ulcer and gall stones. If characteristic symptoms occur, they may be practically distinctive of one disease or the other, but the great difficulty is that in either condition characteristic symptoms may be almost entirely or entirely absent, and the symptoms which in earlier days were believed to be characteristic of one disease or the other, are now known to occur with some frequency in the disease in which they are comparatively unusual. He describes 2 cases: One of a woman of 30 who was said to have had icterus in childhood. After the birth of her second child she had gastric symptoms for some time, and then began to develop attacks associated with chilly feelings, pain in the back, and attacks of vomiting, and diarrhea. She had never had icterus after her childhood, never had any hemorrhage. The stomach was slightly enlarged, there were numerous tender points, the chief one being below the right border of the ribs, in the parasternal line, and a small tumor could be felt in that region. The diagnosis was relative stenosis of the pylorus, due to gastric ulcer. Operation confirmed this diagnosis. In the second case there had been for some years sudden attacks with nausea and vomiting, chilly feelings and violent pain in the gastric region. Icterus was said to have been present, but was never observed. One fact somewhat suggestive of gall-stone was that the pain usually appeared in the middle of the night. There was a tender point in the epigastrium slightly to the right of the middle line, and numerous hyperesthetic points. There was also a tender point in the back slightly to the right of the 12th dorsal vertebra. The test meal showed practically normal gastric conditions. The diagnosis was cholelithiasis and its consequences; other physicians who had seen the patient had, however, made a diagnosis of purely nervous disturbance or gastric ulcer. [D. L. E.]

5.—Simon and Zerner make an interesting report of the results which they obtained in working on a case of jejunal fistula. The patient had had a severe hemorrhage from gastric ulcer, and had at first been fed per rectum. It soon became impossible to feed her in this manner, and it was also impossible to feed her by the mouth, a fistula was therefore made to save her life, and she did well after the operation. The fluid which emptied itself through this fistula was golden-yellow in color, was alkaline to litmus, and acid to phenolphthalein. Its digestive properties were tested in a series of observations. It was found that it digested starches so long as the acetic acid was not added in quantities to make the total greater than 0.13%; it digested albumens rapidly, when moderately or strongly alkaline; it did not digest albumens when the reaction was about neutral or when it was acidulated with acetic acid. In other words the results show that in its native condition or when moderately acid it digested starches, when moder-

ately alkaline or strongly alkaline it digested albumens, but when acid or neutral, it did not digest albumens, and when alkaline it did not digest starches. This is compared with the fact that the contents of the upper part of the intestine are alkaline, while those of the lower part are acid. When remembering this fact, and considering the results here reported it seems not improbable that under normal circumstances the digestion of albumens and starches takes place, in chief part, at least, in different portions of the intestines, the albumens being chiefly digested in the upper part of the small intestine, and the starches in the lower. [D. L. E.]

LA PRESSE MEDICALE.

September 7, 1901. No. 72.

1. Phototherapy in the Treatment of Lupus and Dermatoses Limited to the Face. LEREDDE.
2. Phelps' Incision in the Operation for Club-foot.

COVILLE.

1.—In phototherapy, the action of the rays of light goes deep, forms perfect cicatrices, yet it destroys no tissue and causes no pain. After a detailed account of the apparatus employed, with explanatory diagrams, Leredde names the indications for the use of phototherapy. These are soft, superficial lupus; medium sized or large lupus; nasal lupus; orificial lupus; and lupus of the mucous membranes. Rarely it will be indicated in erythematous lupus; only occasionally in lupus of the body or extremities. It is also useful for skin diseases which remain rebellious to other treatment, such as naevi, acne rosacea, epithelioma, syphilis, etc. [M. O.]

2.—Coville, after discussing the utility of the Phelps incision in the operation for pes equino-varus, describes the operation as it is performed both by Lucas-Championnière, and by Kirrmisson. He believes that both are too radical, and that, in the treatment of such cases of club-foot, a large mediatarsal arthrotomy should be performed, with section of the anterior and posterior tendons of the leg and of the plantar aponeurosis. Then a cuneiform tarsectomy should follow, with resection or ablation of the astragalus, as may be necessary. Coville has recently performed two such operations successfully, which he reports.

[M. O.]

September 11, 1901. No. 73.

1. The Regulating Mechanism of the Composition of the Blood. CHARLES ACHARD.
2. The Treatment of Prostatic Calculi. R. TARNAUD.

1.—Histologically and physiologically the constitution of normal blood is always the same. When hemorrhage occurs and salts and liquids are injected into the organism, the normal equilibrium is soon re-established. This is due to the regulating mechanism of the composition of the blood. The kidneys, the glands of the skin and the alimentary tract, and the lungs, all excrete whatever excess of water, chlorides, urea, gases, etc., may be present in the blood. That this is true has been proved by many experiments. In disease the regulating mechanism works effectively as far as is possible under the existing conditions. It is only from this idea of a regulating mechanism of the composition of the blood that cryoscopy, antitoxins, edema, intoxications, crises in fevers, etc., are clearly understood. Therapeutically, injections may be given to raise or lower the concentration of blood. While his theory is by no means clearly expressed, nevertheless Achard believes that such a regulating mechanism must exist to keep the composition of the blood uniformly equal. [M. O.]

2.—Prostatic calculi may be found in the urethra or in the prostate gland itself. They may be ordinary urinary calculi which remain in the prostatic urethra or enter cavities in the prostate, communicating with the urethra; or they may form in the cavities of the prostate gland, and later enter the urethra. When an exploring instrument, sound or bougie, passes these calculi, a grating sound is heard and crepitation is felt. The treatment consists of the removal of the calculi through the rectum, urethra, or

perineum. The rectal operation should never be performed; the urethral operation is for small calculi only; while median perineal section is the operation to be preferred for large calculi. When the calculi are not in the cavities which communicate with the urethra, care must be taken not to open the urethra. Drainage should always be left in place after operation. [M. O.]

September 14, 1901. No. 74.

1. Gastroenterostomy in the Treatment of Dilatation of the Stomach. H. DEBOVE.
2. Tubercular Rheumatism. MAILLAND.

1.—Debove reports the case of a man of 41, who was inclined to obesity before marriage. At 26 he was married, and gastric troubles began almost at once. Since then he has kept thin. After the death of his two children he became worse, having marked hyperchlorhydria. Two years ago his wife died, since which time his gastric symptoms have been severe. Debove had diagnosed a gastric ulcer. Signs of stricture of the pylorus first appeared a year ago, with dilatation of the stomach. As much as 211% of hydrochloric acid was found after a test meal. Gastric lavage was instituted daily. As he did not improve, gastroenterostomy was performed. Since then his general condition has gradually improved, and no medicines are needed. Debove advises this operation when a gastric ulcer causes stricture of the pylorus and dilatation of the stomach. [M. O.]

2.—By tubercular rheumatism Mailland designates the articular symptoms which are probably due to the toxins produced by the tubercle bacilli, seen in tubercular individuals. The lesions found are irritative and fibro-plastic, like those found in rheumatism due to gonorrhea or the infectious diseases. These lesions may vary from a simple arthralgia to complete ankylosis. Mailland reports the case-histories of three such patients in full. In an acute case the shoulders were affected before a tubercular osteo-arthritis developed; in a chronic case, one shoulder, wrist and knee were affected, with final ankylosis, accompanying phthisis. The diagnosis of this condition is often difficult. The treatment remains that of tuberculosis elsewhere. [M. O.]

September 18, 1901. No. 75.

1. Deformities of the Pupils in the Insane. E. MARANDON de MONTYEL.
2. Cystic Degeneration of the Fetal Kidney. LENOBLE, CARAES, and LE BOT.

1.—Deformity of the pupil has hitherto been supposed to occur but rarely among the insane, excepting in general paralysis. Pupillary disturbance has been noted in alcoholic dementia, organic dementia, periodic mania, and in insanity of toxic or infectious origin. But Mignon's thesis shows how commonly these occur. Marandon de Montyel found deformities of the pupil in 83% of the 77 insane patients examined. In 37% the pupils were unequal; in 12% myotic; in 15% mydriatic; and deformed in 41%. In 44% there was some trouble in the reaction to light; in 29% some trouble in the reaction to accommodation, and in 27% Argyll-Robertson pupils. He concludes that pupillary disturbances are excessively frequent among the insane, especially inequality of the pupils; and that while slight in most, they are severe in some cases. [M. O.]

2.—Lenoble, Caraes, and Le Bot report a case of polycystic kidney in the fetus. A woman of 32, in whom fetal movements had ceased two weeks before labor, had a very difficult labor, until a sac adherent to the dead fetus had been evacuated. The labor terminated successfully, and the woman recovered quickly. In the fetus, a normal sized female, the kidneys were large and cystic, the right kidney weighing almost a pound. After discussing this rare condition, with a description of the microscopical lesions seen, they state that the cystic degeneration of the kidneys probably began in the tubules, about the third

month of intrauterine life, and increased rapidly; for the membrane of the cysts is probably the remains of the tubular epithelium. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

September 7, 1901. (31me. Année, No. 36).

1. Two Cases of Osteosarcoma of the Leg.
CHAVANNAZ.
2. The Alterations in the Leukocytes in Animals Bitten by Venomous Serpents.
B. AUCHÉ and L. VAILLANT.

1.—Chavannaz reports two cases of **osteosarcoma of the leg**, the one upon the fibula of a man of 50, the other on the tibia of a man aged 65. In both cases amputation was performed at the hip-joint, with perfect operative recovery. Now, almost two years after the operation, the former shows only pulmonary symptoms. The second case died with marked cachexia and pulmonary congestion a year after the operation. [M. O.]

2.—Auché and Vaillant report the results of their experiments upon the **white blood corpuscles of animals bitten by venomous snakes**. Leukocytosis occurs in all cases, immediately. This reaches its maximum in from eight to twenty-four hours. The **hyperleukocytosis** persists till death in those cases, which are rapidly fatal. In other cases it diminishes gradually. The polynuclear leukocytes are especially increased in number, while the lymphocytes diminish. The eosinophiles are decreased during the time that the hyperleukocytosis persists. When an animal has received an injection of Calmette's antivenomous serum just before, or a few days before being bitten, the same changes occur, only with greater rapidity and intensity, especially in those cases which recover. When an animal has received an injection of antivenomous serum alone, hyperleukocytosis, much less marked in intensity, occurs. [M. O.]

September 15, 1901. (31me. Année, No. 37).

1. The Histology of Amyloid Disease of the Liver.
B. AUCHÉ.

1. **Amyloid disease of the liver** is localized to the tiny blood vessels at first, to the walls of the trabecular capillaries; later, of the intralobular capillaries. Amyloid matter forms a solid cylinder of the former arterial walls, with almost total obliteration of the lumen of the vessel. When the liver cells show changes, these begin near the affected capillaries. Thus it is that specimens may show three layers in a lobule, a narrow periphery of fatty degeneration, normal liver cells in the center, and between them the intermediate layer showing the changes of amyloid degeneration. The cell granulations are gradually replaced by this material. Others claim that the hepatic cells never become amyloid, the changes found in them being due to mechanical forces alone. Auché gives a detailed description of the histological findings in two cases of amyloid disease of the liver. His investigations show that amyloid degeneration is not seen in the liver cells at all, the changes there found being those of compression, deformity and atrophy, always secondary and mechanical. [M. O.]

September 22, 1901. (31me. Année No. 38).

1. Syphilitic Hydrocephalus. ROCAZ.

1.—Rocaz reports a case of **syphilitic hydrocephalus** in an infant of six months. The mother, a woman of 20, had become infected after marriage, having a specific laryngitis, pharyngitis, and syphilides. Her hair also fell out in large quantities. One miscarriage occurred before this child was born. The infant was small, had a constant coryza, macular syphilides, an anal mucous patch, and a marked increase in the size of its head, which measured 48 cm. in circumference. Both fontanelles were open and fluctuated. There had never been any convulsions. Upon mixed treatment, continued for one year, all symptoms disappeared. The head remains large, but the child is growing up to it. [M. O.]

Society Reports.

THE NEW YORK OBSTETRICAL SOCIETY.

Meeting held November 12, 1901, Dr. Malcom McLean in the Chair.

Dr. W. S. Stone presented a specimen of **cancer of the ovary** in a woman of 47 years whose last labor occurred 23 years before. Menstruation began at twelve years, and was normal until a year ago, when profuse menorrhagia, lasting twelve to fifteen days, began, accompanied by pains in the lower abdomen. She was pale and somewhat emaciated, the cervix was large, hard and nodular, and the uterine body felt enlarged, and retroverted. Behind and to the right was a hard, globular mass about the size of a grape fruit, apparently adherent to the uterus. The diagnosis was made of **cancer of the uterus** with a tumor of the right broad ligament. The uterus and tumor were removed, the patient making an uneventful recovery. The uterus was large and hard, and in the left horn was found a small ragged adenoma or adeno-carcinoma. The tumor was a solid growth of the right ovary, measuring 8 by 9 cm., firmly adherent to the rectum. There were some softened areas of necrotic tissue, but it presented the typical picture of carcinoma. Such a combination of cancer of the uterus and ovary is rare, while the limited involvement of the uterus would suggest that it was secondary. Dr. H. J. Boldt advised that the ovaries be removed always when performing the radical operation for uterine cancer. Dr. J. Riddle Goffe thought that there existed two spontaneous, unrelated, foci in the case reported.

Dr. Dougal Blissell presented a **new operation for retroversion of the uterus**, with a patient. His procedure follows. The abdomen is opened by median incision, pelvic adhesions are broken up, attached organs freed, and ovaries and tubes, if diseased, are removed. The uterus is then pulled upward. In order to form an exact idea of the relaxation of the round ligament, a suture is passed through it about one-half inch from its attachment to the uterus; the same suture is again passed in an opposite direction through the round ligament at a point about one inch from its first insertion. This is done on the other side. When these sutures are tied, the round ligaments become looped, and the amount of round ligament to be resected shows. If the tension is too great, the section is made inside the loop; if not sufficiently taut, it is made outside. Another suture is passed under the round ligament, which, when tied, completely encircles the round ligament, preventing its retraction when cut. This is also done on the other side of the loop, one-quarter of an inch from the uterus. The temporary suture is cut, and dissection from the broad ligament follows. Permanent sutures are inserted and the raw surfaces adjusted. The first patient operated upon in this manner was a woman of 30 with pain in the pelvis which prevented walking or standing with ease, and some vesical tenesmus. Menstruation had lasted at times 20 days. After curettage, abdominal section showed the uterus completely retroverted. Two and a half months after operation the uterus was in perfect position, menstruation had occurred twice, lasting eight days, and all pain and discomfort had vanished. Dr. W. Wylie preferred this operation to ventrofixation except in women past the menopause. He considered Alexander's operation the best.

Dr. W. R. Pryor, who opened the discussion upon **dysmenorrhea in nulliparae**, believed that many cases were due to errors of development and the changes which occur with advancing years. He usually found irregularities in development of other parts of the body, changes associated with various distortions of the uterus. The endometrium may be hypertrophied or atrophied. If the cervix is hypertrophied, he advises either amputation or incision. He obtained good results from gelsemium and cannabis indica, if the flow was too free, or with hyoseyamus, when marked hys-

terical symptoms existed. The radical cure is conception. Dr. Florian Kling believed that anteflexion, with stenosis at the internal os, caused dysmenorrhea. In these cases dilatation and curettage will give permanent relief, while sterility is cured in the same manner. In many cases of dysmenorrhea due to ovarian trouble, he used the curette. Dr. H. C. Coe, who had performed abdominal section on the previous day on a multipara, whose uterus was divulsed and curetted four months before to relieve obstructive dysmenorrhea, had found both ovaries adherent and one tube so diseased that he removed it. Neither dysmenorrhea nor sterility can be cured by dilatation and curetting alone. Dr. Wyllie believed that the real cause was imperfect development; that the membrane was not nourished sufficiently to become a normal living membrane; that its blood supply was deficient; and that it could not perform its menstrual functions properly. If active disease be excluded, anteflexion may exist. Mere mechanical opening the canal does not overcome the difficulty. In patients with dysmenorrhea, a silver probe introduced in the Sim's position, will cause pain when the probe reaches the internal os, a condition which is almost pathognomonic. He advised thorough divulsion and dilatation. After dilatation he passes over the surface of the endometrium with the curette, leaving in place a hard rubber drainage tube. Keeping the os internum open for a week, or more will cure many cases. The tube may be left in through one menstruation and should then be taken out. In obstructive cases the tube can be left in, and the patient can go about. The trouble will return in three, four, or six months, and the procedure may have to be repeated. He has treated hundreds of cases without serious consequences from the use of the tube, which is kept in place with a hard rubber Albert Smith pessary. The same treatment is of value in sterility. Dr. Goffe considered an imperfectly developed uterus the principal cause of dysmenorrhea. In women who are free from pain in the early menstrual life, but develop dysmenorrhea later, some pathological lesion is found, endometritis, salpingitis, or ovaritis. With undeveloped uterus, treatment with carbolic acid applications after dilatation must be continued over a long period. After six months the patient is often pregnant. If the treatment is without benefit, he dilated the internal os, curetted and packed the uterus with gauze, which acting as a foreign body, stimulated contraction, and the uterus develops with exercise. Improvement in the circulation of the uterus, ovaries and tubes follows. Dr. A. H. Ely believed the pathological condition to be hyperplastic endometritis in an undeveloped uterus. Dr. J. N. West referred to other causes, chronic salpingitis, retroversion, and tumors, but used dilatation in obstructive dysmenorrhea. Dr. E. E. Porter thought that the form of the drainage used after dilatation should depend upon each individual case. Dr. H. N. Vineberg agreed that in the slighter degrees of arrest of development, with long narrow cervix and sharp anteflexion, dilatation and curettage were of benefit. Dr. Joseph Brettauer used dilatation when stenosis existed, and considered general hygienic treatment necessary. Two years ago he had seen a book by Fliess, in which were reported a number of cases of dysmenorrhea cured temporarily and permanently, by the application of cocaine to certain parts of the nose. His personal experience, so far limited, has not been uniformly satisfactory.

CINCINNATI RESEARCH SOCIETY.

Regular Meeting Held November 14, 1901.

Dr. Arthur Knight presented a specimen of psammoma of the brain which sprang from the dura in the centre of the orbital plate and extended upward and backward directly into the frontal lobe. It resembled a large solitary tubercle $1\frac{1}{2}$ inches in diameter and $1\frac{3}{4}$ inches long. He reviewed the literature carefully, demonstrated microscopical sections, and showed that the whorls seemed formed by groups of cells which had undergone hyaline and calcareous

degeneration; and that the spindle was called to the normal production of brain sand. The possibility of a blood vessel origin was also pointed out. The paper was discussed by Drs. Griewe, Bettmann, Heldingsfeld, Whitacre, Allen and Muhlberg.

Dr. Muhlberg then read a paper on spinal respiration. When the cord is severed from the bulb by a transverse section opposite the first cervical vertebra, respiratory movements of the diaphragm cease. That this is not due to a shock or inhibition of the phrenic nuclei was demonstrated by W. T. Porter, who, experimenting on rabbits, showed that when a hemisection in the above locality is made and thereby the half of the diaphragm on the homogenous side stopped, the movements can again be started on the hemisectioned side by dividing the opposite phrenic nerve. This is due to a crossing of the impulse from the opposite side, as it descends from the respiratory centre. The crossing probably occurs in the dendritic processes of the phrenic nuclei. The object of the present research was to ascertain whether the crossing occurred through the direct pyramidal tracts, i. e., through the anterior columns of the cord. Rabbits were used in the experiment. The method adopted was identical with Dr. Porter's with the exception that, besides the hemisection, the anterior column on the opposite side was divided. In every case, the results were the same as in Porter's experiment, namely, the diaphragm on the hemisectioned side resumed its respiratory movements on cutting the opposite phrenic, showing that the crossing took place from the lateral columns. When the entire cord with the exception of the anterior columns was divided, the result was the same as total section, the diaphragm did not again contract even after prolonged artificial respiration. The latter experiment proves that no respiratory impulses descend the anterior columns.

Painful Exostosis of the Internal Table of Occipital Bone.

—L. Galliard reported an interesting case diagnosed cerebellar tumor, but shown at autopsy to have been an exostosis of the inner plate of the occipital bone in the right cerebellar fossa. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 4, 1901, No. 23). This exostosis was situated at the point where the patient's intense neuralgia occurred. The patient was a rachitic woman of 36. Besides the neuralgia, which was paroxysmal in character, she had vertigo, vomiting, and outspoken phthisis. Galliard asks what should have been the treatment of this case. For trephining would probably have failed to discover the exostosis. [M. O.]

Genital Pain, a Gynecological Study.—The female genitalia are so richly innervated that pain is easily felt. The nerves come from the hypogastric and lumbo-aortic plexuses. Pain of genital origin is both physical and moral. It often happens that a woman with a grave genital lesion will complain of but slight pain, while one with little wrong will have many severe pains. This is due somewhat to the reflexes being weakened when the lesion is severe. Dr. L. Leon Archambault discusses this subject in *L'Indépendance Médicale*, (June 5, 1901, No. 23). He says that the pain is spontaneous, or provoked, by examination, etc. It may be continued, or intermittent, and may change its position. Pain is more frequent in affections of the adnexa than in those of the uterus; it is most intense in acute disease; both physical and moral pain co-exist; finally the pain described is generally inversely proportional to the pain existing. [M. O.]

Siberian Butter.—Siberia has long been sending butter to England, but the opening of the Trans-siberian Railway has made it a far more formidable competitor than it formerly was. Last year the imports of Siberian butter were valued at £1,400,000, and this year it is estimated that they will reach the value of £2,500,000. The supply of butter which Siberia can furnish is said to be practically unlimited, and it is possible that the opening up of Siberia may affect the dairy industry of these countries as disastrously as the opening up of America affected the wheat-growing industry. It is also expected that Siberia will shortly flood the English market with poultry, game and meat.—*London News*.

Original Articles.

PENETRATING WOUNDS OF THE HEART WITH
SUTURING OF THE WOUNDS.—REPORT OF A
CASE.*

By H. L. NIETERT, M. D.,

of St. Louis.

Superintendent and Surgeon in charge, St. Louis City
Hospital.

Wounds of the heart, penetrating into one of the cavities where hemorrhage was checked by suturing, are extremely rare. They are rare by reason of the fact that patients usually bleed to death before surgical aid can be rendered, and also because of the hesitancy on the part of the surgeon in deciding upon the operation, this class of wounds being looked upon as almost universally fatal. From the best information obtainable there are twenty-two of such cases on record. The history and descriptions in some instances, however, are so incomplete that it is a question whether all belong to this class of cases.

In reviewing these reports it is noticed that the suturing is usually performed several hours after the injury, showing that there must have been present some condition which retarded the flow of blood sufficiently to allow time for the surgeon to act. It is this condition, to my mind, that makes these wounds most interesting and not so much surgical skill required in suturing them.

The case which came under my observation, and a report of which follows, entered the hospital at 6.00 P. M. on April 20, 1901, with a history of having been stabbed two hours prior to admission. The patient was a young man, 22 years of age, well developed and weighing about 180 pounds. He was in an unconscious condition and all information had to be obtained from an officer who accompanied him. According to the officer's statement, patient, during an altercation with another man, had been stabbed in the chest with a knife. It was also learned that after the injury patient ran a distance of 100 feet, when he fell exhausted and unconscious. After the infliction of the wound and up to the time of admission, friends of the patient made repeated attempts at reviving him and falling in this had him forwarded to the hospital.

General inspection showed the skin and lips very pale, breathing shallow but regular, and patient lying quietly and senseless on the operating table. A knife wound was noticed $\frac{3}{4}$ in. in length and situated at a point corresponding to the fifth intercostal space on the right border of the sternum. Wound was filled with small clots of blood and the bleeding from it amounted to about as much as one would expect from a small superficial skin wound and did not impress one as being connected in any way with the heart.

The physical examination, however, revealed the true nature and depth of the wound and that an internal hemorrhage was taking place. The pulse was imperceptible. No apex beat could be found. Examination of the femoral arteries elicited a slight pulsation of those vessels. A feeble pulsation could also be detected in the carotids.

Percussion showed an area of heart dulness bounded on the right by the right border of the sternum, above the third rib and on the left by the nipple. The increased area of dulness indicated, to my mind, that a hemorrhage was taking place into the pericardial sac. The question arose whether the right pleural cavity had been opened, and if so how much bleeding was taking place into that cavity.

Percussion over the right chest, however, outlined the lung in its normal area.

Auscultation showed a muffled sound over the heart area and the heart beat barely audible. The sounds made the impression that the heart was farther from the ear than normal. The contractions at this time were irregular and numbered about 120 per minute. Careful auscultation did not make it possible to hear any splashing or whizzing sound, indicating again that there was no air present and therefore no connection with the pleural cavity or lung. No abnormal signs were audible over any portion of the lungs.

An immediate operation was decided upon and after the usual preparations a semi-circular incision was made in the skin over the sternum with the base of the flap toward the left side. The cut was made through the stab wound and laid bare the bony wall to the extent of about 3 in. in diameter. The patient being unconscious, no anesthetic was necessary. On raising the flap it was found that the knife had penetrated between the fifth and sixth ribs immediately to the right edge of the sternum. It was decided to follow the recommendation of E. Giardano in his surgery (*La Chirurgie del Pericardio e del Cuore*) where he advises, first, to follow canal of wound to pericardium and heart rather than make an osteoplastic flap, as it might be sufficient to stop hemorrhage through a small opening in this way. The cartilages of the fifth and sixth ribs on the right side were severed near the sternum, then by means of the rongeur a sufficient portion of the sternum was removed to bring the cut in pericardium plainly into view. A cut $\frac{3}{4}$ in. in length was found in pericardium from which very little blood flowed, as a large clot was lying immediately behind, preventing the escape of any liquid blood. With the finger introduced into the pericardium, I could feel the cut in the heart. In order to be able to approach this wound, it was thought necessary to enlarge the opening in the sternum, which was done so that it measured 2 in. in diameter, the pleura being left intact. The edges of the cut in the pericardium were then seized with forceps and the wound enlarged, making it 2 in. in length. That a high pressure existed in the pericardium was shown by the fact that the blood spurted from the cut, carrying with it large coagula. The heart, which had hitherto acted feebly, was now becoming more forcible and began to press the blood clots forward.

It was noticed that the thickest layer of coagulated blood was found against the posterior surface of the heart and was removed partly by means of the finger hooked around the heart and partly by a stream of physiological salt solution poured into the sac. After removal of all the clots the heart beat was 100 per minute, regular and forcible.

The hemorrhage from the heart during all this time was controlled by pressing the tip of the finger into the cut. Before suturing the edges of the wound, the bleeding from the wound was carefully observed and it was noticed that it occurred mostly during diastole and almost ceased during systole. The wound in the heart measured $\frac{1}{2}$ in. in length, the line of the cut running parallel to the longest diameter of the heart and was situated in the center of the wall of the right ventricle. The blade seemed to have penetrated it obliquely.

In order to facilitate the suturing of the heart, the edges of the cut were seized by two narrow Kocher forceps and the organ drawn forward into the opening in the sternum and held there until the first suture could be introduced, after which forceps were removed and the heart was held by the suture. Three interrupted silk sutures were required to stop the bleeding, care being taken on introducing the needle not to include the endocardium. The knots were drawn together and tied during diastole. The patient was then heavily stimulated by injections of whiskey, strychnine and physiological salt solution.

While suturing the heart, patient became conscious and conversed in a perfectly rational manner, he discussed the injury and, on inquiry, stated that he felt no pain, nor was any perceptible shock noticed while the heart was being manipulated.

The pericardium was partly closed and a small drain of plain gauze introduced. The flap of skin was

* Published synchronously with the *Interstate Medical Journal*.

stitched back with the exception of a small opening for drain

POST OPERATIVE COURSE.

Immediately after the operation patient's temperature was 98°, pulse 110, respiration 30.

At 6.00 o'clock the next morning patient had a temperature of 98°, pulse 120, respiration 30 and was resting fairly well, was most comfortable with chest elevated to almost sitting posture.

During the entire course of treatment patient was regularly stimulated with whiskey and strychnine. Hypodermic injections of physiological salt solution were administered every three hours.

Patient had a complete suppression of urine, as repeated catheterization of bladder did not furnish enough to enable us to make a urinalysis. In order to favor the action of the kidneys, hot applications were made to the body and enteroclyses of hot water were given every three hours, but without any results. About 32 hours after the operation the patient's condition gradually grew worse. Temperature rose to 104°, pulse became very rapid. Patient died 33 hours after operation, having remained conscious up to the last moment.

POST-MORTEM EXAMINATION.

This was made under the direction of Dr. Funkhauser, the Coroner of St. Louis, and showed all the organs, excepting the heart and pericardium, in a normal condition. I am extremely sorry that no report could be obtained as to the condition of the kidneys, as I feel satisfied that abnormalities would have been found in that organ.

The pericardial sac was found to be completely obliterated and a fibrinous exudate covered the entire heart. Removal of the lymph exposed a highly injected pericardium which was very cloudy in appearance. The edges of the wound in the heart were agglutinated and the sutures, three in number, were intact and were covered with a layer of lymph.

The right ventricle was then opened by a V-shaped incision, so that the entire wall was left intact, with wound in the center, as shown in the cut.

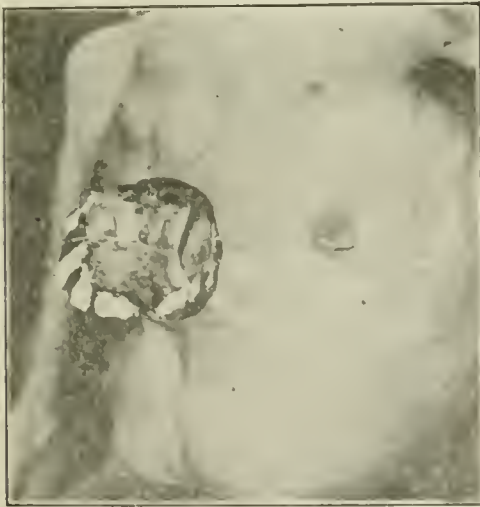


FIG. 1.—A Case of Suturing the Heart.

The endocardium was found to be smooth and retained its normal lustre. The heart muscles appeared soft and flabby. The cut in the endocardium was about $\frac{1}{2}$ in. in length, was parallel to and situated between two columnar carneae, which were lying close together in the anterior wall of the ventricle, so that the wound on the inside could not be seen until these masses of flesh were drawn apart. The edges of the wound were noticed to have become agglutinated and showed no inflammatory changes.

The cause of death, from post mortem findings, was given as shock and pericarditis.

The case, although terminating fatally, presented numerous points of interest. In the first place our patient was unconscious, not from shock or loss

of blood, but from the circulatory disturbance, caused by the compression of the heart. The unconsciousness was to the extent that permitted of operation without anesthetic. The moment the pressure was removed, consciousness was restored completely.

It was the first case operated upon in which no injury existed to the pleura, and hence no communication between the pleural cavity and the pericardial sac. In the other 22 cases reported, the pleural cavity had been opened on the left side in 21 cases, on the right side in one case. There was therefore in all those cases a direct flow of blood from the heart, through the opening in the pericardium into the pleural cavity. In the present case the blood being unable to escape, caused a gradual increase of intra-pericardial pressure and a steadily growing weakness of the heart, hence the patient was pulseless and the heart beat barely audible; and yet the pressure was not sufficient to cause a stasis and cyanosis, which so often precedes death in similar wounds. Cohnheim demonstrated in his experiments on animals, that hemorrhage of this kind caused a compression mainly of the auricles and large vessels, damming back the blood and preventing its flow into the ventricle, thus producing a marked cyanosis. This was not visible in our case and was perhaps due to the fact that bleeding took place chiefly during diastole and very little blood flowed directly from the cavity during systole.

Although pressure was increased somewhat, it was not to the extent of complete compression of the auricles. There was an absence of that splashing sound in the region of the heart, which is so frequently described by surgeons in connection with the reports of their cases.

I should like to suggest the following explanation for this striking fact: I have observed and operated upon four cases of penetrating wounds of the pericardium in which there was a bleeding into the pericardial sac. In these four cases there was a communication of the sac with the pleural cavity, and in each instance the splashing sound was audible. I conclude therefore that the absence of the sound is due to an increased intra-pericardial pressure, produced by an accumulation of blood. This accumulation is due to the absence of an avenue of escape, there being no communication with the pleural cavity. Therefore, the splashing sound, audible over the region of the heart in injuries of this kind, seems to be an important sign in connection with the diagnosis, as it determines whether the pericardial sac communicates with the pleural cavity or not.

The whizzing sound described by surgeons in connection with these cases, which indicates the presence of air in the pericardium, was also absent in our case.

The fact that the wound in our case was extra-pleural made it advisable to perform the suturing through the extra-pleural route. In all other cases reported, either the right or left pleura was injured and the operations were performed through the intra-pleural route. The avenue of suturing was therefore different from any heretofore. It was performed through an opening two inches in diameter without any difficulty, the heart being held with

forceps and drawn up to the opening while the first suture was being applied. Not the slightest tearing was produced, nor did any shock follow the application of the instruments.

Another point of interest was the fact that the knife penetrated on the right side of the sternum. With the exception of the case reported by Watten in *Deutsche med. Wochenschrift* (Leipzig), September 5, 1901, all the wounds were found on the left side of the sternum.

The direction and position of the wound in the heart was also an extremely interesting feature in the case and was such as permitted of the least amount of hemorrhage. The knife had penetrated the heart muscle obliquely, the direction being that of the staff, as shown in Fig. 1. Elsberg, in the *Journal of Experimental Medicine*, September, 1899, reports the result of his experiments on animals and showed conclusively that oblique wounds bled far less than perpendicular ones, as in this form the canal of the wound is longer and favors the formation of small clots. "Then, too, in oblique wounds the surfaces are more tightly pressed against each other during the systolic contraction of the part." But this was not the only favorable circumstance in our patient's wound. The main factor and which, in my opinion, prevented our patient from rapidly bleeding to death, was the position of the cut in the endocardium. As stated above, it was about $\frac{1}{2}$ inch in length and situated between and parallel to two columnæ carneæ, and in order to see the wound it was necessary to draw apart the columnæ. It was observed during the operation that only a small hemorrhage took place during systole, which was undoubtedly due to the pressing together of the columnæ, acting as valves to the opening. Since the hemorrhage occurred mainly during diastole, it must necessarily decrease as the pressure in the pericardium increased. In this way the wound was pressed against from both sides and it is likely that this condition served to keep our patient alive for over two hours.

The experiments of N. Napolkaw,⁸ Delorme, Elsberg and others¹ were also borne out in this case in regard to the size and position of the clot of blood in the pericardium, namely that the thickest portion of it was found back of the heart. The front of the heart was covered with a layer not thicker than $\frac{1}{4}$ of an inch, while that lying against the posterior portion of the heart was at least $\frac{3}{4}$ of an inch in thickness.

METHODS OF OPERATION.

Different methods have been devised for suturing the heart, and surgeons have divided them into two classes, one the extra-pleural, in which an osteoplastic flap is made of the sternum; the second the intra-pleural method with osteoplastic flaps, laying back one or more ribs. In the first method the pleura is left intact, while in the second the pleural cavity is always open. The first method has been described and advocated by von Rydygier² and Giordano.³ The method of von Rydygier consists of an osteoplastic flap made as follows:

The first incision made transversely across the sternum on a level with the lower border of the second rib, extends from the right to the left bor-

der. A second cut is made parallel to the first on a level with the fifth rib, the two are united by a third incision, running parallel to the left border of the sternum. The cartilages of the third and fourth ribs on the left side are then divided, as is also the sternum, and the entire flap forcibly pulled toward the right side.

The one by Giordano consists of an osteoplastic flap with a hinge on the left side of the sternum and includes a section of the sternum extending from the attachment of the second rib down to the fourth.

Statistics gathered by Fischer and Loison⁴ have shown that the large majority of wounds of the heart have occurred in the ventricle. I have been able to find only one case, that reported by E. Giordano in 1898, in which the auricle was injured.

With a view to obtaining a flap which would lay bare a large portion of the heart, and especially the ventricles, and thus cover the large majority of cases, I have in some twenty sections on the cadaver, outlined a flap which seems to answer all purposes. It includes that portion of the sternum extending from a point on a level with the lower border of the cartilage of the third ribs down to the articulation of the gladiolus with the ensiform cartilage. An incision is made from the right border of the sternum transversely across on a level with the lower border of the third rib to a point about 1 inch to the left of the sternum. A second cut is made from the right border of the sternum across to a point one inch to the left of the sternum and on a level of the articulation of gladiolus with the ensiform. The left extremities of the two cuts are united by a perpendicular incision. The cartilages of the fourth, fifth and sixth ribs are divided, care being taken to remain close to the cartilages, particularly that of the fourth, as the pleura usually lies closely attached to that rib. It is an easy matter then to loosen with an elevator the tissues from the posterior surface of the sternum as the pericardium is only loosely attached and there is at no time any danger of injuring the pericardium.

With a cartilage saw and the costotome the sternum is readily divided. However, care should always be taken not to allow the instrument to pass beyond the right border of the sternum, as there is great danger of injuring the right pleura, which lies immediately back and comes up to the right border of the sternum. I have found it safest after the sternum had partly been divided, to pass the finger back of sternum and push away the right pleura before dividing the entire sternum. After dividing these bony structures the entire flap is forcibly turned toward the right side and the cartilages on the right side partly broken. As shown in Fig. 11, by this method a good view can be obtained of the heart with the exception of the upper portion of the auricles and the beginning of the great vessels. It exposes the anterior surface fairly well and that is usually all that is desired in the extra-pleural method, since in those cases where the side of the heart is injured the pleura will be found to be penetrated also, in which case the intra-pleural method will be the more advisable operation.



FIG. 2.—A Case of Suturing the Heart.

For the intra-pleural method, the one devised by Rotter,⁵ seems to me to be the best, as it lays bare the greater portion of the heart, is the most rapidly performed with the least amount of hemorrhage. It consists of an incision extending from the left border of the sternum, parallel to the third rib outward about 2 inches. A second incision is made on a level with the sixth rib and extending from the left border of the sternum to a point 2 inches toward the left side. A third incision connects the outer ends of the two incisions. The third, fourth and fifth ribs are then divided in the line of incision, as are also the muscles and pleura. The entire flap is then forcibly turned toward the right side and the cartilages broken near the sternum. In this way the right ventricle and a large portion of the left can be brought clearly into view. The hand can readily be passed into the chest cavity and the heart grasped or pressed forward to facilitate the suturing.

Since out of the 22 cases reported 21 wounds were inflicted on the left side of the sternum, all injuring the pleura, it seems to me to be the operation that would cover the large majority of cases. I had occasion to perform the operation a number of times on the cadaver and recently performed a slight modification of it on a patient whose left ventricle had been penetrated by a knife. In this case the suturing was performed with little difficulty. The operation was performed four weeks ago and as the patient is still under observation and not completely recovered at this writing, the case is not included in this report.

Other operations of the intra-pleural method have been devised by Pamoni and Parozzani,² but differ only slightly from Rotter's operation.

Although it is advisable for the surgeon to be familiar with all the methods in use, it seems to me that a thorough knowledge of the anatomical relation is of the most importance. Thus, Watten, who had to deal with a stab wound on the right side of the sternum in the fourth intercostal space, in which the pleura was injured, made a flap including the third and fourth ribs on right side and turned them outward. He claimed that this opening gave him ample room to suture the wound, which

was located in the right ventricle. It is therefore impossible to lay down any definite rule for exposing of the heart and each operator should be guided by the position and direction of the wound.

I have been able, as mentioned above, to collect from various records, twenty-three cases of penetrating wounds of the heart, where suturing was performed. This number includes my own case. The following are brief reports of the names of the operators, year of operation, position of the wound and result:

No. 1.—Cappellen,⁶ operation performed in 1896, wound located in the fourth intercostal space on left side of the sternum; patient died.

No. 2.—Farina,⁶ operation performed in 1896, wound located in fifth intercostal space, left side of sternum, penetrating left ventricle; patient died.

No. 3.—Rehn,⁶ operation performed in 1897, wound located on left side of sternum in fourth intercostal space, injuring the right ventricle; patient recovered.

No. 4.—Parrozzani,⁶ operation performed in 1897, wound located in seventh intercostal space, left side injuring left ventricle; patient recovered.

No. 5.—Parrozzani,⁶ operation performed in 1897, wound located in third intercostal space, left side, injuring left ventricle; patient died.

No. 6.—Parlaveccchio,⁶ operation performed in 1899, wound located in fifth intercostal space, left side of sternum, injuring left ventricle; patient recovered.

No. 7.—Ninni,⁶ operation performed in 1898, wound located in fifth intercostal space, left side of sternum, injuring the left ventricle; patient died.

No. 8.—Giordano,² operation performed in 1898, wound located in second intercostal space on left side of sternum, injuring left auricle; patient died.

No. 9.—Pagenstecher,² operation performed in 1899, wound located in fourth intercostal space on left side of sternum, injuring the left ventricle; patient recovered.

Cases Nos. 10, 11 and 12, reported by W. Hordynski and W. Maleszewski in *Medycyna*, 1899, and operated upon by Kosniski, are as follows:

No. 10.—Wound located in third intercostal space, left side of sternum, injuring the left ventricle; patient died.

No. 11.—Wound located in third intercostal space on left side, injuring the right ventricle; patient died.

No. 12.—Wound located in fifth intercostal space on left side, injuring left ventricle; patient died.

No. 13.—Nicolai,⁶ operation performed in 1899, wound located in fourth intercostal space on left side of sternum, injuring right ventricle; patient died.

No. 14.—Tuzzi,⁶ wound located in fourth intercostal space on the left side, injuring left ventricle; patient died.

No. 15.—Lango,⁶ wound located in third intercostal space on left side of sternum, injuring left ventricle; patient died.

No. 16.—Ramoni,⁶ wound located in third intercostal space on left side of sternum, injuring left ventricle; patient recovered.

No. 17.—Rosa,⁶ operation performed in 1899, wound located in fifth intercostal space on left side, injuring left ventricle; patient recovered.

No. 18.—Marion⁷ (*Presse Med.*, 1899, No. 2), wound located in fifth intercostal space on left side, injuring right ventricle; patient died.

No. 19.—Maselli,⁸ operation performed in 1900, wound located in sixth intercostal space on left side, injuring left ventricle; patient died.

No. 20.—Nanu¹⁰ (Bukarest), operation performed in 1900, wound located in third intercostal space, left side, injuring left ventricle; patient died.

No. 21.—Watten,² reported in *Deutsche med. Wochenschrift* (Leipzig), September 5, 1901, stab wound of right ventricle, penetrating fourth intercostal space on right side, which he sutured on March 25, 1900; patient recovered.

No. 22.—Case reported above, operated upon April 20, 1901, wound located in fifth intercostal space on right side, injuring the right ventricle; patient died.

No. 23.—Dr. George Tully Vaughn, operation performed October 12, 1901, wound located on left side in fifth intercostal space, injuring left ventricle; patient died. (A report of this case was read before the Virginia State Medical Society, November 5, 1901.)

From the above report it is seen that out of 23 cases, 16 died and 7 recovered. Wound was located on right side of sternum in 2 cases, on the left side in 21 cases. Pleura was injured in 22 cases and uninjured in 1 case. Left auricle was penetrated in 1 case, right ventricle in 6 cases, left ventricle in 15 cases; in one case the report does not state what part of the heart was injured.

It is my firm belief that, in the future, operations on the heart, for penetrating wounds, will be more frequently performed. The idea that the surgeon is powerless when it comes to treating wounds of that organ, must necessarily lose ground in view of the good results obtained in some of the cases operated upon.

Statistics show that more than 90 per cent. of all heart wounds not operated upon prove fatal. The mortality in the above reported cases, although they must be classed among the most serious of heart wounds, is only 70 per cent.

Many years ago Billroth is reported to have said that no surgeon should attempt to suture the heart if he wished to retain the respect of his fellow-physicians. Surgery of the heart has advanced far since the time that remark was made. It is beyond doubt that the same authority would consider operative interference advisable in a great number of cases were he still with us. I believe the surgeon is justified in attempting to stop a dangerous hemorrhage from the heart by suturing the wound, just as he would stop a hemorrhage from a vessel by ligation. All wounds of the chest where life is endangered from internal hemorrhage should be explored to the bottom if, in the judgment of the surgeon, the parts are accessible. That the greater portion of the heart is accessible has been clearly demonstrated.

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2. *Watten, Deutshe med. Wochenschrift*, September 5th, 1901.
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5. *Muench. med. Wochenschr.*, Jan. 16th, 1900.
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7. *Presse Medical* 2, 1899.
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JOURNAL DES SCIENCES MEDICALES DE LILLE.

September 14, 1901. (No. 37.)

1. The Employment of Suprarenal Extract in Ophthalmology. L. THILLIEZ.

1.—Thilliez who has used suprarenal extract in the treatment of diseases of the eyes reports excellent results. He states the procedure is not absolutely new as Dor, in 1895, and Bates, in 1896, showed the vasoconstrictive action of the aqueous extract of the drug. He describes the material as being of a brownish color, which can be preserved indefinitely as long as the bottle is kept closed; but it alters rapidly when exposed. By means of a single instillation a conjunctiva which previously had been remarkably injected immediately becomes the seat of a local anemia. The duration of this transformation varies from a quarter of an hour to two hours. This vasoconstrictive action of the suprarenal extract is not only confined to the conjunctival vessels, but also extends to the subconjunctival and episcleral vessels and even a little upon the deeper vessels. The drug has the advantage of rendering more prominent for purposes of examination and treatment granulations and follicles. Several interesting cases are appended. The author claims that there is a decided advantage to be derived by employing the suprarenal extracts in operations such as removal of chalazions, and in operating for strabismus; the author has twice excised lachrymal glands with a marked diminution of hemorrhage, something which he considers worth estimating in such difficult dissections. He quotes Darrier, who employed the drug in a case of glaucoma where the vision continued to decrease in spite of a performed iridectomy, and reports a rapid diminution in tension and an improvement in the visual acuity. While iridectomy will always remain the operation of choice in glaucoma, the "antiglaucomatous" action of this drug should not be ignored.

[M. R. D.]

Double Perinephritic Abscess.—Edgar Hirtz reports a unique case of double perinephritic abscess. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, June 27, 1901. No. 22.) A woman of 42, after an angina which lasted two weeks, had chills and fever. There was tenderness over the right renal region with some swelling on palpation. Five days later tenderness was noted over the left renal region. A diagnosis of perinephritic abscess was made and operation decided upon. On the left side over a liter of pus was evacuated. Two weeks later, the same operation was performed on the right side, when even more pus was evacuated. Both abscesses had formed about the same time, and both healed after about two months' drainage. Hirtz considers the angina to have been due to the same streptococcus which was found in the pus from the perinephritic abscesses. Dupré suggested that there might have been in this woman one horse-shoe kidney, so that one abscess really had been opened upon both sides. [M. O.]

THE DIVISION OF THE SENSORY ROOT OF THE TRIGEMINUS FOR THE RELIEF OF TIC DOULOUREUX; AN EXPERIMENTAL, PATHOLOGICAL AND CLINICAL STUDY, WITH A PRELIMINARY REPORT OF ONE SURGICALLY SUCCESSFUL CASE.*

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PART I.

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In a paper published in the November, 1898, number of the *American Journal of the Medical Sciences*, p. 532, I made use of these words: "If it could be shown that the sensory root of the Gasserian ganglion does not unite after its fibres are divided, we should have a fact of great importance. Division of this root would probably be a less serious operation than the removal of the entire ganglion, and might have the same effect in the relief of pain,

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but the surgical difficulties might be insurmountable. Experiments on animals to determine whether or not the sensory root of the Gasserian ganglion unites after section of its fibres might result in a lessening of the great mortality now existing in operations on the ganglion." Dr. C. H. Frazier has shown that the division of the sensory root may be performed in man, and probably with less danger than the removal of the Gasserian ganglion, as hemorrhage is not so likely to be severe. I should like to lay particular emphasis on the fact that in proposing this operation I did so with much caution. I believe that Horsley is the only one who before Dr. Frazier has divided the roots of the trigeminal nerve without removing the ganglion. Horsley avulsed them at their attachment to the pons, and his patient died seven hours after the operation.¹

Frazier has cut the sensory root of the trigeminal nerve in a large number of dogs. Seven of these lived sufficiently long for a study of the nervous system by the method of Marchi. The results of my microscopical examination of the nervous systems from these seven dogs are as follows:

Dog No. 4.—Distinct degeneration by the Marchi method is found in the sensory root at its entrance

1. Horsley: British Medical Journal, 1891, Vol. II, p. 1249.

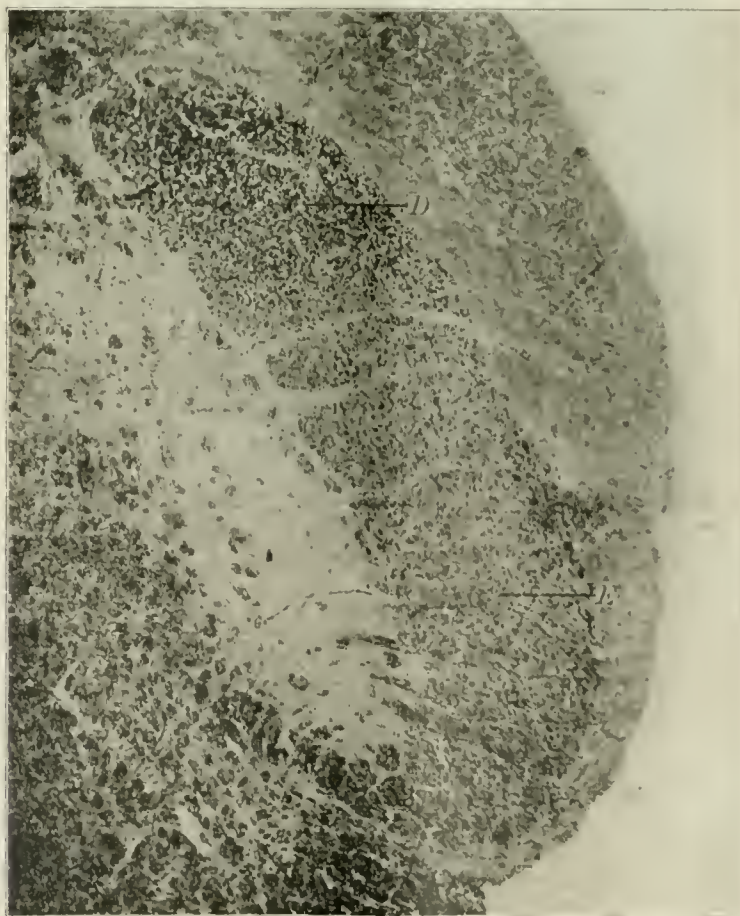


FIGURE 1.—Section of the medulla oblongata from dog 4, showing the descending spinal root. The dorsal portion of this root (D) is much more degenerated than the ventral portion (V), because only the lateral portion of the sensory root was completely divided between the pons and the Gasserian ganglion, as shown in Figure 2. The black dots represent the degenerated fibres.

into the pons, and this degeneration is much more intense in the external portion of the root than in the medial portion, although distinct degeneration is detected also in the latter. The motor root in its intracerebral portion shows slight degeneration. A few black dots are present in the mesencephalic root of the trigeminal nerve. In sections from the medulla oblongata the degeneration is especially intense in the dorsal portion of the spinal root, while comparatively few black masses are found in the ventral portion (see Fig. 1). The Gasserian ganglion and the nerve fibres at each end of this ganglion seem to be normal.

are much degenerated, while those at the peripheral end are not degenerated. This degeneration at the central end is probably the result of purulent meningitis.

Dog No. 11.—The degeneration of the sensory root of the trigeminal nerve in this case is present, but unimportant.

Dog No. 12.—The degeneration of the sensory root of the trigeminal nerve in this case is slight. Slight degeneration is detected in some of the fibres at one end of the Gasserian ganglion.

Dog No. 13.—Degeneration of the sensory root of the trigeminal nerve in this case is not distinct.

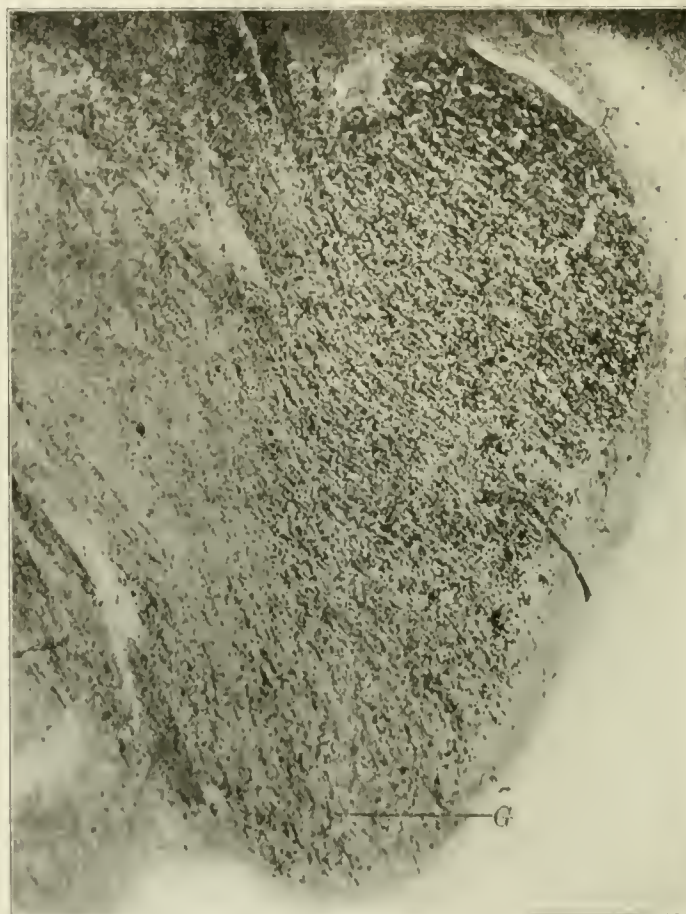


FIGURE 2. The sensory root at its entrance into the pons, from dog 5. The lateral portion (P) is intensely degenerated, while the medial portion (G) is only slightly degenerated. The degenerated portion indicates the extent of the division of the sensory root. By comparing Figures 4 and 5 it will be seen that the fibres of the lateral portion of the sensory root at its entrance into the pons, in their further course occupy the dorsal part of the descending spinal root.

Dog No. 5.—The degeneration of the trigeminal nerve is similar to that in dog 4, only it is more intense in dog 5 (see Fig. 2). Both anterior pyramids show slight degeneration. Much degeneration is found in some of the fibres at one end of the Gasserian ganglion, while those at the other end of the ganglion are normal.

Dog No. 6.—The degeneration of the sensory root of the trigeminal nerve in this case is distinct, but is not very intense.

Dog No. 10.—The degeneration of the intracerebral portion of the sensory root of the trigeminal nerve in this case is very indistinct. The nerve fibres at the central end of the Gasserian ganglion

Two of these cases, dogs four and five, were especially satisfactory for microscopical study, while the others presented too little degeneration to permit valuable conclusions to be drawn. In dogs four and five it is evident that the lateral portion of the extracerebral sensory root of the trigeminal nerve was cut, while the median portion was only partially injured. In these cases the dorsal portion of the spinal root of the trigeminal nerve also was more degenerated than the ventral. I have not been able in these two cases to detect any attempt at regeneration of the sensory root of the trigeminal nerve, but these cases do not disprove the possibility of such a regeneration. The difficulties of tech-

nique in determining by microscopical examination a regeneration of the cut sensory root of the trigeminal nerve are considerable. In removing the brains in dogs four and five the slight connection by means of the motor root between the Gasserian ganglion and the pons was destroyed.

It is important to determine whether regeneration of the central nervous system is possible, and with this object in view an examination of the literature is desirable.

Baer, Dawson and Marshall² state that, on the clinical side, so far as they were able to ascertain, no satisfactory cases are reported for man of regeneration and return of function after lesions causing the destruction of any part of the central nervous system. These authors do not discuss the histological evidence of regeneration. They conclude from a few experiments cited from the literature that in the lower vertebrates a certain amount of return of function seems to follow a lesion in the central nervous system, while it is not yet decided certainly whether any such return is possible among higher animals. They experimented on dogs by ligation of the roots of the second cervical nerve between the spinal ganglion and the cord, and from physiological results they conclude that after severance of the fibres of the dorsal roots of the spinal nerves between the ganglion and the cord, regeneration of the fibres into the cord will take place under proper conditions, so that normal reflexes through the respiratory, cardiac and vasomotor centres may be obtained. They do not venture to express a positive opinion as to the completeness of the regeneration and the average time necessary for the restoration of function, but their seven experiments showed that great individual differences existed in the rapidity of regeneration. In some cases the return of functional activity in the dorsal root fibres seemed to be nearly complete at the end of ninety days, while in one case the return was far from complete after an interval of 151 days. They conclude that if the posterior root fibres can thus be regenerated in the posterior columns of the cord, there seems reason to hope that the fibres in other tracts may possess the same property, and that therefore it is not impossible that with the proper technique a severed spinal cord might be made to regenerate its broken tracts, both the ascending and the descending. It is much to be regretted that the histological evidence of regeneration of the central nervous system obtained by these investigations of Baer, Dawson and Marshall has not been published.

I hesitate to criticise these carefully performed experiments, but it should be remembered that they do not afford satisfactory evidence that restoration of function after destruction of a part of the central nervous system in man will be complete.

It is presumable that if such restoration occurs in the dog it occurs also in man under similar conditions, but it is only presumable. In these experiments posterior roots were ligated; it would have been better if they had been resected. The divided ends would then have retracted from one another,

and the bridge of degenerated tissue caused by ligation of the roots would not have existed. It is possible that such a bridge of tissue may guide the young nerve fibres to the spinal cord.

We know that where only a few sensory fibres exist these may be sufficient to convey impulses coming from the periphery of the body to the central nervous system. Fickler³ states that in a case of his own, sensation was at one period fully lost but returned after a time to such a degree that almost all qualities became normal, only that warmth and cold sensations were somewhat impaired, and yet very few nerve fibres were found in the posterior and antero-lateral columns of the spinal cord at one level. These few fibres must have been sufficient for the restoration of sensation. The motor tracts of the cord in this case contained more nerve fibres than the sensory tracts, but very little return of motion had occurred. It appears that more normal fibres are requisite for motor function than for sensory.

Fickler also states that Schiefferdecker, Kahler, Stroebe and others have not found any regeneration of nerve fibres worthy of the name after division of the spinal cord in vertebrates. He concludes that the nerve fibres he found within the pia of the spinal cord were regenerated fibres. This conclusion is hardly warranted. Dr. Dercum and I⁴ have shown that such fibres may be present in the spinal pia when there is no reason for believing that they are regenerated fibres, and Bielschowsky⁵ later has demonstrated the same fact. Bielschowsky also makes the statement that experiments have shown that the spinal cord is not capable of regeneration after it has been divided.

Stroebe's⁶ article on regeneration of the spinal cord is especially praiseworthy. After a careful review of the literature on this subject he shows that the opinions of the investigators differ concerning the possibility of regeneration of the cord. Stroebe found from his experiments on rabbits that the nerve fibres of posterior roots that were injured at the level of the lesion in the cord, grow out again from the spinal ganglion toward the spinal cord, and push in a certain distance between the tissue of the scar formation. It was therefore evident that an attempt was made by the posterior roots to penetrate the scar tissue of the cord, but the attempt was not very successful.

The evidence of restoration of the spinal cord being so doubtful, it has seemed to me equally uncertain whether the normal relation of posterior roots to the spinal cord is re-established after these roots have been cut in man. The posterior columns of the spinal cord are largely composed of nerve fibres from the posterior roots, and if these fibres within the cord are not restored after they are divided, it seems probable that the portion outside of the cord, *i. e.*, within the posterior roots, is not

2. Baer, Dawson and Marshall: *The Journal of Experimental Medicine*, Vol. iv, 1899, p. 29.

3. Fickler: *Deutsche Zeitschrift fuer Nervenheilkunde*, Vol. xvi, Nos. 1 and 2.

4. Dercum and Spiller: *Revue Neurologique*, March 15, 1901, No. 5, p. 222.

5. Bielschowsky: *Neurologisches Centralblatt*, April 15, 1901, No. 8, p. 346.

6. Stroebe: *Zeigler's Beitrage*, Vol. xv, 1894, p. 383.

restored after these roots are divided. The chief difference between the structure of the intramedullary and extramedullary portions of these fibres, that I am aware of, is that sheaths of Schwann exist on the latter and not on the former, and yet this may possibly be an important difference.

The recent investigations of Bethe⁷ may cause us to modify greatly our views regarding the regeneration of nerve fibres. Some investigators in the past have held that the nuclei of the sheath of Schwann have an important rôle in regeneration, but most authorities have taught that regeneration occurs by the outgrowth of axones from the old axones of the central stump of the divided nerve. Bethe has resected the sciatic nerve of the dog, and sewed the peripheral stump within the muscle to prevent union of the two ends. The peripheral end of the nerve degenerated below the point of division of the nerve, but later full regeneration of this peripheral portion occurred from the nuclei of the sheaths of Schwann. The nerve terminated at its proximal end blindly. Irritation of the newly formed nerve caused contraction of the muscles supplied by it, and the regenerated nerve differed in no way from a normal one, and yet it was not in continuity with nerve cell-bodies. If this regenerated nerve were cut, its peripheral portion below the line of division degenerated but the more central portion persisted, even though it were not in connection with nerve cell-bodies. These investigations of Bethe may possibly show that the presence of a sheath of Schwann is necessary for regeneration of a nerve fibre, and may compel us to accept the possibility of regeneration of posterior roots which are provided with sheaths of Schwann, and to deny the existence of regeneration of nerve fibres within the cord which have no sheaths of Schwann, even though they may be the continuation of posterior root fibres. These very experiments make it doubtful however whether the posterior roots would be restored beyond the point where the sheath of Schwann ceases, that is, at the entrance of the root into the spinal cord; they may possibly explain why peripheral nerves regenerate so readily while the spinal cord does not.

The nerve fibre of the posterior spinal root has apparently the same structure as the sensory fibre of the peripheral nerve, and yet the reaction of the cell-body in the spinal ganglion is very different according as its central or peripheral process is divided. Investigators (Lugaro, Mering, Fleming, van Gehuchten, Cassirer) have shown that division of the peripheral process of a spinal ganglion cell-body causes very distinct degeneration of this cell-body, or even complete destruction of the cell-body, while Lugaro⁸ has demonstrated that the cell-bodies of the spinal ganglia belonging to the sciatic nerve undergo no distinct change when the posterior columns of the cord or the posterior roots belonging to these ganglia are divided. In advanced tabes dorsalis the posterior roots are intensely degenerat-

ed even close up to the spinal ganglia, and yet Schaffer, a very careful investigator, has found the cell-bodies of the spinal ganglia normal in tabes by the Nissl method, and I have confirmed his observations. These findings seem to show that the peripheral process of the cell-body of the spinal ganglion has a different importance from that of the central process, and that although a peripheral nerve may be restored after it has been divided, it does not necessarily follow that the nerve fibres of the posterior root will also be restored after they have been divided. What is true of the spinal ganglion cell-body and its processes is probably true of the Gasserian ganglion cell-body and its processes.

We must, therefore, conclude that further study is necessary before we can be convinced that regeneration of sensory nerve roots in man occurs, and that full restoration of function is possible after division of sensory nerve roots. Even if a partial regeneration of these roots were possible, it does not follow that pain would return after division of the sensory root of the trigeminal nerve. There might be a partial return of sensation without pain. We must acknowledge that some evidence of partial return of function in injured posterior roots in animals exists, but no evidence of return of function in the trigeminus after the division of its sensory root is to be found in literature. It is a question whether the fibres of this root could penetrate through the thick bands of the middle cerebellar peduncle and pyramidal tract to the sensory terminal nucleus of the nerve within the pons.

In view of the uncertainty of regeneration of the sensory root of the trigeminal nerve, and of the great mortality in removal of the Gasserian ganglion, the division of the sensory root for the relief of tic douloureux is a justifiable procedure, and I trust we may be able to keep under observation for at least two or three years the patient on whom Dr. Frazier has performed this operation. We are not urging that division of the sensory root should at once replace removal of the Gasserian ganglion, and distinctly recognize that the former operation is on trial.

Frazier has shown by experimentation that the motor root of the trigeminus in the dog may be spared. The possibility of saving this root was present in my mind when I urged that this operation should be tried. The motor root has never been left intact when the Gasserian ganglion has been entirely removed, and it probably never can be. It seems to me a fortunate occurrence that in this first successful operation on the sensory root of the trigeminus Frazier divided the motor root as well as the sensory. All communication between the Gasserian ganglion and the pons was in this way fully destroyed and the best possible conditions were obtained for testing the possibility of regeneration of the sensory root. If this case should be as successful clinically⁹ as it has been surgically we may be able hereafter to relieve the pain of tic douloureux without paralyzing the muscles of mastication, for Dr. Frazier's operation seems to indicate

7. Bethe: Abstract in *Centralblatt fuer Nervenheilkunde und Psychiatrie*, July, 1901, p. 449.

8. Lugaro, cited by Flatau: *Fortschritte der Medizin*, 1897 No. 15.

9. Sufficient time to determine this has not yet elapsed; so far the case has been very successful clinically.

that he is able to save the motor root; and we may also be able to lessen the danger of loss of vision, inasmuch as by division of the sensory root the nerve cell-bodies of the Gasserian ganglion are left in normal relation with the peripheral distribution of the trigeminus, and changes in the cornea may be less likely to occur. It is not improbable that these cell-bodies exert a trophic influence on the peripheral branches of this nerve. If this operation should be done again, it would be well to resect the sensory and motor roots, instead of merely dividing them. If it should be fully established that the sensory root will not regenerate after it is cut, the motor root should be spared.

There are some other conclusions to be drawn from the microscopical study of the nervous system of the dogs operated on by Frazier.

Bregman¹⁰ has obtained results from experiments on the rabbit very similar to my results obtained from the dog. In his cases, where the descending spinal root of the fifth nerve was fully degenerated, the sensory root at its outward entrance into the pons was also completely degenerated; but where only the ventral portion of the spinal root was degenerated, only the medial portion of the sensory root at its entrance into the pons was degenerated; and where only the dorsal portion of the spinal root was degenerated, only the lateral portion of the sensory root at its entrance into the pons was degenerated. Bregman also found degeneration in the intracerebral portion of the motor root of the fifth nerve after this root was divided, and this was an ascending degeneration in motor fibres. He found also the mesencephalic root of the fifth nerve degenerated.

From the results obtained by Bregman and from mine, we may conclude that the nerve fibres of the sensory root of the fifth nerve, in both its intracerebral and extracerebral portions, maintain the same relative positions throughout the course of this root. This is an important fact, because we may conclude that if the nerve fibres of the sensory root do not mingle freely without regard to order, the nerve fibres of the Gasserian ganglion also probably preserve a definite order of arrangement. The nerve fibres passing distally from the ganglion separate into three distinct divisions at the peripheral end of the ganglion. We can hardly suppose that the nerve fibres within the ganglion are arranged without definite order if in both the sensory root and the peripheral divisions a very definite arrangement exists. Tiffany's suggestion to spare the inner third of the ganglion in order to preserve vision seems, therefore, to have an anatomical basis, although it is not improbable that if this inner third of the ganglion were removed, the relief of pain would not be permanent.

PART II.

By CHARLES H. FRAZIER, M. D.

The surgery of the Gasserian ganglion has received a great impetus during the past few years, largely through the efforts of those who by the most

careful study of the anatomical relationship of the structures in and about the field of operation have been successful in surmounting many of the operative difficulties. All the improvements in technique, for a practical consideration of the subject, may be grouped under two headings: (1) those which render the ganglion easier of approach, and (2) those which suggest means, not of controlling, but of preventing hemorrhage. The pterygoid route of Rose and the temporosphenoidal route of Doyen have practically been abandoned in favor of the temporal route first advocated independently by Hartley and Krause. In order to lessen the risk of injuring the middle meningeal vessel and to facilitate the exposure of the ganglion Cushing suggested a modification of the Hartley-Krause operation, which he has called the infra-arterial route. The base of the flap corresponds to the level of the zygoma and the trephining opening is sufficiently low to escape the sulcus arteriosus in the anterior inferior angle of the parietal bone, which lodges the middle meningeal vessel, and to give the maximum exposure with the minimum of cerebral compression. Sapejko (*Revue de Chirurgie*, September, 1901) goes so far as to recommend the removal of the great wing of the sphenoid up to and including the foramina rotundum and ovale.

No matter what the method of approach, each of these operations has for its object the removal or avulsion of the Gasserian ganglion and the adjacent portions of its first, second and third divisions. I am about to describe an operation for the relief of tic douloureux which depends for its success not upon the removal of all or part of the ganglion, but solely upon the division of its sensory root. This plan of operation, so radically different, was suggested to me by Dr. William G. Spiller almost three years ago. Granting for the time that from the operator's standpoint this measure could claim many points of advantage over those procedures which entail the removal of the ganglion itself, I withheld my endorsement until I was convinced that regeneration of the nerve fibres at the point of division was doubtful, and that in view of this uncertainty, therefore, this operation might be justified. In order to demonstrate experimentally that regeneration would not take place, I conducted, in connection with my colleague, Dr. Spiller, a series of experiments in which the proposed operation was practiced upon dogs. The interpretation of the results of these experiments and their significance from the standpoint of the neuropathologist is carefully considered in Dr. Spiller's contribution in this paper. Suffice it to say here that Dr. Spiller is of the opinion that the burden of evidence is still with those who would prove that regeneration of fibres with restoration of function does follow division of these sensory roots.

Operation.

The following are the steps of the operation:

1. Reflection of a horseshoe-shaped flap of skin and subcutaneous tissue. The flap corresponds in width to the length of the zygoma; its base is on a

10. E. Bregman. Obersteiner's "Arbeiten," vol. 1, 1892, p. 73.

level with the lower border of the zygoma, its convexity reaching a point 6 cm. above.

2. Division of the zygomatic processes of the malar and temporal bones. After reflection of the superficial flap of skin and subcutaneous tissue an incision is made in the periosteum over the middle of the zygoma throughout its length and the periosteum elevated sufficiently to allow of the introduction of the bone-cutting forceps and the division of the zygomatic processes of the malar and temporal bone.

In my operations upon dogs, where the field of operation was so much smaller than that of the human subject, and where the bellies of the temporal and masseter muscles were proportionally so much larger, I found it absolutely necessary to resect the zygoma in order to be able to retract the temporal muscle sufficiently to allow of a proper exposure of the field of operation and I determined to introduce this step into the technique of my next operation upon the human subject. It is better to practise a temporary rather than a permanent resection of the zygoma. At first thought one might think it inadvisable to replace the segment on the grounds that the bone might not become united owing to the difficulty of keeping it at rest. One will realize how unlikely it is that this will occur if one takes into consideration that the most likely cause of displacement, viz., muscular action, is not operative because the muscles attached to the fragment of bone and concerned in the act of mastication will have been deprived of their motor nervous supply, which is derived from the inframaxillary branch of the trigeminus, before the operation has been completed. (This assertion is based upon the assumption that the integrity of the motor root of the ganglion has in but very few instances been preserved.) One or two sutures introduced at either end of the fragment through the periosteum will suffice to insure fixation until union occurs. Necrosis of this fragment has been recorded as a possible unfavorable complication of temporary resection, but this can be avoided if one bears in mind that the bone receives a liberal blood supply through the periosteum and avoids stripping this structure from the bone except at the points where the bone-cutting forceps have to be applied.

3. Reflection of a horseshoe-shaped flap, composed of temporal fascia, muscle, zygoma and pericranium, corresponding in shape to the superficial one but of somewhat smaller dimensions. This flap is reflected sufficiently to expose to view the temporal fossa; during the operation it will be subjected to considerable traumatism consequent to the constant traction and pressure and will be swollen and tender for a short time. Owing to the contractile character of the tissues of which it is composed the flap will shrink at least one-third before the operation is completed, so that some little traction will have to be made in order to approximate the edges upon closure of the wound.

4. Removal with the trephine of a button of bone

at a point corresponding to the middle of area exposed and enlargement of the opening with the rongeur forceps until its diameter measures three to four centimetres. The usual precaution must be taken in trephining here, as in any portion of the calvarium where the bone is of such variable thickness, in order to avoid injuring the dura; and additional precautions are necessary in this region owing to the fact that the middle meningeal artery lies immediately beneath the button of bone to be removed. With the rongeur forceps the trephine opening is enlarged about equally in all directions and should extend downwards to the level of the crista infratemporalis.

5. Separation of the dura and exposure of the ganglion and its sensory root. The adherent dura is separated by blunt dissection (the handle of a scalpel enveloped in a single layer of gauze will meet all indications) inwards and forwards until the foramen ovale or rotundum comes into view, either of which serve as a guide to the site of the ganglion. This is the most tedious stage of the operation and one which taxes the patience of the operator to the utmost. Hemorrhage now constitutes the great bugbear. Protracted and persistent oozing follows the separation of the dura from every point at which it is adherent to the skull; the older the patient the firmer the adhesion and the freer the hemorrhage. Hemostasis can be effected only by pressure and heat; small pledgets of gauze saturated with a hot saline solution are cautiously applied to the bleeding point and allowed to remain for periods of two to five minutes. In my series of operations upon dogs I tested the efficiency of gelatin in 5 per cent. solution as a hemostat in intracranial operations with practically negative results. The solution had no apparent effect. The dura is most adherent to the skull at the margins of the foramina so that the most troublesome bleeding is not experienced until one has arrived almost at the site of the ganglion. Second only to hemorrhage as a troublesome feature of this stage of the operation is the presence of large bony eminences on the floor of the middle fossa. As pointed out by Amyx these eminences are more commonly met with in heads not having a great transverse diameter between the ears, but whose external bony prominences are well marked rather than in those skulls with a large transverse width; these prominences are situated usually external to the foramina ovale and rotundum and, if very large, will have to be chiselled off in order to expose the foramina to view and remove the ganglion. In some cases the ganglion itself lies beneath a bony roof as though it were a continuation of the petrous portion of the temporal bone. While this is an anomaly in men, it is not so in the dog. Almost without exception in the series of dog's skulls which I had an opportunity to examine while carrying on the experimental work, the ganglion was covered by a thin shell of bone which had to be removed in order to bring to view the ganglion and its sensory root.

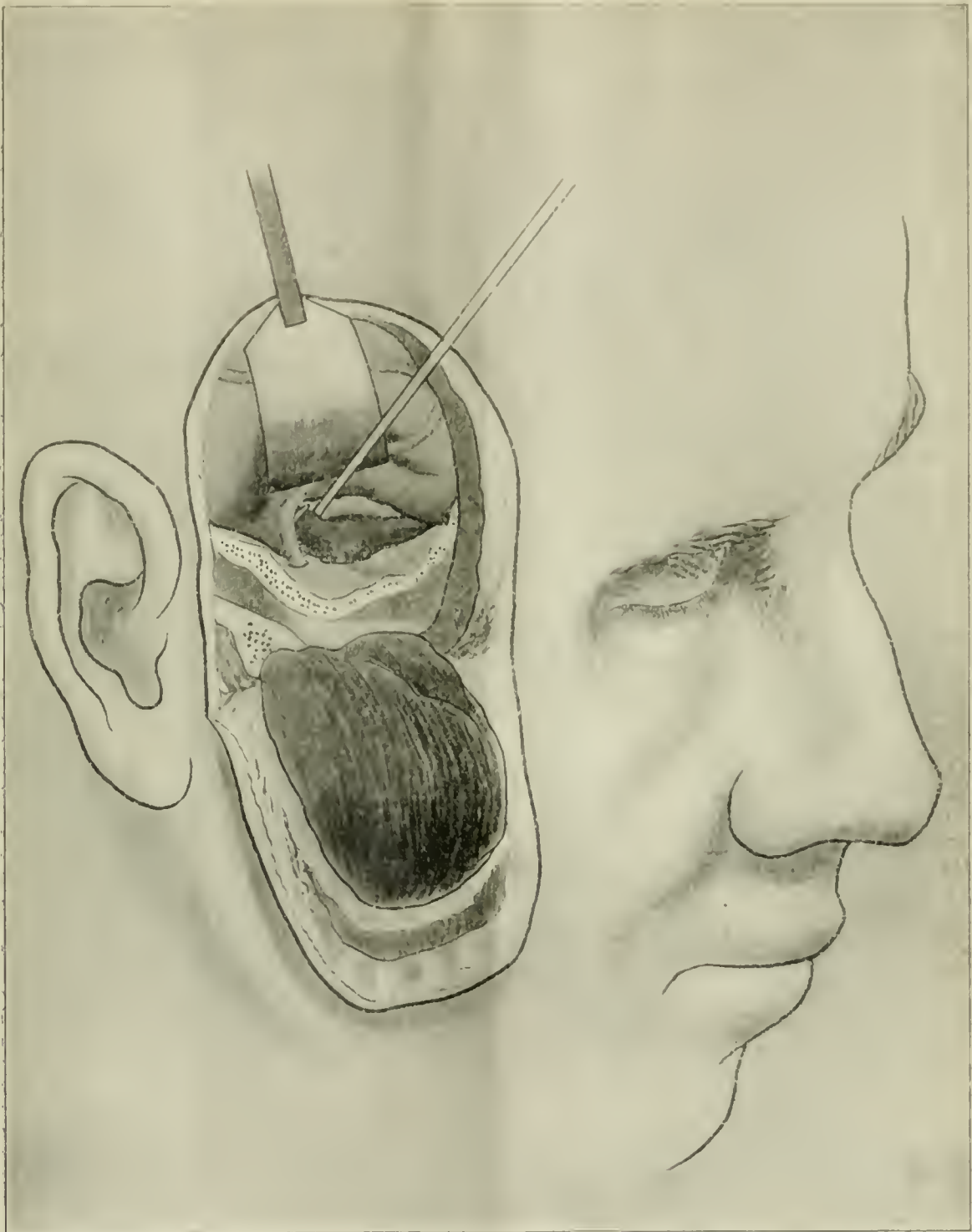


FIGURE 3.—Illustrating the final step of the operation. The sensory root is picked up on a blunt hook preparatory to its division. (This drawing made directly from a dissection upon the cadaver, shows the reflected dura propria and the relationship of the foramina rotundum, ovale and spinosum and the middle meningeal artery to the Gasserian ganglion and its sensory root).

With hemorrhage well enough under control to enable one to recognize the anatomical landmarks, the operator makes an incision into the dura and dura propria between the foramen ovale and spinosum and with a blunt dissector separates the dural envelope from the upper surface of the ganglion as far back as may be necessary to expose to view

the sensory root. Up to this point the method of procedure has not differed essentially from those operations which have in view the extirpation of the ganglion. From now on the courses diverge; in the one the operator proceeds to liberate and extract the ganglion and its branches, in the other to liberate and divide the sensory root. The divi-

sion of the root is not a difficult performance. When fully exposed it is picked up on a blunt hook which is passed around the nerve from without inwards. The nerve is divided either by making traction with the hook or cutting directly upon the hook with knife or scissors. It would be a better plan, however, and I will carry it out in future cases, after elevation of the nerve upon the hook to grasp it with a pair of forceps, hemostatic or dissecting, and remove a small section with knife or scissors. This slight modification will add nothing to the dangers and little to the difficulties of the operation and will serve a two-fold purpose, on the one hand furnishing a specimen for a pathologic examination, and on the other leaving a defect in the continuity of the nerve which would render regeneration a possibility still more remote.

In connection with this step of the operation, there is one point which will naturally come up for discussion. Can the sensory root be isolated from the motor root so that the integrity of the latter may be preserved? This question may be answered in the affirmative if certain reservations be made. That it is possible upon the living subject to separate the motor from the sensory root was proven by my own case. I had practically concluded the operation and was about to close the wound; in order to assure myself that none of the fibres of the sensory root had been left undivided, I repeated the last step of the operation and in so doing picked up the motor root which up to this time had remained intact, and unintentionally divided it. It is *possible*, therefore, to divide the sensory without the motor root; whether we can attain sufficient dexterity to avoid the accident which happened in my case is a matter to be settled by future repeated observations.

6. Closure of the wound.—The section of zygoma is returned to its normal situation and secured in place by one periosteal suture at either end. While there is no danger of displacement as a result of muscular action, the fragment may be dislodged during the application, or the changing, or the pressure of the dressing and for this reason the introduction of a suture at either end is recommended. A narrow strip of gauze enveloped as it passes by the scalp in a cuff of rubber tissue is introduced for drainage. If the bleeding is free at the conclusion of the operation, it must be controlled by pressure with strips of gauze. The rubber tissue, by preventing the edges of the scalp wound adhering one to the other, will insure perfect drainage. The wound in the temporal muscle and fascia is closed with buried interrupted catgut sutures, and the superficial wound with interrupted silk-worm gut sutures.

A special protective dressing is applied to the eye in order to prevent corneal ulceration.

Remarks.

Whether this operation for the relief of tic douloureux will receive the endorsement of the surgical profession and take the place of the operation now in vogue, will depend altogether upon the acceptance without reservation of the facts embodied in the following two assertions: (1) Regeneration of the sensory root will not take place after its division, and (2) (a) Liberation and division of the

sensory root, obviating many of the operative difficulties associated with the liberation and extraction of the ganglia, is easier of execution; (b) the integrity of the structures of the cavernous sinus is not endangered; (c) the operation should be attended with a lower mortality.

I will not enter into the discussion of the subject of the regeneration of the sensory roots of the cranial ganglion, as this is a problem which should be left to the neuropathologist for solution and in this paper has been very carefully and exhaustively treated by Spiller. It remains for me to substantiate the claims which have been advanced from the surgical aspect.

Every surgeon will frankly admit that hemorrhage is the greatest bugbear in operations upon the Gasserian ganglion and holds it accountable for many failures and many fatal issues. The bleeding that takes place during the operation in this field might be said to be either troublesome or alarming: troublesome when it follows division of the middle meningeal artery, the emissary veins; alarming when due to laceration of the cavernous sinus. Let us consider the various sources of hemorrhage separately. Hemorrhage from the middle meningeal artery, since the adoption of the infra-arterial route, will occur infrequently and when it does, may be controlled by plugging the foramen spinosum with gauze or, as Krause has suggested, with the end of a blunt hook (Krause has had constructed a series of hooks of various sizes which he keeps on hand to meet this emergency). If, in enlarging the opening in the skull, the operator should resect that portion of the skull containing the sulcus arteriosus, he runs the risk in the removal of that segment of bone of wounding the vessel. As it is not necessary, in order to expose the ganglion, to carry the resection so high, injury to the vessel at this stage of the operation should be regarded as a blunder. The vessel will most likely be injured at its other fixed point, namely the foramen spinosum. If too great traction be made upon the vessel at this point in elevating the brain, or if too great force be applied in separating the dura in the neighborhood of the foramina where the attachments are firmest, the vessel is in imminent danger of being lacerated. Experience alone teaches one how much force can be applied to these structures without endangering their integrity. In so far as the middle meningeal artery is concerned, neither of the two operations under discussion can claim an advantage over the other. Hemorrhage will follow the separation of the dura from the various places at which it is attached to the skull: it is very variable in quantity, the degree of hemorrhage seeming to be in proportion to the number and firmness of the dural attachments. From this source bleeding is, to say the least, annoying but can always be controlled by pressure. The nearer one approaches the ganglion, the firmer the adherence of the dura, the correspondingly freer the bleeding. Inasmuch as the ganglion receives its largest blood supply from below, surgeons are advised in performing those operations which are designed to remove the ganglion, to put off the elevation of the ganglion till the latest moment in order, as Cushing says, to postpone what

degree of hemorrhage is unavoidable as long as possible. In this particular, therefore, one can justly claim for the operation, which leaves undisturbed the attachments of the ganglion to its unyielding base, an advantage over one the execution of which invades this source of free and troublesome hemorrhage. The time required to separate the ganglion from its base and the additional time required to control or check the flow of blood before the operation can be proceeded with, must be taken into consideration and given due weight in the estimation of the relative merits of the operation under discussion.

The third source of hemorrhage is the cavernous sinus, and, as has been already said, should any injury happen this sinus bleeding may be so profuse as to give cause for alarm. The sinus is exposed to danger once the operator begins to free the internal aspect of the ganglion, and in this connection Cushing says "that it is well to conduct these manipulations *as near as possible to the sensory root, since that is the safest point*, and one at which there is less likelihood of injuring the cavernous sinus and sixth nerve." Therefore, in limiting our field of operation to the posterior aspect of the ganglion and its sensory root, we confine our manipulations to the point of greatest safety. So much stress would not be laid upon the superiority of one operation which is associated with less bleeding than another, because the amount of blood lost in either is not a menace to life and will not materially affect the ultimate results, but because the control of hemorrhage necessary to the continuance of the operative maneuvers is only effected after repeated application of pressure for various periods of time, which in the aggregate may rightly be considered as a factor unfavorably influencing the results. Patients of advanced years, and most of the sufferers of trifacial neuralgia that come to us for operation have reached that period of life, are not good subjects for prolonged general anesthesia, therefore any measure which will economize time should, other things being equal, carry some weight with it. Thus far I have aimed in drawing a comparison to throw the balance in favor of the operation requiring less time for its completion and attended with less hemorrhage. I now call your attention to the operative difficulties and dangers that are avoided by stopping short of the extraction of the ganglion. It goes without saying that the exposure of the ganglion is less difficult by far than its extraction. The ganglion and its three divisions are so firmly bound down to the base of the skull that the liberation of the structures is the step of the operation which, above all others, tests the skill, dexterity and patience of the operator. For the completion of this step of the operation one begins by exposing the superior surface (to quote Cushing again) "of the stellate structures well back on to the sensory root." Without going a step further, without exciting one whit more hemorrhage, without running any further risk of injuring adjacent structures, we have made all the preparation necessary for division of the sensory root. Thus one operation is practically complete before those difficulties, both serious and troublesome, common to the other operation

have been encountered. Not only then do we obviate certain operative difficulties, but we are able as well to eliminate certain dangers to adjacent structures. In practically every operation in which the ganglion has been removed the motor root has been destroyed, but from what has already been said in discussing the last steps of the operation we not only believe it possible to divide the sensory without the motor root, but were able to demonstrate this on the living subject. Too much importance, it seems, has been attached to the question of the preservation of the motor root, since its division causes only the little annoyance to the patient that follows paralysis of the muscles of mastication on one side. The patient can chew his food only on the unaffected side. However, if it is possible to save the nerve, we are not justified in deliberately sacrificing it, and if the neuralgia involve both the right and left trigemini, what is only an annoyance in a unilateral case becomes in the bilateral a serious complication.

As the motor root, so the sixth nerve is almost always injured during the extraction of the ganglion; its proximity to the ophthalmic division is such that division of one without the other is practically impossible.

Although a positive assertion cannot be made, there are some grounds for believing that trophic disturbances in the cornea, secondary to division of the first root of the ganglion itself, may not follow the division of sensory root because of the probable presence in the ganglion of trophic centres presiding over the peripheral nerve. In the case, which is reported in this paper, there was not a suspicion of a keratitis, although a very simple dressing, consisting of a compress saturated with boracic acid, was applied to the eye, and this for only one week following the operation.

On the assumption that we are recommending an operative procedure which obviates many difficulties and some dangers, which is easier of execution, comparatively speaking, and economical as to time, it is reasonable, at least, to prophesy a greater reduction in the mortality than that which has resulted from the improvements in technique which have within the past two years been suggested.

Conclusions.

As a substitute for all operations which depend for their success upon removal of all or a part of the ganglion, I recommend an operation which depends for its success solely upon the division of the sensory root of the ganglion. Granting it will effect a radical and permanent cure, the advantages of this operation are the following:

1. It should be attended with a lower mortality.
2. It obviates a number of difficulties.
3. Its execution is, comparatively speaking, simple.
4. It is practically complete when the posterior aspect of the ganglion and its sensory root have been exposed; that is, it is practically complete before the difficulties most serious and troublesome common to other operations have been encountered.

5. The integrity of the cavernous sinus is never in danger.

6. The risk of injuring the sixth nerve is avoided. The following is a brief history of the case upon which I performed this operation:

J. L., aged sixty-eight, was referred to my service in the University Hospital by Dr. D. J. McCarthy.

Family History.—Father and mother died from

orbital nerve, beginning at the supraorbital notch and extending up over the forehead as far back as the anterior edge of the parietal bone. These attacks were provoked by exposure to cold, dampness or wind. Four years ago a neurectomy of the supra-orbital nerve was performed, after which he enjoyed a period of relief. Within a year of this operation the pains recurred with their former severity, when



FIGURE 4.—Showing area of anesthesia one week after division of the sensory root of the trigemini.

typhoid fever, one brother and sister living and well, two brothers died from unknown causes. His wife, four sons and one daughter are living. One son and one daughter are subject to attacks of supraorbital neuralgia, one son died from phthisis.

Previous History.—Had the usual diseases of childhood. About ten years ago had an attack of sciatica which lasted for some seven months, but did not confine him to bed.

Social History.—The patient was born in Ireland and came to the United States thirty-four years ago. Has been a hard worker ever since ten years of age. His occupation formerly was that of fireman, at present he is a watchman. Has never used alcohol excessively, occasionally taking a glass of liquor, which he found increased his neuralgic pains. No venereal history.

History of Present Illness.—About five years ago he first began to have sharp shooting pains referred to the course and distribution of the right supra-

the second peripheral operation was performed. The latter afforded him relief for about six months; and since that time a third and fourth operation have been performed. Each succeeding operation seemed to afford him relief for a shorter period of time. The administration of large doses of salicylates had beneficial results for a while.

Condition on Admission.—Examination of the thoracic and abdominal organs negative.

Examination of the Head.—The area of tenderness extends on the right side of the head backward from the supraorbital margin a distance of 13 cm., and from the median line a distance of 8 cm. The area of anesthesia is 2 cm. wide anteriorly and 5 cm. wide posteriorly, and its inner margin is 1.5 cm. to the right of the median line.

Examination of the Eye.—Hypermetropia and astigmatism; no coarse changes.

Urine Analysis.—Clear, amber, acid, light floccu-

lent precipitate, specific gravity 1019, urates and mucus, no albumin or sugar.

October 12, 1901. Operation. Division of sensory root of Gasserian ganglion.

October 17, 1901. Examination of patient under this date reveals complete anesthesia over the area corresponding to the distribution of the trifacial nerve (see Fig. 4).

November 2, 1901. Patient was discharged from the hospital to-day. During the post-operative period nothing occurred worthy of note.

Examination under present date reveals absence of the supraorbital reflex on the affected side. The area of anesthesia extends back from the supra-orbital margin 18.5 cm. and 3.5 cm. to the right of the median line at this level. The zygoma has become firmly united. There are no corneal ulcers of the eye of the affected side.

THE OPERATIVE TREATMENT OF INTERCOSTAL NEURALGIA OCCURRING IN THE DEFORMITIES OF THE CHEST FOLLOWING POTT'S DISEASE AND SCOLIOSIS.

By CHARLES F. PAINTER, M. D.,
of Boston, Mass.

In a considerable number of cases of bad thoracic deformity, the result of Pott's disease or scoliosis, one not infrequently meets with cases where pain is a conspicuous feature, referred commonly to the lower ribs on one side, or to the costo-vertebral articulation or its immediate neighborhood. On examination, one frequently can demonstrate the overlapping of the lower ribs by the iliac crests in such a way that the soft parts are pressed between these bones. In other cases it can be shown that the ribs are crowded together, causing the intercostal nerves to be similarly compressed. A further confirmation of the pressure theory is found in the fact that a supine position relieves the pain almost at once, and even in the erect position, if the extension of the trunk can be accomplished, either temporarily or permanently, cessation of the pain is secured.

That, anatomically, conditions of this sort exist in the case of bad scoliotics and healed Pott's disease can be very readily demonstrated by the X-Ray. Reference to Redards' recent X-ray atlas will show several cases of both diseases in which the ribs are in contact or actually overlapping.

(Photographs made from these plates would not reproduce well and are therefore not shown in this article.) Three photographs are shown of most severe grades of deformity, because they represent fairly well the type in which these neuralgic symptoms occur.

In the Pott's cases the manner in which the deformity is developed is of course very evident. The destruction of the bodies of several vertebrae allows the ribs to crowd together, and the shortened trunks of these patients are sufficiently familiar. These cases are more likely than the scoliotics to have bilateral symptoms, though even in them this is unusual because of the fact that an absolutely symmetrical destruction of the vertebral bodies by the tuberculous process is not likely to occur; more

destruction takes place on one side than on the other. In the scoliotics the pain is almost always unilateral, because on the convex side of the rotation there is a separation of the ribs, whereas the concave side is the one where compression occurs and where pain is commonly referred. It must be remembered that the X-rays are taken with the patients supine, a position in which it is well known scoliotics are taller than when standing and that therefore the conditions are not at their worst. Indeed, clinically that is the position when such cases have no pain because the ribs then are the widest separated.

The problem which one has to face in these cases is a purely mechanical one, and sometimes can be wholly met by mechanical means; by the use of a swathe or a brace. Many times, however, more radical procedures are necessary, and under these circumstances excision of a rib is usually effective in bringing about a permanent cure. There is no account of operative interference in these cases which I have been able to find in the literature covered by the Index Medicus. So far as I know, the operation was first done by Dr. J. E. Goldthwait in 95, and the following reported cases were operated at the Carney orthopedic clinic upon patients who were not relieved by the less radical procedures.

The technique is simply that of an excision of the rib and the point of election at which to operate is not chosen with a view of finding the particular nerve which is pressed upon, but to remove sufficient bone to give the other ribs more room. It may be of course that one of the ribs is chosen which is causing the pressure upon the intercostal.

The following cases are reported:

CASE 1.—Boy, 20 years of age. Pott's disease since he was an infant; a bad deformity, as shown in photograph. Complained of a great deal of pain in region of lower left ribs. Ribs were closely crowded together and the lower ones covered by the iliac crest; when lying



FIGURE 1.

* Read by title before the American Orthopedic Association, in June, 1901.

down free from pain. In January, 1900, Dr. J. S. Stone, to whom I am indebted for this case, excised the tenth left rib through the incision shown in the photograph. Relief from pain on the left side was immediate. Later, symptoms developed on the other side in a similar situation, but have now (August, 1901) let up, probably due to a tuberculous process in the right hip which has developed of late.

CASE II.—In 1895 a woman came to the clinic, aged 25, a bad thoracic deformity from Pott's; pain referred to the lower right ribs. A light swathe was tried for a time, but no effect, and later still a back brace, also to no purpose. The pain was wholly relieved by recumbency. Dr. Goldthwait removed about $4\frac{1}{2}$ inches of the tenth rib on the right in January, 1896. This gave entire and permanent relief to the pain and she was enabled to resume her work, which she had been obliged to give up on account of the pain. She was last heard from in 1899.

CASE III.—Male, 50 years, laborer for the street cleaning department. When 28 years of age, sustained a fracture and dislocation of the left shoulder. As a result of this he has never been able to raise the left arm but a few



FIGURE II.

degrees from his side. For the past 20 years he has used the heavy broom used by crossing sweepers, and has gradually developed a right dorsal rotary curve of the spine. For 2 years before coming to the clinic in 1898 he had been able to work only very short hours because of pain in the left lower ribs. This was partially relieved by a tight plaster swathe applied as in fractured ribs, but yet he was unable to do his work as crossing sweeper. In December, 1900, four inches of the eleventh rib on the left was excised, with very considerable relief of pain, so that he has been at work since, but there is still some soreness in that same region. He was a much older patient than the others, and had some osteo-arthritis changes going on which doubtless complicated matters.

CASE 4.—N. H. Female, 23. Had Pott's disease at 6 years of age, which left her a very much shortened trunk, due to a knuckle in the back, involving 5 or 6 of the mid-dorsal vertebrae. This caused her no trouble until 2 years ago, when she began to have pains referred to the lower ribs on both sides, especially the left, where the ribs were pressed down inside the iliac crests. Pain entirely relieved by recumbency and not affected by tight swathes. The discomfort was severe enough to keep her from doing her work as a mill operative. In November, 1900, the left 10th rib was excised back to the angle. This gave immediate relief, but since then she has had so much

pain on the right side that she has had to resort to the use of a swathe, which partially relieves that side.

CASE 5.—M. K. Male, 25. As an infant had Pott's and hip disease, leaving him with an ankylosed right hip in position of right angled flexion and a very marked knuckle in the spine, as shown in the photograph (fig. 3); the ribs are very much compressed and crowded down inside the iliac crests. A subtrochanteric osteotomy was done in 1898



FIGURE III.

upon the hip. In the early part of 1900 he began to complain of a great deal of pain in the left back, beginning at the spine below the scapula, protruding around to the front. A brace, with heavy pad, giving compression over the painful ribs, served for a while to give some relief, but it was not possible to work all the time. After a few months trial the left eleventh rib was excised with immediate and permanent relief. Has had no trouble since.

CASE 6.—C. D. Male, 21. This patient is one of the most extreme grades of scoliosis that I have ever seen. The deformity was noticed first when he was 13 years old and steadily increased in spite of braces, jackets, exercises and 3 months in bed. When lying in bed he was nearly three inches taller than when standing. During the past year and a half he has complained of considerable pain when standing or sitting, referred to the mid-thoracic region on both sides. This is relieved by recumbency. His general condition has rather contraindicated operation and a swathe tightly applied has kept him fairly comfortable.

Case 7.—M. D. Female 23. This young woman had Pott's disease 12 years ago. The process was a rapidly destructive one and the knuckle, composed of 3 or 4 dorsal vertebrae, is quite sharp. Four years ago she first began to complain of pain referred to the right lower ribs. A back brace which tended to hyperextend the trunk with a leather swathe attachment gave her entire relief for 3 years. The pain returned coincident with the wearing out of the brace, and has again been relieved by putting the brace into condition again.

This case, as the others, was perfectly comfortable while she remained recumbent.

CASE 8.—E. G. Female. This patient had a very sim-

ilar condition to case 4 of this series, viz.: a right-angled flexion of the left hip from hip disease, and an extreme deformity from Pott's in the dorsal region. She complained a great deal of pain in the lower thoracic region on both sides, especially the left. $3\frac{1}{2}$ inches of the 10th rib was excised with marked relief of symptoms in the left side. A light canvas swathe reinforced with whale bone has partially relieved the right side.

These cases represent only the most striking ones of this condition coming to the clinic in the last six years. There have been several others with similar symptoms, but relief has been secured by the less radical procedures.

SPLANCHNOPTOSIS.

Factors: A. Relaxed Abdominal Walls (including Pelvic and thoracic diaphragm);

B. With Consequent Distalward Moving of Viscera;

C. Gastro-Duodenal Dilatation, (with report of two operations for its relief and a rubber air pad as a supporter).

By BYRON ROBINSON, B. S., M. D.,
of Chicago.

(Continued from page 999.)

Horizontal Position.

A dominant factor in splanchnoptosis is venous congestion during erect attitude, hence the patient should assume especially the horizontal position. When a patient with established splanchnoptosis assumes the erect attitude, the viscera in general pass distalward, the veins immediately enlarge, the abdominal wall is put on a stretch, and it projects or bulges over the symphysis pubis sufficient to hide the genitals from view. The patient in the erect attitude assumes a position of lordosis as in advanced pregnancy, in order to secure a compensatory weight balance.

In the horizontal position the patient with splanchnoptosis should lie on the side and not on the back. All patients with established splanchnoptosis suffer from gastro-duodenal dilatation, due to pressure on the superior mesenteric artery, vein and nerve on the transverse segment of the duodenum. I experimented with dead subjects who had been afflicted with splanchnoptosis, and when such subjects were placed on the back, the viscera, especially the enteronic loops, passed distinctly more and more into the lesser pelvis, dragging and tugging on the superior mesentery artery, vein and nerve, which compressed more and more the transverse segment of the duodenum. When the subject of splanchnoptosis lies on the back, the enteronic loops glide into the lesser pelvis, which makes the superior mesenteric artery, vein and nerve approach closer and closer to the vertebral column and thus lessen the superior mesenteric vertebral angle.

I have personally observed splanchnoptosis and gastro-duodenal dilatation progress until the stomach filled the abdomen like an ovarian cyst. The more acute the superior mesenterico-vertebral angle, the more the transverse duodenal segment is compressed. If the subject lies on the side, the (superior) mesenterico vertebral angle is made larger, releasing the transverse duodenum from compression. Pregnancy increases the (superior) mesenterico vertebral angle, forcing proximalward

the enteronic loops and thus releasing the transverse duodenum from pressure. A great benefit in the wearing of an abdominal binder is to increase the (superior) mesenterico-vertebral angle, releasing the duodenum from compression and preventing further gastro-duodenal dilatation. Lying on the abdominal surface of the body, with a pillow under the thorax, the symphysis pubis would have the ideal position to make the largest (superior) mesenterico-vertebral angle (as it exists in quadrupeds). Hence the splanchnoptotic should lie in the horizontal lateral position as much as is convenient to increase the (superior) mesenterico-vertebral angle, to avoid venous congestion and to prevent the viscera from passing distalward, producing stenosis and kinking of the lumen of the vessels, ducts and viscera. Lying on the back, or standing, increases the compression of the duodenum by the mesenteric vessels and nerve.

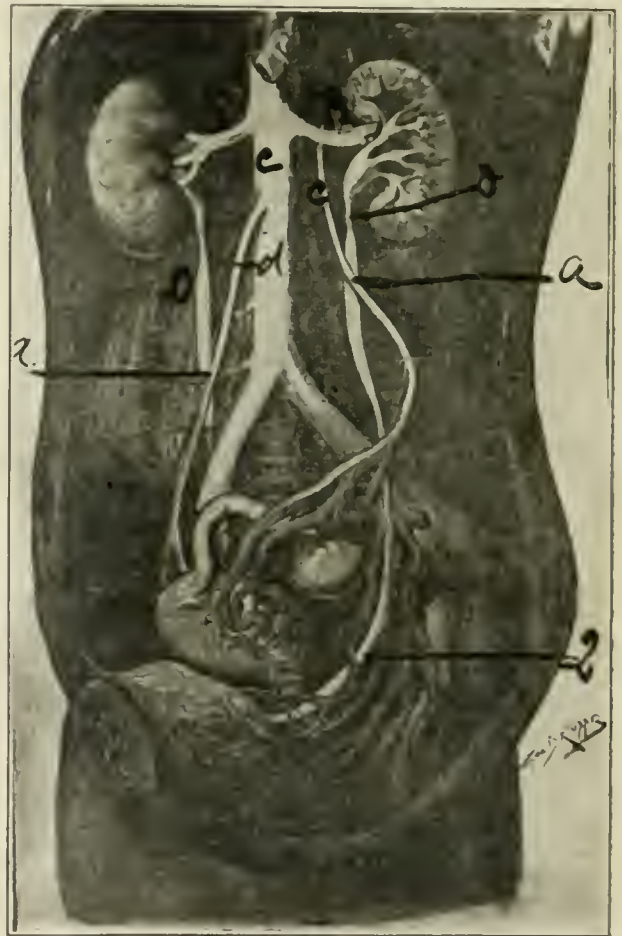


FIG. 17 represents the uretero-venous triangles drawn from a female about 50 years of age. Left uretero-venous triangle a, apex; b, base (renal veins); c, ovarian vein; d, ureter. Right uretero-venous triangle. a, apex; d, ureter; c and d, ovarian vein and vena cava; b, base (renal vein); a, points also to the uretero-venous crossing and besides it points to the proximal ureteral spindle. 2 points to the pelvic segment of the ureter coursing through its veins, and also it is the distal ureteral spindle. The uretero-venous triangles are always more or less distorted in splanchnoptosis.

The Cold Douche.

The cold douche is of limited value even when applied with the physician's direction. It can be applied to the abdomen in the vagina or rectum.

Resection of Segments of Abdominal Wall.

In 1885, Prof. Schröder, of Berlin, employed this method while I was a pupil of his department, and he distinctly concluded it was unsatisfactory, and sufficiently a failure to justify its abandonment. He proved that the abdominal wall again stretched.

The Union of the Two Recti Abdominales in a Single Sheath.

My attention was first called to the subject of lax abdominal walls by Prof. Karl Schröder, whose pupil I was for a year. In that year (1884-1885) Prof. Schröder, the greatest gynecologic teacher of his age, was at his zenith of fame, and his clinic was vast. In fact, he tapped the whole of Europe for his material. He discussed in his clear style the misfortune of lax abdominal walls, and he resected the large oval segments of the abdominal wall lying between the diastatic recti abdominales. He then united the sheaths of the recti in the median line. But Prof. Schröder said then to his pupils that he was not fully satisfied it was the best surgery that he knew at that time. Later German surgeons improved on Schröder's ideas by splitting the sheath of the recti and enclosing both the recti abdominales in one sheath by uniting the recti sheaths anterior and posterior to the recti muscles.

In 1895, Dr. Orville W. MacKellar and I operated on a woman pregnant four or five months, where the diastasis of the recti abdominales was very marked, and the uterus, on coughing or extra-intra-abdominal pressure, would project between the recti abdominales. We united the split sheaths of the recti anterior and posterior, enclosing the two musculi recti abdominales in one sheath. Dr. MacKellar reports to me at present that his patient is perfectly well, and the operation was a success. Dr. MacKellar was at the delivery and the recti sheaths remained perfectly intact. For the post-operative hernia, for years past at the Mary Thompson Hospital, I have split the recti and enclosed them in a single sheath. Every one with sufficient experience knows that the post-operative hernia of any considerable size, in women over 40, is in every case accompanied by splanchnoptosis. Dr. MacKellar and I have records to show that 6 years after enclosing of the two recti abdominales in a single sheath, for splanchnoptosis, the operation is a success. The mesenteries are not to suspend the viscera, but to act as a neuro-vascular visceral pedicle, and to prevent the entanglement with other viscera. It is the abdominal wall that holds the viscera in position.

Besides, I showed in 420 detailed records of personal autopsic abdominal inspection, that in 96 per cent. of the subjects the enteron has a mesenteron sufficiently long to herniate through the inguinal, femoral or umbilical rings. Hence the mesenteries must be looked upon as neuro-vascular visceral pedicles, and not as suspensory organs, while the abdominal walls are the great supporters and retainers of the viscera. And as every anatomist knows, the recti abdominales are among the chief regulators or governors of visceral poise, at least

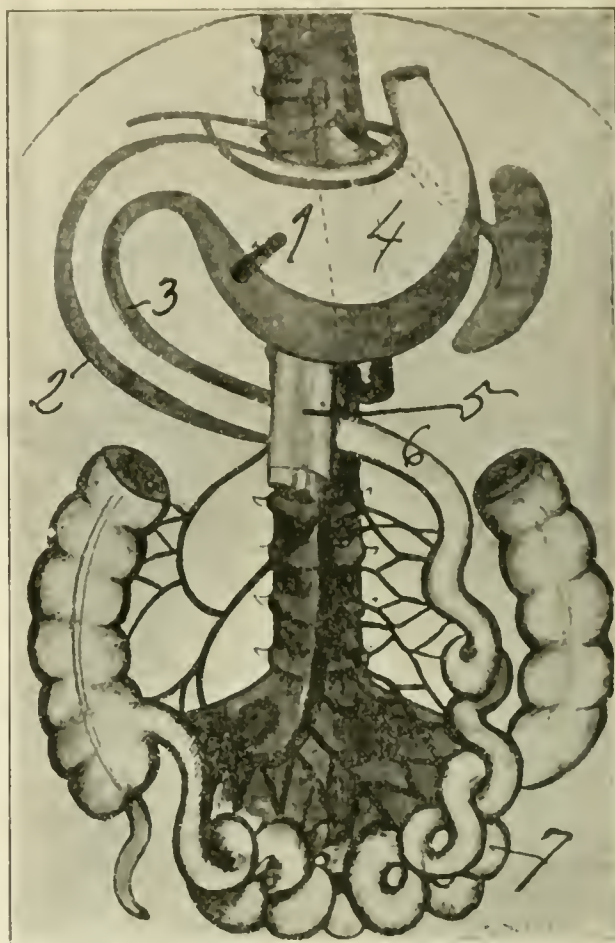


FIG. 18.—Front view of gastro-duodenal dilatation from compression of the transverse segment of the duodenum by the superior mesenteric vein, artery and nerve. 1, 2 and 3, colored portion showing dilatation of stomach and duodenum; 4, stomach; 5, superior mesenteric artery, vein and nerve bound in a strong bundle and compressing the duodenum against the vertebral column; 6, jejunum (note how its natural size is retained, while on the opposite side the duodenum is dilated). 7, Enteronic loops in the pelvis dragging under and more on the structure compressing the duodenum.

they retain the viscera in their first delicate normal balance.

In uniting the two recti abdominales into a single sheath the operation may be performed without entering the peritoneal cavity. I think this operation has a large field of usefulness, for it can be performed without entering the peritoneal cavity and after any laparotomy.

For Gastro-Duodenal Dilatation—Gastro-Enterostomy.

In all cases of advanced splanchnoptosis gastro-duodenal dilatation exists, due to compression of the transverse duodenal segment by the superior mesenteric artery, vein and nerve. I have carefully tested this matter in abdominal autopsies for nine years.

Gastro-jejunostomy.—This I consider one of the best surgical methods to overcome extreme gastro-duodenal dilatation. I proved in gastro-jejunostomy in dogs, ten years ago, that it will enable the stomach to contract, because the food does not tarry in the stomach, but passes immediately into jejunum and ileum, the business portion of the tractus intestinalis. Any segment of the

tractus intestinalis containing no contents, or over which no food travels, will remain contracted.

Any one can prove this by excluding a segment of the bowel from fecal circulation; it soon contracts and remains in that condition. In 1894, Dr. Lucy Waite and I made an abdominal autopsy on a man aged about seventy years, in which the stomach rested on the pelvic floor, presenting enormous gastro-duodenal dilatation. But the duodenum transversum practically remained in its original location and relation.

This illustrates that, since the duodenum cannot pass distalward with other viscera, on account of its attachments, that it can be relieved only by turning the fecal current over another route. Gastro-enterostomy has, in the operation for relief of gastro-duodenal, a much wider and more useful range than for malignancy or stricture of the pylorus.

My first case of gastro-enterostomy for gastro-duodenal dilatation in 1894 was performed on a patient of Dr. C. Henry of Fostoria, Ohio. This patient vomited for nearly two years. At the operation the stomach and duodenum were found enormously dilated due to compression of the transverse segment of the duodenum by the superior mesenteric artery, vein and nerve. The stomach occupied

the pelvis. I performed gastro-enterostomy with my segmented rubber plates. In 1901, seven years subsequent to the gastro-enterostomy, Dr. Henry informs me that she is perfectly well.

A Resume of Splanchnoptosis.

In splanchnoptosis, in general, canalization is compromised, nerve periphery traumatized, motion, secretion, respiration, visceral function, circulation and muscular contraction are disordered—ending in malnutrition and neurosis.

1. There are three conditions to consider in splanchnoptosis, viz.: (a) relaxed abdominal walls, thoracic and pelvic diaphragms; (b) splanchnoptosis, and (c) gastro-duodenal dilatation. The disease is remarkably common especially in females.

2. The general effect of splanchnoptosis is compromising of circulation (blood and lymph) and respiration, traumatizing nerve periphery, impairing elastic and muscular tone of the abdominal walls and deranging secretions and muscular co-ordinations. Its results are malassimilation and neurosis.

3. Splanchnoptosis stenoses or kinks the lumen of ducts, vessels and viscera.

4. Splanchnoptosis is dislocation of the abdominal viscera. A viscus is dislocated when it is fixed permanently out of its place. More adults have dislocated viscera (from local peritoneal adhesions) than normal ones.

5. Splanchnoptosis appears to be to a large extent of congenital predisposition, as its subjects are generally feeble, slender, atonic, highly neurotic, ill nourished, deficient in vital force with weak physiologic functions and anatomic structures, with apparently a hard struggle to battle for life and against its forces. It seems sufficiently difficult for the splanchnoptotic merely to live—without attempting to work or reproduce children. They are consequently physically and mentally weak.

6. The symptoms of the splanchnoptotic are complex and numerous. Each cause in splanchnoptosis produces a vicious circle of pathologic effects—on the viscera, circulation, respiration, nervous system and nourishment. Splanchnoptosis is often mistaken and wrongly diagnosed as neurasthenia, nervous exhaustion, hysteria, spinal anemia, menopause, etc., nervous dyspepsia and neurosis.

7. The large and complex groups of symptoms produced by splanchnoptosis must be considered independent of inflammatory processes.

8. Large numbers of so-called dyspeptics are splanchnoptotics.

9. Stellar's costal stigma of floating tenth rib I have not studied sufficiently to make a report.

10. The splanchnoptotic appears neurotic, slender, and delicate, poorly nourished, pale, non-energetic, tired, and as a sad, helpless picture. Splanchnoptotics form a distinct class, with peculiar characteristics like the class of tubercular subjects to which they are related.

11. Splanchnoptosis is a general disease of all the abdominal viscera; the tractus intestinalis, urinaris and genitalis are equally affected, but from anatomic mechanism the tractus intestinalis suffers

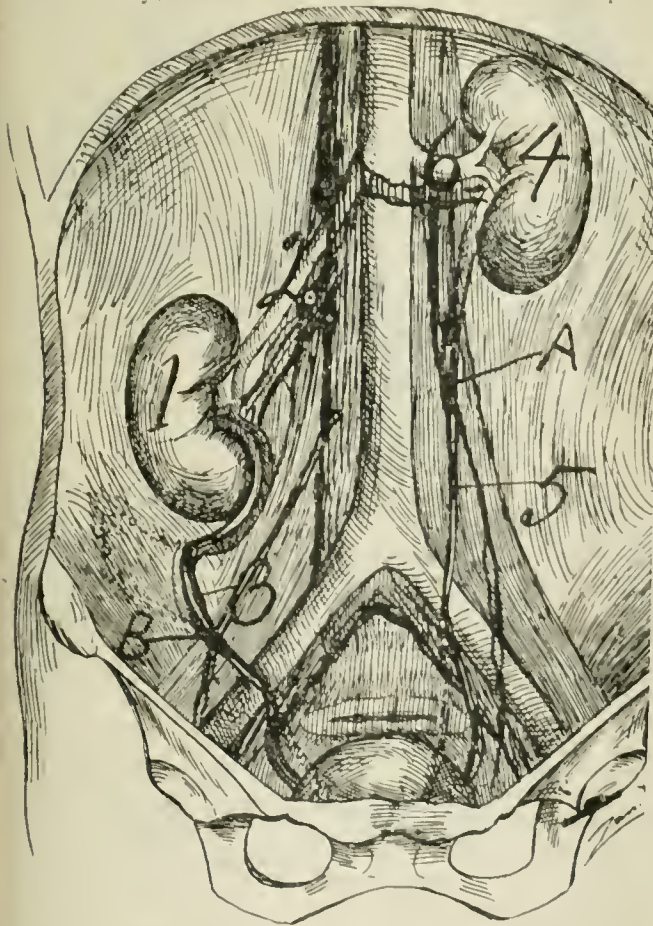


FIG. 19 illustrates nephroptosis dextra. 1, the nephroptotic kidney; 2, the elongated right renal artery; 3, the curled and dislocated ureter. The left kidney and ureter is represented as normal. A and B represents the apex of the uretero-venous triangles. The right one is distorted from right nephroptosis. Right nephroptosis is due, in man, to the erect attitude. In dogs and pigs the right kidney lies proximal to the left. The erect attitude reverses these anatomic data because the anchorage of the right kidney, the right renal artery, is longer than the left

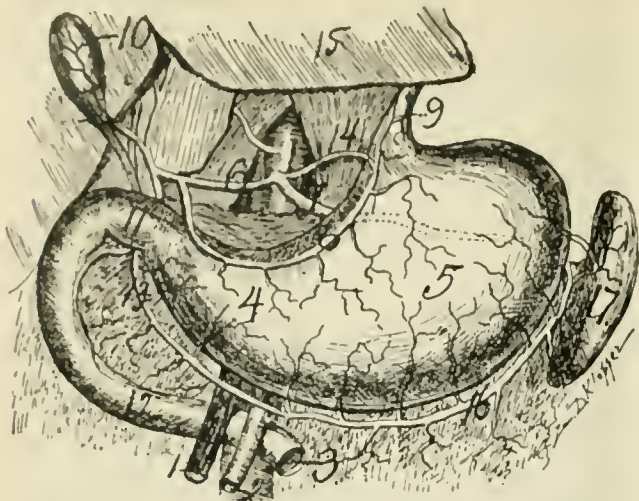


FIG. 20 (author) is a cut to illustrate the position of the duodenum and the superior mesenteric artery, vein and nerve. 1, the superior mesenteric vein; 2, superior mesenteric artery, the nerve not represented in the cut; 3, distal end of duodenum; 4 and 5, stomach; 6, hepatic artery; 7, splenic artery; 8, gastric artery, the hepatic and gastric arteries making what I shall term the gastro-hepatic circle; 9, the esophagus; 10, the gall-bladder; 11, the pylorus; 12, the duodenum; 13 and 16, gastro-epiploea sinistra et dextra; 17, spleen; 15, part of liver. This cut shows that the duodenum in the acute mesenterico-aortic angle is the acute mesenterico-vertebral—however, the real angle of strangulation.

the most. All splanchnoptotics have genital ptosis and nephroptosis.

12. In diagnosis it is well to palpate every abdominal viscus, first in the horizontal position and second in the erect position. The liver, spleen and kidney may appear dislocated only when standing erect. Frequently the muscoli recti abdominales are so diastatic that one can palpate every abdominal viscus through the fascia of the linea alba, thinned by the elongation and separation of its fascial fibres.

14. Since my clinic and private practice has consisted of 90 per cent. of women, I cannot estimate the percentage of splanchnoptosis as regards sex.

15. Gestation plays an influential role in increasing splanchnoptosis, as when the fascial and muscular fibre of some abdominal walls are once well elongated and separated they do not return to normal.

16. The 2d, 3d, 4th and 5th decades of life are the chief ages of suffering in splanchnoptosis.

17. The symptoms which predominate in splanchnoptosis are from the side of the nervous system, as depression, melancholy, excitability, irritability and the stigmata of hysteria. The patients complain much of disturbed circulation causing cardiac palpitation and vigorous aortic pulsation or rhythm. It is a beating tumor and some physicians mistake it for aortic aneurysm, because the aorta is so much uncovered by viscera and only covered by the abdominal wall.

18. Two characteristic groups of symptoms of the splanchnoptotic exist, viz.: On the one side neurasthenia and sick headache, and on the other indigestion, poor appetite and constipation.

19. I cannot agree with Meinert in attempting to establish an etiologic relation between chlorosis and splanchnoptosis. I found no such relation in my series of observation.

20. The large number of women who had not

borne children, who have not laced tight, had no wasting disease, but having splanchnoptosis, indicates a congenital predisposing factor.

21. In splanchnoptosis there are two factors to study, viz.: (a) congenital and predisposition, (b) exciting cause. The secondary or exciting causes are, any forces which tend to weaken the abdominal walls, as rapid child bearing, abdominal tumors, ascites, septic diseases, constipation, and wasting diseases, such as the disappearance of fat in the abdominal wall and adjacent to the viscera.

Splanchnoptosis may exist without any known symptoms to the patient or to the physician, but the rule is that this may be accompanied by almost all kinds of gastro-intestinal disturbances. The chief symptoms of nephroptosis are (a) palpitation, (b) gastric disturbances, and (c) constipation. Though tight lacing and bands are accused of producing splanchnoptosis, they are only a factor, as a predisposition in a weak abdominal wall no doubt must exist.

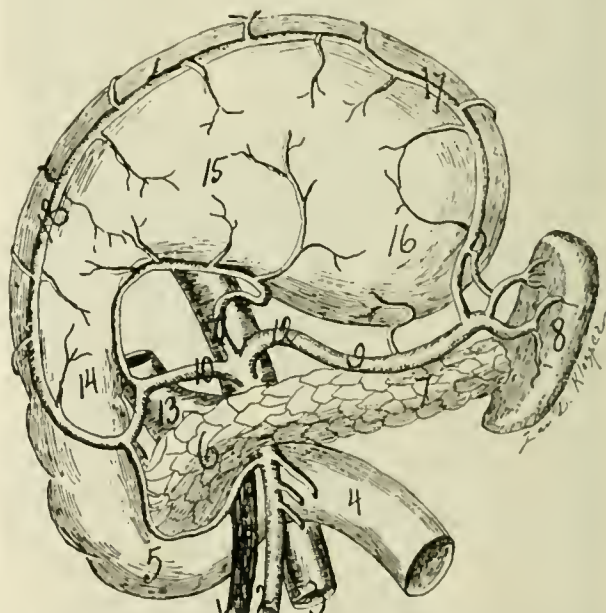


FIG. 21 (author) shows the relation of the duodenum transversum, pancreas, celiac axis, superior mesenteric artery, vein and nerve with the stomach drawn proximally. 1 and 2, superior mesenteric artery and vein; 3, aorta; 4 and 5, transverse segment of duodenum passing posterior to vessels; 6 and 7, pancreas; 8, spleen; 9, splenic artery; 10, hepatic, and 11, gastric arteries forming the gastro-hepatic circle; 13, portal vein; 14, duodenum; 15 and 16, stomach; 17 and 18, epiploic arteries. This cut shows how natural the vessels could compromise the distalward-moving fecal current in the duodenum. The fixation of the transverse segment of the duodenum by the musculus suspensorius and the fibrous band from the left crus of the diaphragm is not drawn in the cut.

Gastro-enteroptosis and nephroptosis almost always exist together. Nearly all splanchnoptotics are easily fatigued and show a neurotic existence. In women I observed that splanchnoptosis is commonly accompanied with backache, constipation, flatulence, varied local pains—all of which yield stubbornly to treatment.

Splanchnoptotics manifest vast disturbances in the circulatory system, as (a) palpitation, (b) vigorous beating in the abdominal aorta from partial uncovering of the viscera and thinning of the abdominal wall, also ganglionic irritation, (c) compromising of vascular lumen, (d) headaches from

irregular cerebral circulation, and (c) extensive abdominal venous stasis.

In splanchnoptosis the individual abdominal organs may be distinctly palpated either through the thin linea alba, between the diastatic recti muscles, or through the thin flaccid abdominal walls.

A good test of relaxed abdominal wall is to stand behind the patient and encircle the distal abdomen with the two hands and force the abdomen proximalward, when it will give relief by its support. Also a partial test is to elevate the abdomen and suddenly let it drop, when the degree of fall indicates the degree of relaxation.

The gynecologist must analyze with care the differential diagnosis between reflexes from nephroptosis and reflexes from genital disease.

Nephroptosis frequently produces identical symptoms with those arising from genital disease. One of the tests to differentiate between the two organs will be the application of a well-fitting abdominal supporter to replace and retain the mobile kidney. The sympathetic nervous system holds an intimately and finely poised relation among the three systems of the abdominal viscera, viz.: tractus genitalis, tractus urinarius, and tractus intestinalis. Disturbance of one system unbalances the others through reflexes.

Observe how nephroptosis from trauma of the plexus renalis produces reflex symptoms on the proximal end of the tractus intestinalis, ending in nausea, pain, malassimilation, constipation, and neurosis. Renal calculus induces vomiting, and sooner or later nephroptosis and gastric disease co-exist. Genital disease gives rise to more gastric disturbances than the reverse, because the gastric secretions are deranged more easily than those of the genitals. Trauma or infection of the nerve periphery of any abdominal system of viscera soon deranges the motion and secretion of the other two abdominal systems. The connection between diseases of the uterus (genitals) and gastric (digestive tract) is profound and intimate. Disease of the uterus and stomach frequently coexist. A differential diagnosis between the symptoms arising from nephroptosis, from the genitals or stomach, is often difficult, as symptoms may be referable to any one of the viscera. This may be due, first, to the nerve tract, whose centre is not in the brain or the spinal cord but in the sympathetic nervous system. From reflex action symptoms arise which relate to kidney or genitals. The reflex tracts being anastomosis ovarica, anastomosis pudendohemorroidalis, anastomosis genitogastrica, anastomosis cutaneo-cavernosa, collateralis and the nervi splanchnici. Also the anastomosis uterocoeleica and anastomosis utero-cerebro spinalis, also anastomosis reno-coeleica. The immediate roads of the reflex are direct connections of the vagus (excluding the ganglion-abdominale) with the sympathetic nervous system. The second manner in which mistakes may occur are due to dislocation of the respective organs. The circulation only plays a minor role in this connection.

As splanchnoptosis is a general disease, local op-

erations, as nephropexy, uteropexy, will appear of limited value.

The tartaric acid and bicarbonate of soda method is a practical means to demonstrate the gastro-duodenal dilatation. Inflation of the stomach by air is also a good method. The two operations I offer after 5 and 6 years of test are both general and local. The local is gastro-enterostomy, which can be immediately followed by a general operation, i. e., the union of the two recti abdominales in a common sheath.

The non-surgical treatment for splanchnoptosis is through water drainage of the tractus intestinalis, tractus urinarius and tractus perspiratorius, with exercise and massage of the muscles.

Of the abdominal supporters I consider the best an ordinary elastic support, with a rubber air pad which can be placed inside of the binder and distended with air. I have invented such a pad and find it gives excellent results. Glenard, Schwert, Virchow, Stiller, Meinart, Ewald, Landon, Boas and Ameill have written excellently on splanchnoptosis.

The photographs in this article were executed by Dr. William E. Holland, from my wall charts. The other drawings were finished by Mr. Zan. D. Klaffer, from my sketches which were nearly all from autopsies.

Chyliform Pleural Effusion.—In the *Bulletin Medical* (July 10, 1901. No. 54.) F. Barjon and A. Cade report a case of chyliform pleural effusion. While chylous effusions contain chyle, much albumen, and some sugar and result from injury to the thoracic duct, chyliform or chyloid effusions are much rarer, containing no fibrin, little albumin, and no sugar, and are rich in fat, which is found in emulsion. It is as a rule due to fatty degeneration of the cells present. It lasts a long time, but does not greatly affect the general health. They report their case in detail. Inoculation of the fluid into rabbits gave lesions containing true tubercle bacilli. This had long been suspected, but had never been demonstrated. They conclude that chyliform pleural effusion is the result of a chronic inflammation of the pleura, due to tubercular infection. [M. O.]

Pneumothorax with Bronchiectasis in Diabetes Mellitus.—Maurice Letulle reports the case of a man of 52, with diabetes mellitus, who suddenly developed right-sided pneumothorax. The symptoms became so severe that on the sixth day a puncture was made, and liquid and gas evacuated. Death occurred with syncope on the ninth day. The autopsy showed a circumscribed patch of recent tuberculosis adjacent to an ancient bronchiectasis. A caseous patch between the bronchiectatic cavity and the pleural cavity ruptured, and thus the pneumothorax was produced. There were also atrophic cirrhosis of the liver and an enlarged spleen, both pigmented. Letulle explains in detail the mechanism of the occurrence of the pneumothorax. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, June 27, 1901. No. 22.) [M. O.]

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended December 7th, 1901:

SMALLPOX—United States.

			Cases.	Deaths.
ALABAMA:	Gilmer Co.	Nov. 26.	10	
ILLINOIS:	Springfield.	Nov. 1-30.	60	
INDIANA:	Evansville.	Nov. 23-30.	2	
KENTUCKY:	Lexington.	Nov. 23-30.	4	
LOUISIANA:	New Orleans.	Nov. 23-30.	2	1
MARYLAND:	Baltimore.	Nov. 23-30.	1	
MASSACHUSETTS:	Boston.	Nov. 23-30.	103	8
	Cambridge.	Nov. 23-30.	1	1
	Lowell.	Nov. 23-30.	1	
	Malden.	Nov. 23-30.	1	
	Medford.	Nov. 23-30.	1	
	New Bedford.	Nov. 26-Dec. 2.	2	
	Newton.	Nov. 23-30.	1	
MINNESOTA:	Minneapolis.	Nov. 22-29.	4	
	Winona.	Nov. 23-30.	2	
NEBRASKA:	Omaha.	Nov. 23-30.	4	
	South Omaha.	Nov. 23-30.	16	
NEW JERSEY:	Camden.	Nov. 23-30.	5	
	Jersey City.	Nov. 24-Dec. 1.	11	
NEW YORK:	Newark.	Nov. 23-30.	26	4
	Buffalo.	Nov. 9-26.	36	2
	New York.	Nov. 23-30.	16	2
OHIO:	Cincinnati.	Nov. 22-29.	6	
	Dayton.	Nov. 23-30.	1	
	Youngstown.	Nov. 16-30.	3	
PENNSYLVANIA:	Allegheny City.	Nov. 23-30.	3	
	Lebanon.	Nov. 23-Dec. 1.	4	
	Norristown.	Nov. 23-30.	5	
	Philadelphia.	Nov. 23-30.	113	14
TENNESSEE:	Memphis.	Nov. 23-30.	2	
	Nashville.	Nov. 23-30.	2	
UTAH:	Salt Lake City.	Nov. 30.	1	
VERMONT:	Burlington.	Nov. 23-30.	7	
WASHINGTON:	Tacoma.	Nov. 16-23.	3	
WISCONSIN:	Green Bay.	Nov. 26-Dec. 2.	9	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Nov. 2-16.	8	
BELGIUM:	Antwerp.	Nov. 2-16.	6	2
	Brussels.	Nov. 9-16.	1	1
CANADA:	Halifax.	Nov. 23-30.	9	
	Quebec.	Nov. 23-30.	27	
	St. John.	Nov. 23-30.	2	
	Winnipeg.	Nov. 23.	5	
COLOMBIA:	Cartagena.	Nov. 12-19.	3	
	Panama.	Nov. 18-25.	100	
FRANCE:	Paris.	Nov. 9-16.	3	
GIBRALTAR:	London.	Nov. 9-16.	368	16
GREAT BRITAIN:	Calcutta.	Oct. 26-Nov. 2.	1	1
INDIA:	Naples.	Nov. 2-9.	29	2
ITALY:	Alvarado.	Nov. 24.	1	
MEXICO:	Moscow.	Nov. 2-9.	9	4
RUSSIA:	Odessa.	Nov. 9-16.	2	
	Barcelona.	Oct. 19-Nov. 2.	2	
SPAIN:	Valencia.	Nov. 5-19.	20	
STRAITS SETTLEMENTS:	Singapore.	Oct. 12-19.	1	1

YELLOW FEVER.

BRAZIL:	Para.	Oct. 1-31.	177	56
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CHOLERA.

INDIA:	Bombay.	Oct. 20-Nov. 5.	2	
	Calcutta.	Oct. 26-Nov. 2.	32	
	Madras.	Oct. 26-Nov. 2.	32	
JAVA:	Batavia.	Oct. 19-26.	19	15
STRAITS SETTLEMENTS:	Singapore.	Oct. 5-26.	15	15

PLAGUE—Foreign and Insular.

INDIA:	Bombay.	Oct. 30-Nov. 5.	173	173
	Calcutta.	Oct. 26-Nov. 2.	24	
	Karachi.	Oct. 26-Nov. 2.	66	38
HAWAIIAN ISLANDS:	Honolulu.	Nov. 13.	1	

VRATCH.

September 15, 1901. (Vol. XXII, No. 37.)

1. A Chronicle of Corporal Punishment in Russia in the Twentieth Century. D. N. ZSHBANOFF.
2. Chronic Suppurative Inflammation of the Middle Ear and Its Treatment. P. P. GELLAT.
3. The Influence of Organic Combinations of Phosphorus (Lecithine) on Assimilation (fixation) of Nitrogen (albuminous substances) in the Human Body.

M. D. ILIN.

- 2.—Gellat points out that diseases of the naso-pharynx,

especially adenoids, form a most important predisposing factor in the causation of acute and chronic catarrhal and suppurative inflammations of the middle ear. It is held by some that adenoids are rare in very young infants. This view the author considers erroneous, as shown by 198 autopsies on infants performed by him. The author made the interesting observation that in Russia (St. Petersburg?) grave forms of otitis media are far less frequent than in Western Europe. Thus, in Strassburg of 77 operations 36 were performed on account of cholesteatoma. Hallé reports 209 cases of otitis media of which 96 were due to cholesteatoma. In Russia, on the other hand, the latter affection is so rare that many ear-specialists never see a case. During a period of 11 years the author has seen only two cases. The cases of otitis media observed by the author run a milder course and are, as a rule, free from serious complications. This he attributes to the climate. The routine treatment of suppurative otitis media by the usual irrigations is severely criticised on the ground that while far from accomplishing the results for which it is intended, it does actual harm by increasing the suppuration. The use of tampons is also condemned. The method advocated has been successfully employed in a large number of cases with very happy results. It consists in thorough cleansing the cavity by means of small, dry-cotton swabs on long thin wooden sticks. As soon as the swab saturated with pus is withdrawn, it is broken off and a fresh one made. In this manner thorough cleansing is accomplished with considerable ease and rapidity. In cases where the pus is stringy and removed with difficulty by the dry method, careful syringing may be resorted to, but even in these cases the irrigation should be followed by the application of dry swabs. Insufflation of dry boracic acid does no harm and may do some good. If the case is protracted beyond 1-1½ months and exuberant granulations, together with pain and headaches occur, further local treatment is inadvisable and surgical intervention is indicated. Stacke's operation, which has been somewhat simplified by the author, is recommended. The operation is described and details of the after-treatment given. 9 illustrative cases are reported. [A. R.]

3.—Danilievski, Kolpaktshi. Umlkoff and Tamasheff have proved experimentally that assimilation and organization of albuminous substances in the animal organism are determined by the organic combinations of phosphorus, especially lecithine. Ilin endeavored to verify the findings of these observers on man by the following experiments. A laboratory servant was placed on a special diet for 14 days divided in 5 periods. During the first period (3 days) an ordinary diet, but deficient in proteids, was given; during the second (2 days), the diet was almost free from proteids and organic phosphorus; during the third (4 days), it was rich in albumin, but poor in phosphorus, especially lecithine; during the fourth (4 days), the amount of albumin was gradually diminished and that of lecithine increased; during the fifth (1 day), the man received an ordinary diet but deficient in proteids. The food was carefully weighed each day, and the various constituents calculated according to a special table. The man was weighed daily, his urine collected, the nitrogen determined by Kjeldal's method and the phosphorus by uranum acetate. The feces were not analyzed, it being assumed that 90% of the eliminated nitrogen is excreted with the urine (Neumeister) and 80% of phosphorus on a mixed and 94% on a meat diet is eliminated through the same channel (Noorden). The following results were obtained: During the first period the man had neither nitrogen nor phosphorus equilibrium. During the second he lost both in N and P. During the third the nitrogen assimilation was increased and phosphorus equilibrium established. During the fourth nitrogen assimilation was increased despite the gradual diminution of the intake with the food, this being due to the increased ingestion of phosphorus. During the fifth, with a diet poor in N, nitrogen assimilation still kept up, owing to the presence of P. It is thus evident that the presence of organic phosphorus in the human body aids in the process of nitrogen assimilation. [A. R.]

The Philadelphia Medical Journal

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VOL. VIII, NO. 25

DECEMBER 21, 1901

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A New Operation for Tic Douloureux.—The proof of a surgical operation is in the success of it; and, provided the surgeon attains his wished for result, the theory upon which he has worked becomes in the opinion of many persons a matter of secondary importance. The division of the sensory root of the fifth nerve must *a priori* abolish sensation, and therefore pain; and its simplicity, as compared with avulsion of the whole Gasserian ganglion, commends it both to the surgeon and to the neurologist. The one obstacle that may stand in the way of a perfect success is the possible reunion and regeneration of the sensory root; and this conjures up an old physiological or pathological problem about which surgeons and neurologists have been contending—and even wrangling—for years.

In their valuable and highly interesting paper, published in last week's number of the Journal, Drs. Spiller and Frazier present this subject from both the theoretical and practical standpoint. Dr. Spiller has done well to seek for light in this field by experiments on dogs before advising the operation on man, and he has presented some results of experiments that are of great interest. These results, however, it may be noted, point to the degeneration of the fibers of the sensory root rather than to their regeneration. The experiments do not seem to disprove the possibility of a reunion of the divided root, but merely make such reunion seem highly improbable. This may be due partly to the fact that the experiments are not reported in full detail, and that it is not indicated for how long after the experiments the animals were kept under observation before they were killed. The fact that certain fibers degenerated was, of course, entirely in accord with well known neuropathological laws, and needed no experiment; but the question whether a divided sensory root can or cannot reunite does not seem exactly proved either way. These facts are fully recognized by Dr. Spiller, who presents them with judicial impartiality.

In his review of the literature of this subject Dr. Spiller presents the results of other observers who have studied the regeneration of divided nerves. Perhaps the most interesting of these is the obser-

vation of Bethe, who claims that he observed the regeneration of nerve fibers from the nuclei in the sheath of Schwann in the peripheral portion of the divided sciatic nerve in a dog. This is a recurrence to an old idea, and one which had been regarded as well nigh exploded. It has been claimed of recent years that a divided nerve fiber can only be restored by an outgrowth or budding from the proximal end, or the end which is still in union with the cell body; but Bethe's observation, it is seen, tends to prove that, for the sensory nerve at least, this is erroneous. It is well to recall in this connection, what Van Gehuchten so fully insists upon, that the peripheral prolongation of a sensory neuron is its protoplasmic end and is different from its central or axis-cylinder prolongation. This protoplasmic portion seems to have some special nutritional function of a higher degree of activity than the axis-cylinder or central prolongation. Hence it more readily regenerates.

From the practical or surgical standpoint Dr. Frazier's case has thus far been a brilliant success. It is too soon, of course, to claim that the sensory root in his patient cannot reunite and regenerate, and the further history of the case will be awaited with interest. But if prophecy and *a priori* reasoning are at all justifiable, we think we are safe in predicting that reunion will not occur. When we consider how almost inconceivable it is that the two stumps of the divided root should apply themselves accurately to each other, and that the divided axis-cylinders should then reunite, we feel almost justified in a prediction that the patient will never have a restoration of function and of suffering.

The Quarantine Against Tuberculosis.—Last summer the supervisor of immigration issued an order that immigrants suffering from tuberculosis should be debarred from entering the United States. Since that time there has been an effort made in various lay and medical journals to cast discredit upon the wisdom of this order and to secure its repeal on the part of the United States, with the avowed intention or turning the entire matter over to the local boards, who should have discretionary power to refuse such cases admission to the

United States. The advocates of repeal make the following arguments. That consumption is not a contagious but a communicable disease. It is admitted on all hands that it is a germ disease; that the germs are discharged in great numbers in the sputum of patients suffering from pulmonary tuberculosis, and probably also in the feces and urine, and that they do not lose their virulence when dried in the dust. Under these circumstances tuberculosis must certainly be classed as a highly dangerous disease; not dangerous so much perhaps to the individual coming in direct contact with the victim, as to the community at large, to whom every new case is an added source of danger. Secondly, that it is a chronic disease. This only increases the danger by prolonging the period during which the patient may spread the germs broadcast. Third, that it is easily preventable. This is perhaps true in hospitals and sanatoria, but it is a matter of daily observation among the physicians that the consumptive is by no means so careful as he should be with his sputum, and utterly disregards all other material in which tubercle bacilli may be eliminated. Fourth, that it is often a curable disease. We should say rather that under favorable hygienic conditions and in suitable climates some cases get well. A recovery in one of the large cities of the Atlantic seaboard—and it is to these cities that the immigrant chiefly goes—is of such rarity as to justify its immediate publication. Another group of arguments claims that this measure is inhumane inasmuch as it may separate children from parents, husbands from wives, or dependents from their source of support. Unfortunately there is no method of dealing with a contagious disease that does not involve an element of inhumanity toward the victim, but it is possible that when the ruling is more generally known, even if it is not already the case, families including cases of tuberculosis among their numbers will elect to remain at home. A more reasonable argument perhaps would be that a case might come to this country in search of the favorable climate that exists in many of our western states. It is possible that for them, providing they possess sufficient wealth to enable them to carry out the treatment rationally, relaxation should be permitted. Finally, the fear is expressed that other countries will retaliate and prevent our citizens suffering from tuberculosis from seeking the beneficial climate of Algiers or the Riviera. We fear that this is only too likely to occur, and that it will not be a matter of retaliation, but rather of protection on the part of the foreign governments. This subject must be regarded from a purely rational stand-

point. We must not be sentimental in treating with tuberculosis, for it is unquestionably the most serious malady that confronts us at present. Before we agitate any measure likely to cause the repeal of this order we should carefully consider whether in our efforts to be humane to a few we are not cruel to a multitude.

Tetanus in Camden.—It seems desirable that a rational view should be taken in regard to the deaths from tetanus supposed to be conveyed during vaccination in the city of Camden, New Jersey. The Board of Health took energetic measures to discover the cause of these deaths, and incidentally the best method of preventing their occurrence in the future. An official report has been distributed generally to the medical profession in Philadelphia, and we presume throughout the country. The conclusions stated prove that in no case can the tetanus be supposed to have been introduced by the vaccine virus. In one case the patient had not been vaccinated, and in all the others the disease developed so late that it is reasonable to assume that the tetanus bacilli were introduced by scratching or contamination after the removal of the scab. They explain that the dry weather and high wind had probably caused a very wide dissemination of the tetanus germs.

Upon two points the report may be criticized: Exactly the same climatic conditions existed in Philadelphia and yet cases of tetanus did not occur. The nature of the experiments made with the vaccine virus upon white rabbits in order to prove that it did not contain tetanus bacilli, are given so briefly that they are of imperfect value to enable an impartial reader to arrive at a conclusion. But the clinical histories of the cases seem to prove satisfactorily that their conclusions regarding the time of infection are unassailable, and excepting these the cases fail utterly as material to support the dangerous contentions of the anti-vaccinationists.

The results in Porto Rico where the mortality has been reduced from over 600 to less than 2 per year since the universal vaccination of the population by the officers of the United States Government, are sufficient proof, if any were needed, that vaccination is, as someone has expressed it: "the greatest boon conferred upon mankind".

The Canary Islands as a Health Resort.—The United States Consul at Teneriffe, has recently communicated to the Secretary of State an interesting report on the Canary Islands as a resort for tuberculous cases. The resort is situated between 27° 4' and 29° 3' N. and 13° 3' and 18° 2' W. The Canaries

in consequence of their geographical position form an almost ideal home for those who do not thrive in the trying climatic surroundings of the northern countries. The mean winter temperature of the principal towns in the islands averages about 65°. The islands are easily accessible as they are used by many of the principal lines of steamers as ports of call. Good hotel accommodations are to be found, and an English physician, Dr. Stamford Harris, has chosen Guimar, on the Island of Teneriffe as a site for the construction of a hospital to be devoted to the treatment of tuberculosis. The hospital stands 1200 feet above the level of the sea, and commands a beautiful view of mountains and ocean. The Consul who makes this report, Berlinger, quotes several writers' opinions of the possibilities of the Islands. He warns physicians against sending patients in late stages of tuberculosis to the Islands, as many cases of death have been known to take place with no friends near the sufferer. Those who go to the Islands seeking health, may be encouraged by the fact that numbers of apparently hopeless cases have been completely cured in those patients who have followed absolutely the regimen laid down by the local medical men who have devoted their lives to the study of the climate and its effects. It would appear from reading this report that the Canary Islands are deserving of consideration in the selection of a suitable location in the proper climatic conditions, which will benefit many incipient cases of tuberculosis. But if there is to be an iron-clad international quarantine against tuberculosis, we suppose these islands would be closed to American invalids.

Hepatic Drainage.—In another column Dr. John B. Deaver, in discussing this subject refers generally to the various pathological conditions of the gall-bladder and its ducts which confront the surgeon. The question of early diagnosis and treatment in diseases of the gall-bladder and its ducts is one of the greatest importance not only to the operating surgeon but to the general practitioner. Oftentimes the diagnosis is obscure, the symptoms being in no sense proportionate to the pathological condition present. It has been shown clearly enough, however, that early operative treatment gives a very low mortality, whereas late treatment, instituted after complications such as adhesions, obstruction of the ducts, jaundice, etc., have set up, presents a much higher mortality. Much has been done within recent years, particularly by Mayo Robson, Richardson, Halsted and others, to perfect the technique of gall-bladder surgery, and every general practitioner should be informed of the progress that

has been made in the treatment of these conditions and the great necessity for an early operative interference. In all cases of persistent disordered digestion, particularly when accompanied by dilatation of the stomach, and possibly attacks of so-called "biliousness," the attendant should most carefully examine the gall-bladder region and if he cannot clearly eliminate this organ and its ducts as a causative factor, he should call a surgical consultant. Dr. Deaver shows the great similarity between appendicitis and inflammation of the gall-bladder. None but the experienced knows how much more serious operations upon the gall-bladder become in the presence of jaundice; the mortality from hemorrhage in these cases is extremely high. Dr. Deaver very rightly asserts that "temporizing and Carlsbad" can only be productive of harm in cases in which the gallstones have already developed. As a preventive measure medicines and waters may be of advantage. With one statement which Dr. Deaver makes, namely, that the gall-bladder should be removed when there is any marked change in its wall, many surgeons will hardly be prepared to agree, and yet his argument in favor of the removal of this organ is very plausible.

Pharmacological Experiments.—The subject of pharmacology has been largely turned over to the drug manufacturing firms, and there can be no doubt that in spite of the pure spirit of commercialism that has inspired them, they have contributed considerably to progress in this subject. It is to be regretted however, that the subject of pharmacodynamics inspires relatively little interest on the part of the medical profession. In the olden days studies of the physiological action of drugs occupied no inconsiderable portion of the space devoted to original work in our medical journals, but nowadays an article on this subject is exceedingly rare. It is not necessary for the prosecution of these studies to await the discovery of new drugs. On the contrary, the careful examination of the physiological action of drugs supposedly well known is still a fruitful field for the investigator; this is particularly true of their various chemical derivatives. A recent article upon the effect of some of the salts of morphia, by Barnes (*Archiv für experimentelle Pathologie und Pharmakologie*, Vol. 46) shows how much there is to be studied in connection with this oldest of drugs. He found that cooking an alcoholic solution of potassium morphinate with an equivalent amount of calcium chloracetate produced a new salt, probably morpho-oxylacetate in combination with potassium. The addition of hydrochloric acid liberated the acid from

its potassium base. This acid experimentally tried on frogs and rabbits produced very slight symptoms of diminished brain function. If, however, the methyl and aethyl ester of the salt were employed and administered subcutaneously or by intravenous injection, there were in frogs, first exaggeration of the reflexes, then violent clonic convulsions resembling those produced by picrotoxin, and finally paralysis and death. In rabbits the drug produces violent clonic convulsions, and death may be caused by respiratory cramp, or if artificial respiration is employed, the animals may remain in persistent convulsions for hours. The drug, however, has no effect when administered by the mouth. Various studies convinced Barnes that in frogs the spinal cord was involved in the action of the drug, whereas in rabbits only the mid-brain. It is not very clear just what the therapeutic value of these studies will be, but at least they are a step in the right direction.

Some Medical Solons.—A brilliant scheme for the abolition of drunkenness has been devised by Dr. Archdall Reid, who has just written a book on "Alcoholism." Dr. Reid would punish severely every drunkard who should beget a child. As alcoholism (according to Dr. Reid) is hereditary, it can be eradicated if only the drunkards will stop procreating their kind; but as experience shows that inebriates will not of their own accord stop procreating, the remedy evidently is to compel them to stop. This sovereign remedy could be applied, according to Dr. Reid, by magistrates, "sitting in open or secret session as the accused preferred", who would impose as a penalty, "a month's imprisonment" on every tippler who should dare to beget a child. The plan, as can readily be seen, is simplicity itself. It is not proposed as a joke, but as a measure of law. The book in which it is expounded is actually in print, and for sale.

Our only suggestion is that the penalty is not severe enough. The term of imprisonment is too short, and leaves the offender an early opportunity to repeat the offense. If it were for fifteen or twenty years, there might be some chance of reducing the birth-rate of incipient drunkards. Dr. Reid's suggestion reminds us a little of that equally sapient plan which has been proposed for eradicating venereal diseases in the army. The victim is to be regarded as a criminal and docked of his pay as long as he remains unhealed! We suppose he would be put in the guard-house instead of in the hospital, or even walked around with a placard on his back announcing the diagnosis. The depth of the knowledge of human nature that evolves such schemes is truly beyond fathoming.

Cancer "cures" are rather too numerous to find place in the overcrowded columns of our Journal

—and the newspaper story of another alleged cure slipped into our news columns recently without the critical comment which it needed. We have not the slightest belief in the efficacy of an infusion of violet leaves for cancer, and regard the story as a "fake". It will probably do some harm by arousing temporarily the false hope of cure in some victims of the disease, and therefore we are all the more indisposed to give it countenance.

The Kaiser has assumed many rôles, but he never played a more eccentric part than when he started out to investigate the beer-drinking habits of the German workingman. Reports say that the daily average for each mechanic is about eight pints of beer. In some German factories there are morning and afternoon "beer recesses". Investigation shows that the producing capacity of the workingman is seriously impaired, especially toward the end of the day. The Kaiser's crusade will be watched with interest. If he can control the beer drinkers he is indeed fit to command an army.

Dispassionate critics have always recognized that among the advantages of college athletics is the regard for physical health which they encourage in the student. A course of training for athletic honors is a discipline not only for the body but also for the mind; it promotes bodily vigor at the same time that it inculcates mental and moral control. The risks even from football are not so great as the risks from alcohol and cigarettes. Dr. Seaver, of Yale University, finds in the Freshman class this year an unusual lung capacity, with marked athletic tendencies and a reduced consumption of tobacco. His figures are interesting, his deductions are warranted, and his studies are to be commended.

Current Comment.

A GOOD WORD FOR ATHLETICS.

Dr. Jay W. Seaver, director of the Yale University gymnasium, has furnished the most effective argument against smoking yet given. He finds that the average lung capacity of the members of the Freshman Class is five inches greater than last year's class, and as the number of users of tobacco in the present Freshman Class is 10 per cent. less than in the last class, Dr. Seaver feels authorized in ascribing the average greater lung capacity to the smaller use of tobacco. The fact that the present class has also a larger number of athletes among its members than usual helps to strengthen this theory. If the truth of this statement could be established by a long series of experiments, it would be the most convincing argument that could be brought against the use of tobacco in any form. Many young men who can not be persuaded by moral arguments

would yield to proof that smoking injured their health. The experiments should continue at the Yale gymnasium and the results be made public. — *The Philadelphia Press*.

FEEDING THE NURSE.

Evidently things are getting in bad shape in England, if we are to believe the statement made by a correspondent in a recent number of *The Lancet*. There are rumors that there is a division of the fee among some of the members of the profession here, but this division is between the surgeon or the consultant and the family physician of the patient. On the other side, however, they seem to have gone one better and a division of the fee is made with the nurse. According to the correspondent, certain medical men over there are paying sums from a shilling to half the confinement fee, or more, to the nurses in attendance, who, to use their own words, make their living from "following the doctors." This tipping of the nurses is done with the hope that the recipient of the fee will recommend the doctor to future patients and, in other words, act as his drummer. As *The Lancet* editorially comments, the probability is that things are not quite so bad as this correspondent makes them out to be, even in England, where tipping is such a common every-day and every-where affair.

—*Journal of the American Medical Association*.

IT DEPENDS UPON WHOSE OX IS GORED.

In some cases in which the diagnosis is difficult, or may require considerable time, experiment upon animals aids us greatly, and so is of immense value to man. Thus in supposed anthrax, or wool-sorter's disease, a most dangerous malady, by inoculating a guinea pig with the discharge the diagnosis can be cleared up quickly and proper treatment instituted. If a case suspected to be one of bubonic plague arises, the diagnosis can be established within 24 or 36 hours by a similar injection into a rat or a guinea pig, the apprehensions of a community (to say nothing of the patient and his friends) relieved and the greatest damage to its commerce averted by discovering that it is not the dreaded pestilence, or, if it is the plague, by showing the necessity for most stringent measures of prevention. I do not think any community will or ought to allow sympathy with the unavoidable suffering of a few rats or guinea pigs to weigh in the balance for a moment against the safety of many human lives or the ruin of large business interests.

An amusing instance of how sentiment gives way before affection and facts occurred not long since in England. The brother of the Duke of Newcastle was bitten by a dog supposed to be rabid. The Duke was a Vice President of the Anti-Vivisection Society, but knowing that whether the dog was rabid or not (and, therefore, whether his brother was in danger or not) could only be settled by inoculation experiments upon animals, he took the dog to Mr. Horsley, in London, and had the experiment done.—Dr. W. W. Keen, in *The Philadelphia Record*.

Correspondence.

GONORRHEA COMPLICATED WITH SCIATICA, EPIDIDYMITIS, DOUBLE CONJUNCTIVITIS, AND RHEUMATISM IN GREAT TOE.

By F. ALAN G. MURRAY, M. D., Fligel, P. O., Md.

To the Editor of the *Philadelphia Medical Journal*:

Harry R., aged 20 years, 3 days after intercourse developed a severe gonorrhea. He came to me July 27, 1901, for treatment, 4 days after the disease set up. There was a profuse purulent discharge which showed microscopically many intracellular gonococci, there was also a slight balanitis and conjunctivitis of both eyes. The upper and lower eyelids were swollen and very red and the conjunctivae were red and inflamed and thrown into rugae and had a profuse discharge which showed many intracellular gonococci. Gave him 1% solution sulphate zinc for urethral injection, and 1/2% solution nitrate silver for his eyes with

minute directions as to use of each. I was called to see him the evening of July 28 and found him with a severe pain in the left hip in the course of the great sciatic nerve. The pain was so severe that he could not turn himself in bed or move the leg. Gave him morph. sulph. 1/4 gr. and applied hot applications over course of nerve.

July 29.—Patient had not slept any for pain, gave him 1/4 gr. morph. sulph. hypodermically at point of greatest pain, this relieved him for a time. He had no fever or constitutional disturbance but suffered extreme pain necessitating the free use of morphia for several days. His eyes gradually improved and in two weeks all inflammation had disappeared. The urethral discharge also became much less, and the pain in his hip after several exacerbations gradually subsided. August 14.—Patient was taken with severe pain in right testicle and along course of cord up into the abdomen. Pulse 120, temp. 104°, the epididymis was swollen and very painful, gave him 1/5 grain pilocarpine muriate by the mouth and in a few minutes he had a profuse sweat and his temperature dropped and pain left.

August 15.—Feeling much better, some soreness in testicle on handling. Patient got along all right until August 19, when he had another attack of epididymitis which responded to the same treatment.

At this time he reinfected his right eye and when I saw him two days later he had a severe conjunctivitis with profuse discharge and gonococci present. Gave him 5% protargol solution to use 4 times a day and same care to be exercised as before. The urethral discharge had almost ceased, but I gave him 1/2% protargol as injection. About August 31 he developed a red swollen joint of his right great toe, at that time he had had no urethral discharge for 10 days and his eyes were well, and his sciatica much improved, so that he was able to walk around.

September 9.—Toe still swollen, not very painful. Sciatica improving rapidly. October 13.—Still has twinges of pain in the sciatic nerve occasionally, joint of toe still swollen.

Sciatica is not a very common complication of gonorrhea as the *Twentieth Century Practice of Medicine*, Vol. 1, page 457, is the only one of several books on practice and surgery that mentions its occurrence. In this case the sciatica began on the 5th day of the gonorrhea and continued all through the disease, and the patient still has attacks of pain occasionally at the present time. The pain was so severe that morphia was necessary for some time, and in addition, sodium salicylate, iodide of potash, acetanilid and other drugs were used but without much effect.

The conjunctivitis was treated vigorously by silver nitrate 1/2% solution 3 times a day, and 1/2 hour by washing with hot borax and chlorate of potash solution, and responded kindly.

The epididymitis was rapidly aborted by the pilocarpine muriate on each occasion of its onset and the swelling was reduced by hot poultices.

The rheumatism came on late in the disease, about 10 days after the urethral discharge had ceased. The joint is still, at the present time, somewhat sore and swollen. The treatment was hot applications and tonics.

The case was of remarkably short duration considering all the complications. The urethral discharge lasted only 28 days. The patient was in bed 4 weeks and went to work in 7 weeks.

TUBERCULOSIS: A REPLY TO DR. KNOPF.

By LAWRENCE F. FLICK, M. D., of Philadelphia.

To the Editor of the *Philadelphia Medical Journal*:

Dear Sir:—A letter written by Dr. S. A. Knopf, of New York City, is making the rounds of the newspapers. In this letter Dr. Knopf arraigns Surgeon General Wyman, of the U. S. Marine Hospital Service for declaring pulmonary tuberculosis a "dangerously contagious disease" and di-

recting the superintendent of Immigration to issue an order debarring consumptive immigrants from all American ports. The gist of Dr. Knopf's diatribe is that Surgeon General Wyman, in the action which he has taken, is at variance with scientific medicine, and stands unsupported by the medical profession. It would be an injury to the cause of science to let Dr. Knopf's statements go unchallenged.

Aside from the merits of the question at issue it is a grave mistake for a member of the medical profession to harangue the public against the official acts of the highest representative of the profession in the Government. If such methods are to be countenanced by the profession, can we hope to gain the confidence of the public in scientific medicine? Surgeon General Wyman is an honor to the medical profession. He has done more probably than any other man to win the confidence of law makers in medical science and to pave the way for proper representation of the medical profession at the counsel board of our Chief Magistrate. He of course is not infallible nor impeccable, but if he has made a mistake, the proper place to lecture him is not in the newspapers, but in our medical societies and in medical journals. The lecture, moreover, should be along scientific lines, and not a toot to the galleries.

Now let us examine Dr. Knopf's letter upon a scientific basis and see whether he makes out a case against Surgeon General Wyman. The gravamen of Dr. Knopf's charge lies in the Surgeon General's use of the word contagious. Dr. Knopf claims that "pulmonary tuberculosis is not a contagious, but only a communicable malady" and that "the contact *per se* of a consumptive individual does not transmit the disease." He admits, however, that "ever since the discovery of the tubercle bacillus it has been demonstrated by clinical and bacteriological experiments all over the civilized world that the germ alone is the direct cause of the disease, and without its presence tuberculosis cannot be conveyed" and that "the bacilli are usually contained in the expectoration, more rarely in other secretions, very rarely in the muscular or osseous tissue." Here are two contradictory statements which Dr. Knopf seems to think he reconciles by saying further that "the destruction of tuberculous expectoration and other secretions, also of the tuberculous food substances, suffices to do away with all danger of infection and transmission." Let me ask Dr. Knopf how the one hundred thousand annual new implantations of tuberculosis in the United States or the one million annual new implantations of tuberculosis of the world take place? Is it by keeping away from the people who have consumption or by coming in contact with them? Is the tubercular matter given off by a consumptive a source of danger and the center from which that matter is given off not? We know that the room which a consumptive occupies, the clothing which he wears and the implements and utensils which he handles are capable of conveying the disease to others even after he is dead and gone, and the source of pollution has become extinct, and are we to believe that the source from which this pollution is given off is innocuous during its activity? The more theoretical possibility of its being made harmless means nothing so long as we have ocular demonstration that in one million instances annually it is not made harmless.

When Surgeon General Wyman applied the words dangerously contagious to tuberculosis he no doubt did so advisedly, and science supports him. Except perhaps leprosy there is no disease which so absolutely depends upon contact for implantation as tuberculosis. Not only contact, but intimate prolonged contact. It was by reason of the spread of tuberculosis along the family tree that the disease got its reputation of being hereditary. At least sixty per cent. of all cases of tuberculosis are developed from prolonged intimate family relationship and occupation of houses which have been occupied by consumptives. Probably twenty-five per cent. of the remaining forty per cent. are developed from prolonged intimate contact in occupation and social relationship. Thus we have eighty-five per cent. of all implantations of tuberculosis which

can be demonstrated to be dependent upon prolonged intimate contact with persons who have the disease or with places or things which have been in contact with such persons. That the remaining fifteen per cent are likewise probably due to contact, direct or indirect, would appear from the fact that the number of new implantations in any one year is seldom larger than the number of old cases. Surgeon General Wyman's justification in using the word "dangerously" appended to the word "contagious" is to be found in the number of deaths annually from the disease. Surely a disease of which there are annually upwards of a million new implantations and a million deaths merits the epithet dangerous. Dr. Knopf admits that every new implantation must come from an old case, and whether he calls this communicable or contagious, the danger exists and is the greatest danger which threatens human life. Dr. Knopf also admits that the danger is a preventable one and by admitting this stultifies himself in quibbling over the meaning of words and trying to embarrass the Surgeon General in his praiseworthy efforts to prevent it.

As to the matter of debarring consumptive immigrants from American ports, whatever sentimental reason there may be against such action, the safety of our own people undoubtedly demands such a step. It is true that there are some consumptives who, by reason of their financial ability to take care of themselves and their cleanliness and intelligence, might be admitted without danger to anyone. But what is true in theory is often false in practice. So far as my experience goes, no consumptive is absolutely innocuous to those around him, no difference what his wealth or intelligence, unless he has been scientifically trained to make himself innocuous, and this training is seldom obtained outside of a sanatorium. The Government has no way of determining who would be harmless and who would not be harmless, and so long as it cannot determine this question it is proper that it should exclude all.

In conclusion let me say one word about alarming the public. The public is never alarmed by a knowledge of the truth. It is fancy and doubt which alarm. Tell the public that tuberculosis is a communicable, but not a contagious disease, and they become alarmed because of the doubts and fancies which arise in the mind when trying to reconcile those two statements. The question at once arises, how am I to avoid a disease which is communicable and which millions of people contract, but which is not contagious? There is a mystery about such a disease which is inscrutable. On the other hand, tell the public that tuberculosis is a contagious disease which is implanted by prolonged intimate contact either with the person who has the disease or with something which has been in prolonged intimate contact with such a person and you tell them something which they can understand. They will then know where to look for the danger and it will not be a difficult matter further to make them understand how they can overcome that danger.

Reviews.

Anatomy in its Relation to Art. By George McClellan, M. D., Professor of Anatomy in the Pennsylvania Academy of Fine Arts. W. B. Saunders, Philadelphia and London, Publishers, 1901.

As a rule, when the scientific anatomist condescends to write and to illustrate a text-book for the use of the artist, he appears to deem it necessary to cast his knowledge into such a form as he supposes may best fit the very limited requirements for which it is intended. He handles a very weighty subject very lightly; instead of a solid and thorough treatment of the matter in hand as a scientific problem, he is too apt to give what he supposes to be a disquisition upon the subject from the artist's standpoint. He is apt to expend a great deal of time and care upon a distortion of the facial muscles which he terms "expression,"

or an equal distortion of the muscles of the frame which he calls "action."

These efforts of the scientist to adapt his knowledge to the limited comprehension of the artist appear funny sometimes to him whom the pictures are intended to instruct—the effort does not in the least fulfill the needs of the case. As a rule the scientist does not know nearly so well how to indicate an expression or how to draw an action as does the artist whom he is instructing. What the artist desires is not to have a supposititious statement of his views, but a clear explication of the scientist's own knowledges. That which he seeks when he is studying a book of anatomy is facts from which he may draw his own inferences. He does not desire supposititious results, but something from which he may deduce his own conclusions.

I very well remember of one fledgling artist and his fellow students—it was in the old days when the world was young—unable to find within the lids of the printed book the solid knowledge of which they stood in need—how he and his brethren went down into the dissecting room, donned an apron and entered with all the good will in the world into the not very congenial task of separating a human frame in the endeavor to discover its secrets.

Since then the same artist having, with gray hairs, obtained pupils of his own, has desired many a time some text-book that might supply a quicker and easier method of imparting the required knowledge to those students than the dissecting knife and scissors might afford.

The best source of knowledge, I think, that has yet fallen under his attention is the work, just published, of Dr. George M'Clellan, "Anatomy in its Relation to Art."

That Dr. M'Clellan, who is Professor of Anatomy at the Philadelphia Academy of Fine Arts, is well equipped to deal with his subject in such a way as to supply the artistic desire for information, goes without the saying; that he has dealt with it well, the book (which is monumental) itself attests. It is limited well and closely with in the lines of its subject and is thorough in the field which it is intended to cover. "The object of this book" he premises to the reader, "is to contribute to that knowledge of human anatomy with which artists are chiefly concerned, and it should therefore be understood, as preliminary to so complex a subject, that the deeper structures are here set forth solely for the purpose of explaining their influence upon the surface anatomy."

Accordingly, beginning with the bony framework of the body and with the articulations of the joints, he proceeds to build upon it, layer by layer, first the interior, and then the superficial muscles, until the entire figure is constructed thoroughly and entirely from the anatomist's standpoint.

Only when treating of the facial muscles does he appear to deem it necessary to make that descent to the artistic intelligence already mentioned. It is, perhaps, impossible that he should touch upon that subject without giving his ideas as to how the face appears when the human soul is perturbed by the emotions of fear, rage, surprise, etc. I do not feel that the faces there depicted evoke in my imagination an echo of any such emotions as are labeled upon the more or less distorted visages. But, perhaps, this wandering into other fields than those covered by a purely scientific disquisition upon superficial anatomy may be allowed in view of the traditions that surround the treatment of the matter, and of the very great value of the work where it deals entirely with facts. As for the facts themselves, they are not only extremely well presented, but are equally thoroughly and equally clearly set forth. His analysis of the hand is particularly good, and cannot be too strongly recommended to the attention of those art students who so often fail to devote adequate study to this most important part of the human figure. His study of the foot is equally thorough and complete.

A very useful, as well as very interesting feature of the work, is the comparison by photographs of the human figure to certain famous antique statues; the two being placed side by side in as nearly as possible the same attitudes. The living figure, to be sure, strained into an assumed position, cannot render the play of muscle so wonderfully represented in those great masterpieces of art;

but the comparison, nevertheless, is both interesting and instructive.

Taken all in all, the work is one of the best and the most thorough text-books of artistic anatomy which it has been the writer's fortune to fall upon and, as a text-book, it ought to make its way into the field for which it is intended.

HOWARD PYLE.

Athletics at Princeton.—A History Compiled and Edited by Frank Presbrey, '79, and James Hugh Moffett, '00, with Introduction by Henry van Dyke, '73. Fully illustrated, and published under the Sanction and Supervision of the Graduate Advisory Committee. Frank Presbrey Company, New York City.

This is a volume which every graduate of our eastern colleges may consult with interest and, within certain limits, the older the graduate, the greater will be that interest. To one, who, like the writer, has witnessed the origin of organized athletics at Princeton and assisted therein to the best of his ability—*quarum parva pars fuit*—the interest derived from the perusal of old "scerers" is intense, and yet this interest is not without a tinge of melancholy. There is a celebrated picture in the Louvre by the great painter of the seventeenth century, Nicolas Poussin, which represents four shepherds grouped about a tomb in the foreground of a landscape in Arcadia. The oldest shepherd is tracing with his finger, and evidently explaining to his companions, a half defaced inscription in which, however, the words are still legible: "Et in Arcadia ego"—I, too, was an Arcadian. So may the descendants of one whose name is recorded in this volume discover, with pleasurable surprise, that their ancestor whom, perchance, they may remember as a decrepit valetudinarian, was, in his college days, as eager as themselves in the pursuit of athletic fame, and as successful in acquiring it.

Many questions are suggested by this book; but the most important is whether the pursuit of athletics is detrimental to the student while at college or in after life. The Index of Princeton Representatives, which covers more than thirteen double columned pages, answers this question most emphatically in the negative. In it are found, in great abundance, the names of men who have achieved distinction in every walk of life: in the church, at the Bar and Bench, in science, in finance, and last, and by no means least, in medicine. [F. P. H.]

Diseases of the Stomach and Their Surgical Treatment.

By A. W. Mayo Robson, F. R. C. S. and B. G. A. Moynihan, F. R. C. S. Svo., pp. 308. Wm. Wood & Co. New York, 1901.

Few English surgeons are better known on this side of the Atlantic Ocean than the senior author of this monograph. His work in, and writings on, abdominal conditions have long been conspicuous for painstaking care, good judgment and an abiding faith in the truth of the doctrines of aseptic surgery. His recent visit to this country has served to increase the confidence of the American surgical profession in his scholarly attainments and surgical acumen. Much interest will be felt in this formal statement of the opinions of Mr. Robson and Mr. Moynihan on the surgery of the stomach; but most readers will naturally attribute the weight of authority to the senior author. Both writers are connected with the surgical staff of the General Infirmary at Leeds, and, according to the preface, hold themselves jointly responsible for every statement of the book. They have each carefully revised the manuscript of the whole work. Such collaboration cannot but add to the value of the finished product.

It is also interesting to know that this valuable monograph is a development of Mr. Robson's Hunterian Lectures delivered before the Royal College of Surgeons of England in 1900. It is sometimes said that endowed lectureships in medical science are of little value. This opinion is probably based on the limited audience which the lecturer often

addresses. The real value of the endowment, however, is frequently the stimulus given to the chosen lecturer and the printed monograph, which comes from his study of the subject and from the clinical opportunities brought by the delivery of the lectures. It seems not impossible that this book would never have appeared, if the Hunterian Lectureship had not been established.

The authors insist upon the surgeon going over the whole of the medical evidence before resorting to operation, but show clearly the advantages of surgical treatment of many conditions of the stomach. An impressive statement is that which deprecates the too early resort to operation and suggests that a second or third examination of the patient may clear up the diagnosis, by the discovery of new symptoms or by knowledge of points in the history of the case which were previously not brought out by questioning the patient. The following sentence shows their reason for this opinion: "The surgeon may on the next visit focus his attention on different points or group his data differently, and so perhaps arrive at a truer conclusion." In speaking of exploratory operations, followed by the discovery of a gastric tumor, they caution the surgeon to "know when to stop," which is "a matter of common-sense combined with experience."

Exploratory operation is said to be justifiable whenever cancer of the stomach is suspected, because the smaller the tumor the greater is the hope of radical cure. In gunshot wounds of the stomach in civil practice, exploration is said to be safer than uncertainty. The great prominence given to the discussion of gastric ulcer is an evidence of the attention recently given by physicians and surgeons to the study of this serious lesion. About one-third of the book is devoted to the consideration of this subject. The volume is beautifully illustrated and will be of great value to those engaged in the study of pathological conditions of the abdomen. [J. B. R.]

"First Aid" to the Injured and Sick. An Ambulance Handbook. By F. J. Warwick, B. A., M. B. Cantab., M. R. C. S., L. S. A., and A. C. Tunstall, M. D., F. R. C. S. Ed. Philadelphia and London: W. B. Saunders & Co., 1901.

This little volume contains much valuable information for those who are apt to have the immediate care of the injured. It possesses the advantage over many other books of its kind in that it is supplied with numerous good illustrations. It is a book well adapted for the instruction of nurses and hospital corps orderlies.

The first part of the book is given up to a discussion of practical anatomy and physiology, the second part to bandages, and the latter portion to the immediate treatment of injuries, hemorrhage, etc. It well fills the purpose for which it was written. [J. H. G.]

"The Surgical Treatment of Disfigurements and Deformities of the Face." By John B. Roberts, A. M., M. D., Professor of Surgery in the Philadelphia Polyclinic, Surgeon to the Methodist Hospital. Second edition with a chapter on the Reconstruction of Syphilitic Noses. Illustrated with 62 figures. Philadelphia: The Phila. Medical Publishing Co., 1901.

It is a gratification to find Dr. Roberts' writings upon facial deformities and their treatment in a volume of such convenient size. This little book contains his Mütter Lectures on "The Surgical Treatment of Congenital and Pathological Disfigurements of the Face" delivered at the College of Physicians of Philadelphia, and also a supplementary chapter on "Reconstruction of Syphilitic Noses."

Dr. Roberts' experience in plastic surgery of the face has been very extensive and the book contains a great deal of valuable information and instruction. It is well illustrated and as a book of reference will be found of great use to the general surgeon who only occasionally operates for the conditions here discussed. [J. H. G.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

Smallpox in Philadelphia.—During the week ending December 14 125 new cases of smallpox were reported, the greatest number in any one week during the year. There were but 8 deaths. 965 cases have occurred since January 1st, with 127 deaths. 349 cases are now under treatment in the city, and 53 persons recovered last week. Over 11,000 persons have been vaccinated by the city's physicians in a week. For students of the University of Pennsylvania who have not been vaccinated in the past five years, revaccination has been ordered. All public school houses are being disinfected weekly. Dr. Gray, a Frankford physician, has contracted the disease.

Municipal Hospital, Philadelphia.—The Philadelphia Municipal Hospital, where over 360 cases of contagious diseases are under treatment, about 260 of them being smallpox patients, has very little room for many more patients. When a supplementary hospital was begun six weeks ago, neighboring property owners got out an injunction which stopped the erection of the building. Should the epidemic of smallpox still spread, further hospital accommodations will have to be secured by the city. Meetings have been held frequently, lately, to protest against the present site and probable sites for the Municipal Hospital.

Philadelphia Hospital.—Ground was broken for the three new hospital buildings to be erected on the grounds of the Philadelphia Hospital, December 10. The buildings will cost, when completed, \$80,000, and will be known as the Maternity Home, Children's Hospital and the Hospital for the Treatment of Contagious and Venereal Diseases. The Department of Charities and Correction instructed its Secretary to communicate with Directors of the different hospitals and ask their judgment as to the advisability of establishing a staff of gynecologists at the Philadelphia Hospital. A vacancy in the hospital staff was filled by the election of Dr. George M. Boyd, of the Medico-Chirurgical Hospital staff.

Society Meeting Next Week.—The only society meeting to be held next week will be the Neurological Society, at the College of Physicians, Philadelphia, Monday evening, December 23, at 8.15 P. M.

Hospital for Consumptives.—At the next meeting of Councils' Finance Committee, Dr. John V. Shoemaker, Director of the Department of Charities and Corrections, will ask an appropriation of \$180,000 for the erection of a hospital for the treatment of consumptives and a clinic hall, on the grounds of the Philadelphia Hospital. The former building, which will be two stories high, will, it is estimated, cost \$80,000, while the clinic hall, with its equipment will cost \$100,000. Dr. Shoemaker says these two buildings are imperatively necessary, and must be erected to relieve the crowded conditions of the other hospital buildings.

Appointment of Dr. Pearce.—Dr. F. Savary Pearce, professor of nervous diseases at the Medico-Chirurgical School, was elected, December 9, neurologist to the Howard Hospital, Philadelphia.

Outbreak of Diphtheria.—Nearly one-fourth of the pupils attending the Barton Primary School, Frankford avenue and Buckius street, Richmond, are said to have been stricken with diphtheria during the last few days. Four of the little ones died this week, and forty-five others are suffering from the disease. The building has been thoroughly disinfected, and every precaution is being taken to prevent a further spread of the disease. There were about 215 children enrolled, of whom about 120 were boys and about 95 were girls.

Keystone Veterinary Medical Association.—At the meeting held in Philadelphia, December 10, Dr. Leonard Pearson reviewed foreign veterinary medical schools, making comparisons with the veterinary schools of this country. Dr. M. P. Ravenel told of recent observations made at the Tuberculosis Congress in London, saying that the medical and veterinary professions throughout the world are not yet ready to adopt the theory advanced by Koch. Dr. B. M. Underhill read a paper on the treatment of tetanus by antitoxin with good results.

Dr. Amick Fined.—Dr. J. H. B. Amick, member of Com-

mon Council from the Thirty-seventh ward, who was under arrest, charged with failing to report a case of smallpox, was discharged after paying a fine of \$10 and costs. Dr. Amick testified that he diagnosed the case typhoid fever, and that smallpox subsequently developed. The patient was removed to the Municipal Hospital two weeks ago, after an examination by the assistant medical inspector, who pronounced the case smallpox.

Death of Dr. Huidekoper.—Dr. Rush Shippen Huidekoper, creator of the Veterinary School of the University of Pennsylvania, died December 17, at the Presbyterian Hospital, Philadelphia, in his 48th year. The cause of death was pneumonia following an operation for abscess of the lung. He was graduated from the University of Pennsylvania medical department in 1877, and spent the following years at work in European laboratories. He had been coroner's physician, dean, professor of internal pathology, contagious diseases, zootechnics, and hygiene in the University of Pennsylvania veterinary department, and professor of comparative anatomy and veterinary surgery in the New York College of Veterinary Surgery. He was surgeon to the First City Troop, Philadelphia, and surgeon in chief at Chicamauga. He was also editor of the *Journal of Comparative Medicine and Veterinary Archives* from 1889 until his death.

NEW YORK AND NEW JERSEY.

Regimental Skin-Graft.—In Englewood, N. J., 56 members of the Second Regiment, New Jersey National Guard, will give from two to four square inches of skin to save the life of one of their number who was severely burned in a gas explosion August 27. Dr. Currie, who is colonel of the regiment, operated upon 22 men December 15, removing portions of skin from their left arms, soaking them in normal salt solution, and transferring them to the body of the patient. The men had but a slight conception of the pain of the operation, and gave evidence of suffering keenly. When the operation was concluded, new skin had been grafted on the patients left arm, left chest, one side of the neck, and a portion of the head and face. The entire process took ten minutes less than four hours. At another operation next Sunday, skin will be grafted on the patient's left side, part of the abdomen, and both legs.

Physician Contracts Smallpox.—Dr. Beekman, health physician in Sayreville, N. J., has been attacked by smallpox. He assumed care of the smallpox cases when half the population fled. In two weeks the disease has spread from four cases to 22 cases, and each day new victims are recorded.

The Camden County Medical Society has adopted resolutions asking the Legislature to adopt a law providing for a State sanatorium for incurables.

Report of the New Jersey State Board of Health.—The State Board of Health has discovered that the death rate from cancer throughout New Jersey is phenomenally large. The report does not explain the prevalence of this disease in this State, neither is any reason given for the fact that although smallpox cases have been alarmingly numerous in contiguous States, New Jersey has had only 325 cases and five deaths in a year. During the year there were reported 3,444 cases of diphtheria and 426 deaths, 2,496 cases of scarlet fever and 78 deaths, and 944 cases of typhoid fever and 119 deaths. The deaths from cancer numbered 1,001, or nearly twice as many as those from smallpox, diphtheria, scarlet fever and typhoid fever combined.

Smallpox in Camden.—The Camden Board of Health has given a contract for the erection of an addition to the Isolation Hospital in the New Camden Cemetery property. The building will be 24 by 100 feet and will accommodate a hundred smallpox patients. Smallpox cases have been discovered in six public schools in Camden and the disease is still increasing.

Pathological Institute of the New York State Hospital for the Insane.—The Lunacy Commission of the State of New York, Dr. Frederick Peterson, president, has appointed Dr. Adolph Meyer, of the State Hospital and Clark University, Worcester, Mass., director of the Pathological Institute of the New York State Hospital for the Insane, replacing Dr. Ira Van Gieson, who resigned last summer. The scientific and clinical work of the reorganized institute will be begun as soon as possible in a build-

ing connected with the Manhattan State Hospital for the Insane, on Ward's Island. The scheme of investigation and research will be developed along lines to be formulated by Dr. Meyer, in association with the Advisory Board of the Pathological Institute appointed not long ago by the Commission on Lunacy. The composition of this Board was announced in the *Philadelphia Medical Journal*, October 26th.

The Eastern Medical Society, of New York City, at its annual meeting, held December 14, elected the following officers for the ensuing year: President, Dr. A. Abrahams; vice-presidents, Drs. Joseph Barsky and E. K. Browd; secretary, Dr. Maurice Flashberg; treasurer, Dr. B. Gordon; chairman of ways and means committee, Dr. A. Hymanson; chairman of committee on ethics, Dr. A. A. Himovitch; trustees, Drs. A. Brothers and William S. Gotthell.

The Annual Meeting of the Medical Society of the State of New York will be held at Albany, January 28, 29 and 30, 1902.

New York City.—The first graveyard (God's Acre) was laid out in 1633, west of Broadway, above Morris street. The first physician was Dr. Johannes La Montagne, who began practicing here in 1636. He was the only doctor in Manhattan for a number of years. The first public school was established in 1652 at Peter Stuyvesant's suggestion. The first prison on the island was a small room on the first floor of the Stadthuys, (City Hall); it was opened in 1655. The first official census was taken in 1656. The inhabitants were found to number 1,000, of whom a large percentage were negroes. The first undertaker was Conradus Vanderbeck, who was licensed in 1683. The first poor house was opened in 1698. The first quarantine was established in 1737.

Dr. Barney's Patient Has Tuberculosis.—Dr. Barney, of Brooklyn, announced December 13 that Miss King, who was inoculated by him November 23 with tuberculosis germs from an infected cow, has been removed by him from her home in Brooklyn to Jersey City. She has developed tuberculosis as a result of inoculation, and he is treating her to bring about her cure. He says he is certain he will cure her, having demonstrated that Dr. Koch's theory of the non-intercommunicability of bovine tuberculosis is all wrong.

A Blunder.—A surprising piece of carelessness was brought out in connection with the new marine hospital on Ellis Island, New York. When the work was almost completed, it was discovered that no means were provided for artificial illumination. While it was supposed that the contractors had made the blunder, they exonerated themselves by showing that no provision for lighting the hospital was mentioned in the plans or specifications furnished. The hospital is so near completion that the walls, ceilings and floors will have to be torn out to remedy this defect. This will entail an additional expenditure, and it would seem as though an investigation were needed to fix the responsibility for the blunder which caused a waste of public money.

Federal Control of Virus.—Federal supervision of the manufacture and sale of diphtheritic antitoxin and vaccine virus is advocated by Dr. H. M. Biggs, director of the laboratories of the New York Board of Health, as the most effective means of protecting the public from spurious preparations. Sweeping aside the controversy raised by Dr. Dalton's attack upon the municipal laboratories of New York and St. Louis, Dr. Biggs takes the ground that wherever deaths have occurred from tetanus, inferior virus or antitoxin had been used. Dr. William H. Park, acting head of the division of bacteriology of the Department of Health, declares that there has been no death from tetanus since the manufacture of the serum was begun in New York.

NEW ENGLAND.

A Hospital for Harvard Men.—The Stillman Infirmary at Harvard, which will be ready by Christmas, is the most fully equipped hospital yet opened by any university for its students. At Harvard the system of medical supervision includes medical visitation, the infirmary and an endowment for a prospective professorship of hygiene. At the beginning of the term a card is sent to each student calling attention to the college rule requiring that every case of illness shall be immediately reported to the medical

visitor. The janitors also are instructed to report any cases of sickness. The medical visitor visits all cases reported to him, a task that sometimes reaches 40 visits a day. All consultations are confidential, and the relations between student and medical visitor differ in no way from those between a private physician and his patient, except that the university pays for his services. His advice is free to every student, but for regular medical attendance those students who can afford to pay are expected to employ a private physician. The total number of cases thus visited during four years, according to a recent tabulation, amounts to \$495, more than one-third of the cases being "colds," very few of the others being of a serious nature. The system benefits the individual in that it keeps constant watch for the appearance of contagious disease. The Stillman Infirmary, which has grown directly from this system, is the gift of Mr. James Stillman of New York, who contributed about \$10,000. The building, a four-story structure built of red brick and limestone, stands on Mt. Auburn street overlooking the Charles river, about half a mile from the Harvard yard. It contains 30 beds, there being two wards of eight or ten beds each and 12 private rooms. The class of '68 has donated \$3500 for endowing a free bed. The infirmary will be used exclusively by members of the university. Last year the university authorities appropriated a sum of money for conducting a diet kitchen in connection with Randall Hall, the new student commons, from which a student confined to his room by sickness, not sufficiently serious to necessitate hospital attendance, may nevertheless be supplied with food properly prepared in accordance with the prescription of the medical visitor or his own physician.

The Effect of Smoking.—Dr. Seaver, gymnasium director at Yale, who has just completed the measurements and the physical statistics of the Freshman class, says that fewer of its members smoke, than the members of any class at Yale in recent years. He finds that the average lung capacity of the class is 260 cubic inches. The number of men using tobacco in the present Freshmen class is 10 per cent. smaller than for many years. Dr. Seaver finds that the average age of the class is 19 years 1 month, which is 56 days younger than the average of last year's class. The average weight is 134 pounds, 6 pounds less than last year. The average height is 5 feet 7.8 inches, or .4 of an inch less than last year. The average size of the chest when inflated is 35.9 inches, and the average measurement of the biceps is 11.4 inches, which is .2 of an inch smaller than last year.

Typhoid in Adams, Mass.—There are 18 known cases of typhoid fever in Adams and many others have probably not been reported. The state board of health is investigating.

Framingham Hospital, South Framingham, Mass.—The Framingham Hospital corporation has voted to authorize the trustees to solicit subscriptions for an annex, two stories in height, to contain two wards of four rooms each, for private patients, and for a diet kitchen in the basement where student nurses may be taught to cook delicacies. The cost will be about \$4000.

Diphtheria in Maine.—The State Board of Health is taking measures to cope with the epidemic of diphtheria now prevailing in Fort Fairfield. In the extreme northern part of Maine, and in Portland. These places are four hundred miles apart, and yet the disease has caused several deaths in both towns. Strict quarantine is being enforced by the State Board, the local boards having called upon the higher authorities to assist in handling the epidemic.

Surgical and Gynecological Society.—The 58th session and the 25th annual meeting of the Massachusetts Surgical and Gynecological Society was held in Boston December 10. Dr. Henry E. Spaulding presided. The following officers were elected: President, Dr. G. F. Martin; vice-president, Dr. N. H. Houghton, and Eliza B. Cahill; general secretary, Dr. T. Morris Strong; associate secretary, Dr. Herbert B. Boyd; treasurer, Dr. Grace E. Cross; auditor, Dr. Frederick A. Davis; censors, Drs. Horace Packard, J. P. Rand, and F. C. Richardson.

Smallpox in New England.—Smallpox still exists in Boston, in spite of widespread vaccination. Not only have the large stores, corporations, mills, etc., had employes

vaccinated, but the students at Harvard have also been revaccinated. Over 30,000 people have been vaccinated during the past few weeks. Smallpox appeared in Boston first in August, 32 cases were reported in September, and 52 in October. During November over 100 cases occurred, but last week 60 cases were reported, with 6 deaths. Hospitals are closed to visitors, and the accommodations for smallpox patients on Gallup's Island have been enlarged to hold over 250 patients. Scattered cases have appeared throughout Massachusetts, in Chelsea, Wakefield, Oxford, Brockton, New Bedford, Dedham, Malden, Lynn, etc., and in Bath and Bangor, Maine.

Diphtheria in Brookline, Mass.—The fashionable residential section of Brookline has been attacked by diphtheria this winter. Previous epidemics have been confined to the poorer classes in the thickly populated districts. Thus far not a single case has been found among the poorer people this year. Bacteriologists examined the sanitary arrangements of infected dwellings, but it was found that these conditions were not at fault. After further examination it was found that along one milkman's route 12 cases of diphtheria had broken out, and the agent of the board of health says the disease is due to infected milk.

CANADA.

(From our Special Correspondent.)

The College of Physicians and Surgeons of Quebec will henceforth issue licenses to practice, on the presentation of candidates' university diplomas, without further examination. This applies only to those who come under the statute of the Quebec Legislature, known as the Roy law, which was adopted two years ago. Recently the Courts have rendered several decisions, holding that the College was bound to give licenses to those who came within the statute of this law.

New Smallpox Hospital, Toronto.—A fine new smallpox hospital has just been opened in Toronto, probably the best of its kind in the Dominion of Canada. It is constructed of wood and brick, has accommodation for 25 patients, the wards being divided into two divisions, one for convalescents, and the other for those in whom the disease is in its active stage. In addition to these, there is a large attic which can be pressed into service should an extensive outbreak appear at any time. Before it was declared open a week, it had an occupant, the only case at present in the city. This patient inadvertently gained admission to St. Michael's Hospital, and the disease was well established before it was discovered that he had smallpox. As a result, the medical wards of St. Michael's have been under strict quarantine.

A Case of Poisoning from Chloroform has been recorded in Toronto. A gentleman came to the Western Hospital for operation. Chloroform was administered by the house-surgeon, which is said to be competent, though he has not as yet fulfilled all the requirements of the Ontario Medical Council to admit him to actual practice, being in his fifth year, at post-graduate work as is required by law. The patient, a man of 53, died on the table, all attempts at revival proving futile. The inquest showed that death was the result of poisoning by the anesthetic. The coroner's jury strongly recommended that each hospital in the city have a specially appointed and competent physician to look after the administration of all anesthetics.

Ottawa's Death Rate.—From the report of the Ottawa Medical Officer of Health, Dr. Law, the death rate for the past year reached the total of 1,273, a slight increase over the previous year, when 1,146 were registered. The largest number of deaths among adults was from tuberculosis, 125, while pneumonia came next with 102; heart disease, 88; convulsions, 72; old age, 73; diphtheria, 65; scarlet fever, 52.

The Medico-Chirurgical Society of Montreal is now seeking for incorporation at the hands of the Lieutenant-Governor of the province of Quebec. The names of the following well-known practitioners of Montreal appear on the petition for incorporation: Drs. J. G. Adams, G. E. Armstrong, A. T. Bazin, H. S. Birkett, F. Buller, J. M. Craik, J. M. Elder, W. Gardiner, Sir William Hingston, J. M.

Jack, H. A. Lafleur, F. A. Lockhart, J. G. McCartney, James Perrigo, F. J. Shepherd and J. W. Stirling.

Smallpox in Quebec.—The extent of the outbreak in the province of Quebec is shown by the statement recently issued by the Provincial Board of Health. Since the appearance of the disease in the lower province there have been 81 centres infected, with a total of 340 cases, and new ones are developing every day. In the city of Montreal alone there have been over 30 cases in the Civic Hospital. One or two cases of tetanus have been reported following vaccination. The Board of Health recommends only glycerinated vaccine.

Victoria Hospital for Sick Children, Toronto.—The Twenty-sixth annual report has recently been issued and shows that since the institution was organized, 13,201 children have been treated and that 20,000 of these have been cured. In the last hospital year, ending September 30, 770 children were cared for in the wards, and 5,152 in the out-patient department. Of the indoor patients, 530 were cured, 154 improved, 41 unimproved, and 43 died, 32 dying within a month after admission. The cost of maintenance per patient for the year just closed was 75.50 cents per day, against 89 cents for the previous year. There is at present a deficit of \$13,000. This hospital can accommodate 195 patients, and in addition has a fine summer home on Toronto Island, "The Lakeside Home," the largest of its kind in the world.

Tuberculosis in Toronto.—The reaction appears to have set in. The hospitals closed their doors against tuberculosis patients when a consumptive sanatorium was only being talked of. A short time ago a by-law was to have been submitted at the coming municipal elections in January, but the National Sanatorium Association has come forward and offered to accommodate 100 of Toronto's consumption population within the next twelve months. In the meantime, some place must be found for the consumptive; and there is much discussion upon the action of the hospitals in so quickly closing their doors against this form of illness, when there is not really so much to fear from contagion after all. Then the proposal to stop spitting in the streets is taking shape and one cannot help wondering how people are going to be prohibited from spitting after dark, because sputum expectorated after dark may yet be proved more of a menace to the health of a community than spitting in sunshine.

Ottawa University Quarantined.—On December 9, Ottawa University was placed under quarantine, since three cases of smallpox developed there in the two days previous. Many of the students at the University are from the United States.

Smallpox in Saint John, N. B.—Over 11,000 people were vaccinated before December 1st. There have so far been 60 cases of smallpox reported, with 13 deaths.

Death of Dr. Sweetman.—Dr. Leslie M. Sweetman, a prominent surgeon of Toronto, died December 11, in Johns Hopkins Hospital, Baltimore, from blood poisoning which set in several weeks ago, after an operation performed in Toronto.

MISCELLANY.

Positive Signs of Locomotor Ataxia.—Fournier gives six signs which should be sought when there is reason to suspect tabes. The first is Westphal's sign, the absence of the patellar reflex, found in two-thirds of all cases in the early stages. Next is Romberg's sign, unsteadiness of the body when standing erect with the eyes closed. Third is the difficulty experienced in walking downstairs. Fourth, while sitting and attempting to place one leg across the other, an undue effort is observed, a swinging, circular movement of the leg. The fifth test consists in noting the promptness and decision in halting at command and turning about while walking. The movements in the early ataxic condition are performed with unsteadiness and uncertainty. The sixth test consists in requiring the patient to stand on one foot, first with the eyes open and then with them closed, and noting the muscular instability. This test is regarded as the most important of all.

Danish West Indies.—The Government has imposed a quarantine of 15 days against vessels arriving at St. Thomas, Danish West Indies, from the Port of Philadelphia, on

account of the epidemic of smallpox existing there. Jamaica has already established a similar quarantine.

Sanitation in the Middle Ages.—The Greeks and Romans paid special attention to physical culture, water supplies, and baths, and Athens and Rome were provided with sewers early in their history. During the Middle Ages, sanitation received a decided check. Most European towns were built compactly and surrounded by walls. The streets were narrow and winding, and light and air were excluded. The accumulation of filth was frightful. Stables and houses were close neighbors. The dead were buried within the churchyards or in the churches. Wells were fed with polluted water. All conditions were favorable for the spread of infectious diseases, and in the fourteenth century alone bubonic plague carried off a fourth of the population of Europe. The birth-rate was much less than the death-rate normally. The cities had to be continually repopulated from the country.

Bubonic Plague.—A death from bubonic plague was reported December 11, in the suburbs of Sydney, N. S. W.

Cure for Insomnia.—Dr. von Gellhorn recently reported a cure for insomnia. A piece of calico, about eighteen inches wide and two and three quarter yards long, is rolled up like a bandage, and a third of it wrung out of cold water. The leg is then bandaged with this, the wet portions being carefully covered by several layers of the dry, as well as by a layer of gutta-percha tissue, and a stocking drawn on over the whole. This causes dilatation of the vessels of the leg, thus diminishing the blood in the head and producing sleep. It has been found by Winternitz that the temperature in the ear begins to fall a quarter of an hour after the application of the bandage; the decrease amounting to 0.4° C., and the normal not being again reached from one and a half to two hours afterwards. It is especially useful in cases where there is congestion of the brain.

Havana Sanitary Congress.—The Superior Health Board of Valparaiso, Chile, has strongly recommended that the government be represented at the Sanitary Congress to be held in Havana in 1902.

Trichinosis in The United States.—Carefully collected statistics show that the white population of the United States has trichinosis less frequently than the colored population, or the white population of other nationalities. The nationalities suffering most are the Canadians and Italians, and the Germans are very close to them.

The Drinking Habit.—It is said that in serious cases of the drinking habit, the average duration of life is about fifteen years; the duration of life among moderate periodical inebriates is about nineteen years. The capacity to get drunk more than a thousand times is rare. The maximum capacity for any man during ten or fifteen years is about two thousand gallons of whisky.

The Age of Man.—According to the latest announcements scientists have traced man back 9,000 years, but it took him about 7,000 to get a start for what he has done within the past 2,000, and it required more than 1,800 of these to prepare him for what was done in the last two centuries. And about now he is beginning to make a real start in knowledge and progress. Man is a great animal, but he needs time.—*Philadelphia Times*.

Obituary.—Dr. Moses Marshall, at Easton, Mo., December 2, aged 48 years—Dr. John W. Brock, at Caldwell, Ohio, December 3, aged 51 years—Dr. Charles B. Osborne, at South Waterloo, N. Y., December 2, aged 54 years—Dr. Charles S. Essig, at Wallingford, Pa., December 2—Dr. C. L. Broadus, Wallonia, Ky., December 1, aged 40 years—Dr. C. C. Miller, at Halifax, Pa., December 9, aged 42 years—Dr. Leslie M. Sweetman, at Baltimore, Md., December 11, aged 42 years—Dr. B. F. Kibler, at Dayton, Va., December 11—Dr. Francis A. Utter, at New York City, December 10—Dr. J. B. Sickler, at Peckville, Pa., December 11—Dr. William H. Hartley, at Westport, Wis., December 12, aged 89 years—Dr. Alexander Jackson, at Boston, Mass., December 12, aged 82 years—Dr. William Hilleary Johnson, at Adamstown, Md., December 13, aged 74 years—Dr. Creighton Colburn, at Westwood, Mass., December 11, aged 58 years—Dr. E. S. Leake, at Philadelphia, Pa., December 13, aged 80 years—Dr. Jesse G. Shoemaker, at Phoenixville, Pa., December 14, aged 35 years.

GREAT BRITAIN, ETC.

Deaths of Children in South Africa.—A blue book on the concentration camps in South Africa, issued in London, December 14, shows that in October the deaths in the camps were 3,155, of which 2,633 were children. In November the deaths were 2,087, 2,051 being children. The figures for October and November make the total number of deaths for the last six months 13,941, or a death rate approximating 252 per year per thousand.

Yellow Fever in the West Indies.—Mail advices received in Kingston, Jamaica, from Saint Lucia, British West India, report the existence of yellow fever at that place. A case has appeared also at Barbadoes.

Government Expert on the Plague.—The British Government has appointed Professor W. J. L. Simpson an expert on plague to advise the Hong Kong Government as to the best means to check the continued prevalence of that disease.

Appointment of Colonel Trotter.—Colonel Trotter, late Professor at the Royal Victoria Hospital, Netley, has been appointed to succeed Surgeon-General O'Dwyer as principal medical officer at Aldershot.

Ireland has 408 able-bodied persons to 1000 inhabitants, Scotland 424, and England 432.

Macclesfield Infirmary.—The election of a female junior house surgeon in opposition of the wishes of the medical staff has resulted in the resignation of the entire medical staff.

Obituary.—On November 28, in Glasgow, Dr. Archibald Campbell Clark, a graduate of the University of Edinburgh, lecturer on psychology at St. Mungo's College, Glasgow, and superintendent of the new Lanark District Lunatic Asylum at Hartwood, died, aged 50.—Francis Henry Lyon, a graduate of Dublin University, died in Dublin, aged 54 years.—The death of J. D. Harries, consulting surgeon to the Salop Infirmary, has just been announced.—Surgeon General Harvey, director of the Indian Medical Service, died of peritonitis, December 1, at Simla.

CONTINENTAL EUROPE.

Capital Punishment.—Professor Mareclin Berthelot, the renowned chemist, whose fiftieth anniversary as professor of chemistry in the Collège de France, Paris, has recently been celebrated, suggests the use of carbonic oxide for the production of death for criminals, as employed for the destruction of stray dogs. He says that this is a quiet and painless death and one that does not shock the sensibilities.

Spring Water in Auvergne, France.—Numerous methods are related in Auvergne, by which the peasants, renowned as the most stupid throughout France, decide whether the water of a spring is fit to drink or not. When it contains salamanders, leeches, etc.; when, upon expectorating into it, sputum does not separate; when bread, thrown in, does not sink rapidly, then the water is not drinkable. After a bit of bread has been held four or five minutes in the water, to absorb all harmful properties, the water may be drunk. Finally, wherever frogs are seen, the water must be good, since they destroy all venomous insects.—*Gazette des Eaux.*

Hospital Overrun by Rats.—A patient who fled from the Cochin Hospital, Paris, says the hospital is infested with thousands of rats which gallop about the wards night and day, devour the patients' food, and even bite helpless patients. A similar state of affairs, it is said, prevails in the temporary hospital at Aubervilliers.

A Treatment for Diabetes.—An important communication on the treatment of diabetes has been contributed to the Academy of Medicine of Paris, by Dr. S. Nourse. His theory is that potatoes in an equal quantity contain the same amount of salts of potash as bread, and by giving large quantities and suppressing bread, an alkaline treatment is set up, the diminution of sugar being an important factor. The treatment is not a cure, but is a powerful aid to doctors.

To Make Cattle Immune.—Professor Behring, who was recently awarded the Nobel medical prize of \$40,500, has announced that his experiments have demonstrated the possibility of making cattle immune to tuberculosis by inoculation. He proposes employing the Nobel prize money in combating cattle tuberculosis.

A Medical Certificate Obligatory.—The Bohemian Society of Physicians has procured the introduction of a bill

in the Austrian Reichsrath compelling both sexes to undergo a medical examination previous to marriage and to show a medical certificate of physical and mental capacity to either the priest or magistrate before the ceremony can be performed.

A Tablet to Dr. Molina.—A tablet in honor of Dr. Martinez Molina was unveiled November 17, upon the front of the house in Madrid in which he formerly lived. Addresses were delivered at St. Charles Hospital after which the procession formed and marched to the site of the tablet, which was then unveiled.

New Devices for Training the Blind.—The Paris Academy of Medicine has just been shown an invention by Dr. Dussard that completely revolutionizes the system of writing, calculation, and musical notation for the blind. The system marks a decided improvement on the Braille method, and is hardly less important than the improvement made by Braille himself. The primary advantage is that the blind are enabled to read and immediately correct what they have written. It does away with the cumbersome calculating board, and all of the apparatus necessary to the blind student may be folded and carried in the pocket. Dr. Dussard's appliance consists of a frame on which runs a ruler containing sets of square spaces, disclosing small dice fixed on a flexible metal band beneath. When the writing point is pressed on one of the concave spots of the dice, a raised dot appears in the paper. The position of the dots being mechanically determined, perfect regularity in the characters is obtained. The writer has but to lift the ruler, which is hinged and cannot be displaced, to read by the touch the characters which he has just formed. Erasures are accordingly made at once. Arithmetical notation on paper is thus rendered easy. The invention was brought before the Academy of Medicine December 2d, by Dr. Laborde, and two girls from the Braille School showed how easy it was to make use of the machine. Their speed in writing was equal to that of the average writer using pen and ink.

Deaths Placarded in Venice.—When any one dies in Venice it is the custom to fix a placard before the house, and in adjacent streets, a public notice stating his name, age, place of birth, and illness, affirming that he received the holy sacrament and died a good Christian, and requesting the prayers of the faithful.

Measles in France.—A severe epidemic of measles has broken out at Etaples, near Arras, 20 children dying in three days. Stringent prophylactic measures are being taken.

New Children's Hospital, St. Petersburg.—The foundation of a new children's hospital, intended as a memorial of the coronation of the Czar and Czarina, has recently been laid in St. Petersburg. The hospital, which is to be built on the pavilion system, will contain 400 beds. The cost, which is estimated at 1,700,000 roubles, approximately \$850,000, will be defrayed by the State.

Exterminating Rats at Marseilles.—The port authorities at Marseilles have experimented with carbolic acid instead of sulphuric acid in exterminating rats. The results have been effective, the carbolic acid not damaging the cargoes. They hope it may be the means of preventing the plague, which has been brought by rats generally.

Horse-flesh.—The consumption of horse-meat in Frankfurt has increased. The first horsemeat dinner was given on October 6, 1847, at Bornheim, a suburb of Frankfurt. As soon as a horse was slaughtered, and at that time only young horses were killed, the meat was sold at six kreutzers (about 4 cents) a pound. Yet it was not until fifty-four years later that the first horse meat restaurant was opened. At the present time about 1000 horses are slaughtered annually, and a separate slaughter-house has been built. The horsemeat butcher shops of Vienna, of which there are no fewer than 185, present a clean and attractive appearance, and at in no way distinguishable from the shops where the usual kinds of meat are sold, save by the sign announcing their specialty. Restaurant keepers who serve horsemeat must designate this fact in a special column on the bill of fare offered to patrons.

Obituary.—Dr. Hermann Löhlein, professor of obstetrics and gynecology in the University of Glessen died of apoplexy, November 25, in his 55th year.—Dr. G. Chiarleoni, professor of obstetrics at Palermo, Sicily, has died recently.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

November 30, 1901.

1. A Lecture on a Case of Syphilitic Arterial Disease. SIR WILLIAM GOWERS.
2. A Clinical Lecture on Some Cases Illustrating the Necessity for Accurate Observation in the Management of Surgical Cases. SIR WILLIAM IL BENNETT.
3. A Clinical Lecture on Acute Yellow Atrophy of the Liver. T. R. BRADSHAW.
4. On the Treatment of Wounds in War. W. WATSON CHEYNE.
5. Medicated Lozenges. SIR JAMES SAWYER.
6. Observations on the Rate of Vibration in Ankle Clonus. J. A. MacWILLIAM.

1.—Gowers reports the case of a woman aged 25 years, who suffered for 3 months from headache, which was severe from the first, and which was referred to the front and back of the head. After it had existed for a month, vomiting was added and both symptoms continued. Toward the end of another month the patient was noticed to become strange in manner, and the mental disturbance increased, so that she is said to have been "always talking nonsense." Soon afterwards, 3 weeks before admission, to the hospital some loss of power of the right side was noticed, and she also had a fit of some kind. The family physician stated that the patient had probably had syphilis. She was an ill-nourished, anemic girl, very weak, and in a condition of stupor, foot clonus was present on the right side and the optic discs were normal. Inunctions of mercurial ointment were ordered and following their use there was distinct improvement; although the benefit was not greater than that we often see from the first influence of the rest and suitable food a patient receives in the ward of a hospital, and the improvement soon ceased. At the end of a week 15 grs. of potassium iodide, 3 times a day, was added to the mercury; but, in a few days more, the increase in weakness was so distinct that the inunctions were stopped, the iodide being continued alone. At the end of another fortnight the patient had several slight convulsive attacks and almost complete paralysis of the left side came on suddenly. The stupor deepened to coma, the temperature rose to 104°, and 3 days later the patient died. The symptoms suggested a rapid cerebral growth. The necropsy showed that, although the disease was syphilitic, there was no growth. There was extensive syphilitic disease of the arteries, which was most intense at the commencement of each middle cerebral artery. In this situation the thickening of the wall had encroached on the cavity of the artery to the point of obliteration; this was especially great on the left side. The right middle cerebral artery contained a thrombus which was the cause of the final hemiplegia. There was a partial thrombus in the left middle cerebral artery, the occurrence of which must have caused the onset of the right hemiplegia. An abnormal artery from the posterior cerebral carried enough blood to the distal side of the clot to prevent the paralysis being complete. A clot which was situated in the anterior cerebral artery may be assumed to have caused the onset of the mental symptoms, although its effect was lessened by the supply of blood brought by a second anterior communicating artery. The progressive increase in the symptoms, the increasing palsy, the deepening speechlessness and stupor were undoubtedly due to the alteration in the structure of the brain produced by the endarteritis.

[J. M. S.]

2.—Bennett publishes a clinical lecture in which he cites a typical surgical case which would mislead a careless observer. He cautions against the so-called pathognomonic signs of disease and deprecates too readiness which is sometimes shown to operate for diagnostic purposes only. [F. T. S.]

3.—Bradshaw reports the case of a married woman aged 24 years, who was suffering from jaundice, impaired vision, and choreiform movements. Three weeks before her admission to the hospital she was seriously frightened by a large dog which sprang at her and following that, she had nausea and vomiting occasionally for 2 or 3 days. Two

days later she was slightly delirious, threw her arms about and jerked her head from side to side, the tongue was tremulous and she could not distinguish the features of people about her. The temperature was 99°. Two days later jaundice was distinct, and she appeared to be almost blind, there was, in addition, profuse metrorrhagia. Later, the patient became cyanosed, the breathing became irregular, the liver dulness was obliterated and the splenic dulness was unusually distinct. The urine contained a moderate amount of bile, but no albumin; the proportion of urea was estimated at 2.6%, and neither leucin nor tyrosin could be found. A diagnosis of **acute yellow atrophy of the liver** was made which was confirmed at the post-mortem examination. The liver weighed 25½ ounces, the capsule was loose and wrinkled, as if it was too large for the organ and numerous yellow spots the size of a pea or less showed through it. On section, the organ was mostly a bright cherry red, with patches of yellow here and there. The substance was perhaps rather harder than normal. The kidneys appeared normal; the spleen was enlarged. The portions of the liver which appeared yellow to the naked eye consisted chiefly of hepatic cells, arranged in lobules or irregular clusters, and showing marks of degeneration in a greater or less degree. These yellow areas were surrounded by areas of red atrophy, consisting of a fine connective tissue network infiltrated with blood and containing scattered collections of bile ducts, for the most part grouped around the portal vessels. At the periphery of the yellow areas, and in the neighborhood of the portal canals, there was an extensive infiltration of small round cells. The substance of the hepatic cells was converted into irregular aggregations of fine and coarse granules, many contained bile pigment, and a few contained fat droplets. As a rule, the nucleus was regular and had a distinct nucleolus; occasionally it was double, but without any evidence of karyokinesis. Some of the hepatic cells contained small, round, deeply-staining bodies resembling leukocytes, apparently the endocytes of McPhedran and Macallum. The intralobular bile capillaries appeared to be large and their lumen was occupied by a clear homogenous material which stained pink with eosin. The areas of red atrophy were composed of a delicate felted network of connective tissue and scattered endothelial plates, containing numerous red blood corpuscles. The author failed to recognize the existence of any obvious predisposing or exciting cause of the disease, unless it was the occurrence of severe mental shock.

[F. T. S.]

4.—In discussing the treatment of wounds in war, Cheyne expresses the opinion that the experience thus far gained does not warrant any modification in the surgical procedures adopted for similar injuries in civil life. He believes the good results attained in the South African War were due to the modern bullet and to the dry hot climate and not to modern surgery and asepsis. A small wound quickly heals because of the slight amount of bruising of the envolving tissues and because it is rapidly covered with a scab owing to the dry atmosphere, wounds larger than an inch in size were invariably infected. To speak of the field dressing which every soldier carries with him as aseptic is an absurdity, as it is frequently laid on the ground before it is applied to the wound and is always handled by dirty fingers. For the first treatment on the field Cheyne recommends a free use of a drying antiseptic powder and an exposure of the wound to the sun and air. When the first dressing was covered with a piece of mackintosh which kept the moisture in, suppuration frequently occurred. That the excellent results were not due to asepsis is self evident, since it was impossible to obtain and maintain perfect cleanliness; the regimental surgeon's hands are dirty, the men must lie on the field some time before being transported to the rear, the air is filled with sand, dust, and flies, and the water is scarce, muddy, difficult to filter, and hard to boil because of the absence of facilities.

[J. M. S.]

5.—Sawyer recommends the following basis for **medicated lozenges**: Take of decorticated liquorice root 4 drams; water 4 pints; macerate for 12 hours; strain and add 2½ pounds of picked gum arabic and 2½ pounds of refined sugar; dissolve, strain, and evaporate to the thickness of honey, constantly stirring, and add gradually the

whites of 12 eggs well beaten with 4 ounces of orange water; evaporate with constant stirring till the paste is so firm as not to adhere to the hands. [J. M. S.]

6.—In the case of a man, aged 40 years, who was suffering from hemiplegia of 10 months duration, and who presented ankle clonus, the rate of vibration was found to be as a rule 13.5 or 14 per second. The clonus excited in the quadriceps by traction on the patella exhibits a rate of about 7.5 per second. When the movement of the foot was recorded, the vibration showed only half as fast. [J. M. S.]

LANCET.

November 30, 1901.

1. An Address on the Symptoms and Treatment of Movable Kidney. HENRY MORRIS.
2. A Clinical Lecture on the Symptoms and Treatment of Perigastric Adhesions. W. HALE WHITE.
3. Harveian Lectures on Twenty-five Years' Experience of Urinary Surgery in England.

G. BUCKSTON BROWNE.

4. Anatomical Preparation-making as Devised and Practised at the University of Edinburgh and at the Hunterian Museum of the Royal College of Surgeons of England. J. BELL PETTIGREW.
5. About Alkaptonuria. ARCHIBALD E. GARROD.
6. A Case of "Myxasthenia," with Remarks on Kindred Affections. WALKER OVEREND.
7. Carcinoma Mammæ. CECIL LEAF.
8. A Case of Lead-poisoning causing Insanity.

W. STEWART STALKER.

9. The Lighting of an Operation Theatre.

P. T. B. BEALE.

1.—In discussing the symptoms and treatment of movable kidney Henry Morris reaches the following conclusions:

"1. When movable kidney is associated with enteroptosis, no operation should be performed on the kidney unless it is evident that the more serious symptoms are due to the mobile kidney alone, and not until after the trial of a well-fitting abdominal support and the careful dietetic and medicinal treatment of the gastric and intestinal disorders. Should these means fail and the kidney evidently be most at fault, nephropexy means fail and the kidney evidently be most at fault, nephropexy, followed by the wearing of an abdominal belt, should be tried.

2. When a movable kidney is complicated by a movable liver, or when both kidneys move, the same rule should be followed as in general enteroptosis; in the case of both kidneys moving (when both organs have been given trouble) they should be fixed one after the other at an interval of a week, so that convalescence from both operations may be taking place simultaneously. I have in several instances thus operated upon both organs with the most satisfactory results.

3. When the movable kidney occurs in an hysterical or neurasthenic patient, all palliative means should be tried before resorting to an operation, and the patient's friends should be informed of the uncertainty of the result from operation. The statistics show that a cure may be hoped for by nephropexy in about half of these cases.

4. For uncomplicated movable or floating kidney, in which the principal symptoms are pain and gastro-intestinal troubles, the operation may be confidently advised and carried out without any previous trial of belts or of rest.

5. When renal crises are a feature of the case, nephropexy ought to be strongly urged because of the impossibility of keeping the kidney in its proper place by a belt, and because of the constant risk of hydronephrosis and recurring pain, even if the renal crises can be kept under control.

6. When a movable kidney gives rise to no inconvenience, an operation ought not to be thought of and a belt need not be worn." [J. H. G.]

2.—(Will be considered in the surgical critical review of January.)

3.—In this third lecture Browne takes up the question of urethral stricture and deals at length with that variety which does not yield to dilatation. For this condition he recommends internal urethrotomy. The instrument which he uses is the urethrotome of Civiale. Browne claims that there is no stricture however severe through which it is impossible to pass an instrument. The use of the filiform bougie is heartily condemned as being an instrument capable of misleading the surgeon and inflicting severe damage upon the patient. The treatment recommended is that the patient should be profoundly anesthetized and the passage of a small steel bougie attempted. When the tip of this instrument has become fixed in the stricture, it is not forced through it but is withdrawn and the next size is then introduced. This gradual dilatation of the stricture is kept up until a No. 6 English instrument can be passed readily into the bladder. The urethrotome is then introduced and a free incision made from behind forward, being at least an inch long through the stricture. A rubber catheter, No. 10 or 11 (English scale) is introduced and fastened in the urethra. This instrument is allowed to remain in position from two to three days. Browne objects most strongly to the performance of external urethrotomy, largely because of the danger of a permanent urinary fistula. There are, however, four conditions which call for an incision in the perineum; (1) when there is an extravasation of urine; (2) when pus requires an exit; (3) in some cases of prostatic calculi; and (4) in certain rare cases of urethral calculus. In cases of periprostatic abscess and of perineal abscess a free incision must be made at once, because delay is productive of the most serious damage to the tissues. In certain cases of perineal abscess it is Browne's custom first of all to divide the stricture, introduce a soft rubber catheter into the bladder, and then incise the abscess. "The urethra should never be opened in cases of vesical calculus, urethral stricture, perineal abscess and extravasations, or for vesical exploration or drainage or for any prostatic operation." [J. H. G.]

5.—Garrod contributes an article on "alkaptonuria" which throws fresh light upon its nature and causation. He emphasizes that this condition may be met with in several members of a family. A considerable number of the cases demonstrate this point. This condition affects brothers and sisters alike, but no facts at hand point to show its transmissibility from one generation to another. He has inconclusive evidence that children of first cousins show a special liability to alkaptonuria. The older members of a family are less liable than the younger ones. He gives an account of a case of alkaptonuria occurring in an infant. The condition developed very soon after birth. The urine which was collected between the eighth and eleventh day reduced Fehling's solution and had the characteristics common to alkaptonuria. He believes the condition manifested itself after the entry of proteid food into the alimentary tract and that "the evidence available points to tyrosin, formed as a product of pancreatic digestion, as the parent substance of the homogentisic acid which imparts to alkaptonuria its peculiar properties." A certain amount of homogentisic acid can be destroyed by the human tissues, but when their powers become overtaxed, this substance is excreted. He quotes from a paper of Mittelbach who has observed, "that at different periods of the day of twelve hours, the maximum excretion of homogentisic acid follows within two or three hours after the chief meal." The author has also estimated the reducing power of several specimens of urine passed by a patient during the course of twenty-four hours. The results he embodies in three tables. The first table shows the results after partaking of an ordinary hospital diet for children. The first meal was at 5 A. M.; dinner at 12 noon, which consisted of minced meat and rice pudding; at 3.45 P. M., an egg and tea, and at 6 P. M., bread butter and

milk. Eight observations were made during the course of the twenty-four hours, and it was found that between 4 P. M. and 5 P. M. (about four hours after the chief meal) the maximum excretion of homogentisic acid occurred. The second table embodies the results which were obtained after partaking of a diet rich in proteid at the chief meal (twelve noon). The maximum excretion then took place between 3 P. M. and 7 P. M. The third table includes the results after the ingestion of a meal richest in proteid at 9 A. M. instead of noon. It was found that the maximum output of reducing substance occurred between 12.15 P. M. and 4.25 P. M. or about three hours earlier than when the chief meal was given at 12 noon. The author's results do not correspond with Mittelbach's observations who found the reducing power of urine at its height within two or three hours after a proteid meal. Garrod remarks "that his observations lend support to the view that the change from tyrosin to homogentisic acid takes place in the tissues after the absorption of the former, rather than the alternative view that the change in question is brought about in the alimentary canal." [F. J. K.]

6.—Overend reports "a case of myxasthenia" which occurred in a woman 44 years of age. For twenty years the patient's health had been much impaired. She had had a number of illnesses; among these were diphtheria, pertussis, and acute gastritis. At the time this patient came under observation she complained of dryness of the tongue and throat, loss of appetite, flatulency, and pain after taking food. Sleep was disturbed on account of the parched feeling in the throat. The mucous membrane of the mouth was dry, pale, and shiny. Two small granulations about the size of a pea existed below the left tonsil. These caused her much discomfort and at times pricking pains below the angle of the jaw. Gastric pain developed about two hours after food was taken and was most intense at midnight. The ingestion of milk seemed to induce more pain than the ingestion of meat. The bowels were constipated. The author prescribed powders consisting of mucin (mucin and bicarbonate of soda) to be taken before and after meals; the throat to be swabbed or painted before retiring at night with a solution of mucin containing menthol, in a wine glass full of water; and powders of bismuth and sodium sulphate. He states that the presence of mucin in abundance within the synovial fluid where uric acid deposits most frequently occur in cases of gout, and diminution of saliva and the desiccated tongue of diabetic patients are suggestive facts which may lead to the discovery of some interesting relationship. [F. J. K.]

7.—Leaf, in discussing the necessity for taking steps to prevent dissemination of carcinomatous material in operations for cancer of the breast, recommends that the fascia in which run the veins and lymphatics from the breast should be ligated by a number of ligatures introduced on large curved needles. He presents an illustration showing the various lymph channels and the positions for the ligatures. It is claimed that the use of these ligatures will prevent to a considerable extent the possibility of infection of neighboring structures during the process of removing a malignant breast and infected lymphatic glands. [J. H. G.]

8.—Stalker reports a case of lead poisoning causing insanity which occurred in a man 30 years of age, a plumber by occupation. He was admitted into the Surrey County Asylum on August 19, 1901. The patient's illness began very suddenly on April 12, 1901, with chilly sensations and pains all over the body. Mental symptoms were quite marked; delirium was persistent. He remained in this condition until his admission to the Asylum. A marked degree of wasting occurred during the period between the onset of the disease and the time of admission to the Asylum. His mental condition on admission closely resembled alcoholic mania, he was restless, noisy, excited and utterly incoherent. There was paralysis of the extensor mus-

cles and wristdrop was pronounced. A tremor appeared upon any attempted movement. Ankle clonus was absent. The knee jerks were slightly increased. A well defined blue line was found on the gums and a certain amount of optic atrophy existed. The treatment consisted in the administration of iodide of potassium. Six days after admission stimulants were resorted to on account of collapse. On the 25th of August the patient developed well-marked epileptic seizures. He steadily improved from this time on and was discharged on Oct. 11, 1901, when he was mentally sound, but there was evidence of a certain degree of cirrhotic change in the kidneys. The diagnosis of lead encephalopathy and epilepsy seemed justifiable. This case differs from the usual type of lead encephalopathy in its suddenness and acute mode of onset. [F. J. K.]

MEDICAL RECORD.

December 14, 1901.

1. Optimism vs. Pessimism in the Surgical Treatment of Cancer. ROBERT ABBE.
2. An Epitome of the Subject of Rheumatism as Cause and Effect in Inflammation of the Throat. WILLIAM CHEATHAM.
3. Rheumatic Affections, Their Pathogenesis and Treatment. MARTIN A. H. THIELBERG.
4. Municipal Sanatoria. ALFRED MEYER.
5. Treatment of Delirium Tremens and Alcoholic Toxemia. T. D. CROTHERS.

1.—Robert Abbe presents a paper on optimism vs. pessimism in the surgical treatment of cancer. His observations have caused him to affirm that a radical cure can occasionally be hoped for in a few cases of cancer by extirpation, and that the resources of surgery have greatly mitigated the suffering from malignant disease and prolonged life. He states that out of more than 150 excisions of the breast for cancer he found 25 per cent of the number of the 75 cases who responded to his inquiries had survived the three-year limit. One case survived six years; one five and a half, and one four years. He includes in this report many favorable results which followed a number of operations for sarcoma and epithelioma. [T. L. C.]

2.—William Cheatham has inquired into the subject of rheumatism, and its relation to inflammation of the throat. In his experience chronic rheumatism causes frequent attacks of inflammation of the tonsils, pharynx, and larynx, and that acute exacerbations in chronic and acute rheumatism are frequently ushered in or preceded by an acute tonsillitis; that following these attacks we may have all the heart, joint, and other lesions that are found in any other rheumatic affection. He emphasizes the fact that these lesions may not be rheumatic, but depend upon other toxins. As yet we are not able to distinguish them. [T. L. C.]

3. M. A. H. Thielberg discusses the pathogenesis and treatment of rheumatic affections. Rheumatic fever has of late years been classed by many authorities as a bacterial disease, and various microorganisms, especially diplococci, staphylococci, and bacilli, have been found in the nodules, synovial membranes, fibrinous and serous exudates, blood, urine, in persons suffering from acute rheumatism. He refers in this direction to the researches of Poynton and Paine, Achalmé and Thierloix. It may be safe to predict that many cases of apparent typical rheumatism will, without doubt, be due to pyemias, or infections with microorganisms, differing from those of true rheumatism, as pus-cocci, gonococci, etc., while again many cases of chorea, tonsillitis, and even of rheumatoid arthritis will prove true rheumatic affections. If we accept the definition, which seems to be a correct one, that "rheumatism is a general disease of bacterial origin, characterized by especially arthritic and cardiac manifestations," we may also be allowed to add: "Contracted by persons whose blood, on account of perverted metabolism, is of especially low alkalinity and immunizing power." In such persons he states that the nervous equilibrium is disturbed by the toxic and irritant products of retrogressive metamorphosis, or disassimilation. Treatment, in his cases, has been directed almost exclusively in the line of digestion and general hygiene. He states that he has found all his rheuma-

tles to be chronic dyspeptics of some sort or other. His patients have, as a rule, been divisible into two distinct classes. The first are spare, nervous men, or especially women, who often suffer from headache, lack of appetite, distress after eating, and constipation. They are, as a rule, extremely light eaters, but drink instead a great deal of tea and coffee. Whatever food taken is low in nutritive value, and the food is bolted and imperfectly masticated. Fresh air, sunlight, and exercise is insufficient; hot baths taken in excess, or not at all; cold baths are never indicated. The second type is the ruddy fat woman, or especially man, with flabby, distended abdomen, and with sedentary or lazy habits. Such persons are usually hearty eaters and drinkers, and suffer from a chronic gastro-intestinal catarrh. His first class of cases he treats with small doses of calomel followed by saline. He recommends a teaspoonful of sodium bicarbonate and sulphate every morning, as well as a pint of hot water and one-tenth grain strychnine sulphate half an hour before each meal. He advises cold sponge baths every morning, and a brisk rubbing down and light massage an hour daily; warm baths once a week and close attention to the diet. Tonic treatment is to be added to this general treatment after a few weeks. In his second class of cases he advises small, repeated doses of calomel alkali, and saline cathartics in some form, a few hypodermic injections of morphine, and ice to the affected joint. Cold sponging followed by some antipyretic, together with dietetic, hygienic, and hydrotherapeutic measures. This treatment he regards as more valuable than the salicylates. He has not found that meat is contraindicated in rheumatism after the temperature has subsided. Attention to the elimination, however, cannot be too rigid. [T. L. C.]

4.—Alfred Meyer discusses municipal sanatoria. In the autumn of 1900 he made a plea before the New York Academy of Medicine for action under the Henry Bill, showing that in Greater New York alone there were about eight thousand deaths a year from consumption, and that there were probably over twenty-five to thirty thousand cases in various stages of the disease. As the final outcome a committee of five physicians was appointed by the council to co-operate with other bodies to further the erection of a municipal hospital for consumptives, and the following resolutions were adopted, which contain, the writer believes, an excellent enunciation of principles for all similar institutions: First. Resolved, That the Committee appointed by the Academy be instructed to use its influence to have the municipal hospital constructed for cases in the early and presumably curable stage of phthisis. Second, Resolved, That while the proper designation for such a hospital would be for curable cases, yet in view of the bad effect a refusal to be admitted would produce upon others, the designation be "Hospital for Incipients." Third, Resolved, That the Committee be instructed to use its influence to have the hospital placed in a locality which would be most productive for good; where there shall be such space that it shall not become an injury and danger to the neighborhood, as would be the case were it placed in a populous locality. Fourth, Resolved, That the Committee be instructed to use its utmost endeavors to have such examinations for admission made by thoroughly competent physicians possessed of such moral stamina as shall prevent advanced and incurable cases being sent to the hospital for incipient cases. Fifth, Resolved, That the Committee be instructed to use its influence to have the rules and regulations of this hospital such that it shall not become an unnecessary burden upon the community. He regards it as important that often the incipient cases of phthisis may do a small amount of work, not only without injury to their health, but with actual benefit to it. This work must be regulated in amount and character by the physician in charge. This system has been introduced at the Bedford Sanatorium of the Montefiore Home, and he shows the economical value of such a method by the food stuffs produced. He believes that no system of municipal care of consumptive poor will be complete which does not also provide for the care of advanced cases within the corporate limits. He believes that the two types of cases should be kept strictly separate; that the incipient and presumably curable cases should be kept in a sanatorium outside of the city limits, and that the

advanced and presumably incurable cases should be treated in an institution within the corporate limits.

[T. L. C.]

5.—T. D. Crothers discusses the treatment of *delirium tremens* and *alcoholic toxemia*. If the delirium comes on abruptly; the exciting causes are acute and point to the formation of toxins. If the delirium has been preceded by mental changes, and transient alterations of thought and conduct occur, gradually becoming more constant and fixed, there are indications of organic lesions of the brain. It is important to ascertain whether the delirium follows from a long period of continuous drinking, or whether the drink period was preceded by some physical or mental disturbance arising from organic disease, traumatism, or mental strain. Whether it followed acute disease, severe exhaustion, or whether there was mental instability as the result of hereditary influence, preceding this state. Alcohol in these conditions may be both an exciting and predisposing cause. Should the delirium follow prolonged excess in the periodic drinker, where the alcohol is abandoned before the delirium comes on, intense hallucinations of short duration, prolonged delusions concentrated upon one subject, will follow. The general pathology of these cases is a vasomotor paralysis, particularly of the blood vessels of the brain; the dilator and constrictor nerves in the walls of the arteries are affected, and a subsequent congestion of the veins is the result. Alcohol also acts directly on the composition of the blood, increasing the number of white blood cells, but diminishing their uniformity and movement, and form. There is at the same time a decrease in the number of red blood cells. The removal of the alcohol is the first step in the treatment. The cessation of the delirium must not be expected to follow the removal of the spirits. Slowly reducing the amount of alcohol, giving narcotics, forcing the feeding with an idea of overcoming the supposed exhaustion, is extremely dangerous treatment. The elimination of the toxins is also indicated. Small doses of calomel with the salines should be given until free catharsis is induced. He recommends a combination of magnesium sulphate and potassium butyrate, two parts of the latter to one of the former, given in small doses according to the conditions present. Next in importance, he believes, are hot-water and hot-air baths, hot packs followed by vigorous rubbing, are useful means in promoting the elimination through the skin. Frequent sponging with hot salt water is another effective measure. He distinctly forbids the use of narcotics to produce sleep. For the craving for alcohol that follows the withdrawal in some cases, strong solutions of quassia or elnchona, given every hour, will soon break up this impulse and produce an intense disgust for spirits. He advises against the prevailing practice of allowing alcohol to be given, and also both solid and liquid foods very freely. Restraint depends largely on the patient, and in certain cases should be associated with as much liberty as possible. The condition of the heart should be carefully watched. He found that ice on the nape of the neck is one of the most powerful excitants that can be used. When the delirium has subsided, different conditions of prostration follow for which he recommends nux vomica or strychnine. In the convalescent stages, both static electricity and electric light bath are the most valuable agents that can be used. The evils to be avoided in all these cases are overdrugging and over-feeding. [T. L. C.]

MEDICAL NEWS.

December 14, 1901. (Vol. LXXIX, No. 24.)

1. The Modern Urethroscope. WILLIAM K. OTIS.
2. Adherent Pericardium. ROBERT H. BABCOCK.
3. Clinical Facts and Their Meaning. JOSEPH M. AIKIN.
4. An Epidemic of Smallpox at the Michigan Asylum for the Insane, Kalamazoo. ARTHUR MAC GUGAN.
5. Rectocolitis. WILLIAM M. BEACH.

1.—W. K. Otis recommends a urethroscope of which the following is a description: It consists of a metal tube or cylinder, an inch and a quarter in length by somewhat less than half an inch in diameter, the first half inch of which is narrowed down conically to form a funnel-shaped diaphragm, leaving an opening of a quarter of an inch in

diameter through which the rays of light emerge. At the other end of this tube of the same diameter forming an elbow at right angles to the first tube, three quarters of an inch in length, into which the handle of the instrument fits. The funnel portion unscrews from the upper tube and a plane-convex lens is placed at this point to concentrate and direct the rays of a small electric lamp placed immediately behind it. This lens can be readily removed for cleaning. The handle consists of a cylindrical piece of hard rubber about one-half inch in diameter and one and a half inches long, to the upper end of which is fixed the electric lamp, while the lower end is arranged to receive the cords leading the current from the battery. A small electric switch in the form of a milled wheel is placed on one side of this handle, a half-turn of which makes or breaks the current. The two small screw-heads are seen on the other side of this handle; the upper serves to clamp fast the hood, the lower to fasten the lamp in position. The lamp is of a variety known as "high efficiency," differing from the others in a special preparation of the filament which enables it to give out a very intense light without a corresponding increase in heat; it is unusually strong and capable of withstanding a current of from sixteen to twenty volts. It is attached to a wire running through the centre of the handle, so that it may be raised or lowered and clamped in position by the lower screw. The only adjustment which may be necessary is, when changing the lamp, to see that the filament of the new lamp comes exactly opposite the center of the lens; a small piece of brass with a pin-hole in it has been placed on the handle behind the lamp socket, so that, by holding this to the light and moving the lamp up or down until the filament is exactly across the center of the hole, the lamp may be clamped in the correct position. The length of the handle and the weight of the instrument varies according to material used and the desire of the operator. The author in his experience with this instrument found an illumination of field such as is not found with any other instrument. It gives the entire field of the tube used, offers no obstruction to the use of applicators, and at the same time nothing is inserted into the urethra which cannot be rendered thoroughly antiseptic by boiling. It is simple in construction, strong, inexpensive, and fulfills all the indications of a good, practical working instrument. [T. M. T.]

2.—R. H. Babcock divides adherent pericardium into two forms: (1) As a result of pericarditis interna, which has led to a more or less complete and firm union of the two layers of the sac without adhesion to the surrounding structures; (2) as a result of pericarditis interna et externa, which has caused adhesions not only between the pericardium and epicardium, but also between the sac and the contiguous structures. This form has also been called chronic adhesive or fibrous mediastino-pericarditis on account of the extensive development of fibrous tissue within the mediastinum, with consequent union of all the structures therein contained. The symptoms vary. In one case they are referable to stasis within the pulmonary vessels, shortness of breath on exertion, cough due to bronchial congestion, and a marked disposition to attacks of bronchitis. In another palpitation either with or without dyspnea are produced by efforts and excitement, occasioning much discomfort and at times alarm. In these cases the pulse is apt to be persistently rapid; it may be irregular and the cardiac impulse is exaggerated in force and extent. In a few cases without co-existing valvular defect, the disturbance of circulation is not pronounced, being shown only by digestive disorders lasting for years and attributed to simple dyspepsia. Generally there is nothing to distinguish them from ordinary cases of mitral disease or from chronic dilatation. Physical examination generally discloses enlargement of the liver, which always has a tendency to return to its large size as soon as treatment is discontinued. Diagnosis is sometimes easy; at other times very difficult. It is difficult when the sac is adherent to the heart, but not to the neighboring structures. The diagnostic signs are inspiratory distention instead of the normal inspiratory collapse of the external jugular or other superficial veins, known as Friedreich's sign, pulsus paradoxus (not always constant nor reliable) and cardiac hypertrophy. When the pericardium is adherent to the chest wall or diaphragm it is easy and certain. Finally, in some cases in which positive signs cannot be obtained, the diagnosis of this

condition is rendered possible by a process of exclusion, together with the history of a previous rheumatic attack and the discovery of an hepatic enlargement for which no other predisposing cause can be ascertained. [T. M. T.]

4.—A. McGugan described the following treatment for smallpox. A few divided doses of calomel followed by a saline. Plain milk or malted milk diet during the febrile period. No medicinal febrifuge was used, depending entirely upon cold water; the bath, pack, the moist girdle, throat and head compress, depending upon the case. During the period of eruption the patients were sponged frequently with a 1:2000 bichloride solution, and during the few hours when the pain was severe from distention of pustules, the hands and face which were the parts complained of usually, were covered with a few layers of gauze kept constantly wet with cold soda bicarbonate solution. As the eruption began to dry it was anointed in the first cases with carbolized vaseline. In the latter cases ichthyol with enough lanoline to give it consistency was used. The application of silver nitrate and of pure carbolic acid to individual pustules was tried, but without any remarkable result. The severest cases wore no bed-gown and were covered with one sheet only. Everything about the patient was kept scrupulously clean. Great care was taken with diet and bathing. [T. M. T.]

5.—W. M. Beach concludes his article on rectocolitis as follows: (1) It is a condition of the rectum and colon of varying degrees of inflammation; (2) a knowledge of the anatomical bearings of the rectum and colon is necessary to understand the symptoms and reflexes; (3) the symptoms are local and systemic; (4) rectocolitis may be catarrhal or ulcerative; (5) it may be acute or chronic; (6) When dependent upon polypus, hemorrhoids, fistula, etc., the cure depends upon their removal; (7) chronic rectocolitis, due to altered secretions, anemia and congenital narrowing of the sigmoid strait, is difficult to cure.

[T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

December 14, 1901. (Vol. LXXIX, No. 24).

1. Laryngeal Paralysis and Their Importance in General Medicine. J. W. GLEITSMANN.
2. Concerning an International System of Quarantine. FRANK W. FOXWORTHY.
3. The Ethyl Bromide and Chloride, respectively, as Surgical Anesthetics, with a Description of an Apparatus for Their Scientific Administration. S. ORMOND GOLDAN.
4. The Daily Medical Inspection of Schools. D. S. LAMB.
5. Hysterical Dissociation of Temperature Senses, with Reversal of Sensibility to Cold. G. W. McCASKEY.
6. Mycosis of the Tonsil and Base of the Tongue. E. HARRISON GRIFFIN.

1.—J. W. Gleitsmann considers the organic causes of laryngeal paralysis under two separate divisions: Those emanating from the bulbous and spinal column and peripheral ones. The former are softening processes, hemorrhages, syphilis, tumors, diphtheria, progressive bulbar paralysis, amyotrophic lateral sclerosis, syringomyelia and locomotor ataxia. Peripheral causes are tumors of the neck (cancer of the esophagus), aneurysm of the aorta, of the innominate, or of the right subclavian (on account of the greater frequency of aortic than subclavian aneurysm the left recurrent is oftener paralyzed than the right), mediastinal tumors, such as malignant growths, infiltration of the peritracheal or bronchial glands in syphilis, pericarditis, pleuritic adhesions, as in tuberculosis, traumatism and injuries; further, infectious diseases, influenza, scarlet fever, typhoid fever, toxic influences principally lead, which is apt also to produce abductor paralysis or rheumatism, both causing peripheral neuritis, although the diagnosis of rheumatism ought not to be made hastily and before an earnest and conscientious search for other factors has been made. The importance of these paralyzes, especially of the abductor muscle, for the practitioner results from the fact that it has very often been accidentally discovered at a laryngoscopic examination and is also frequently observed before the underlying grave affection has been recognized or caused any perceptible symptoms.

For instance in a case in which abductor paralysis antedated all the other symptoms of locomotor ataxia and further, in which the position of one vocal cord in the median line in an otherwise apparently healthy person was the incentive to a careful examination of the entire organism and an aneurysm was found. [T. M. T.]

2.—F. W. Foxworth, after studying the international system of quarantine very thoroughly has come to the following conclusions: (1) Variations in quarantine in the same country, as seen in Calcutta, Bombay and inland cities of India; (2) variations in quarantine between different countries; (3) because of these numerous variations the liability of the spread of the infectious disease is increased; (4) dangers to travelers detained at quarantine stations from infection received there; (5) injurious effects on commerce from variation in quarantine system; (6) the use of pernicious disinfectants; (7) the absurdities of different systems. The author quotes Dr. Robert Koch, who states he believes that unless some international commonsense system is adopted soon, it would be far better to abolish the quarantine system and let commerce and travel be without restrictions of any kind.

[T. M. T.]

3.—S. O. Goldman, in his article on ethyl-bromide and chloride, respectively, as surgical anesthetics, states that these drugs are only applicable to minor operations, and comparisons cannot properly be made with chloroform. Everything considered, chloroform is less safe than either gas or ether, and the ethyl-bromide and chloride are both less safe than chloroform, were they used in the same class of cases. Ethyl-bromide is safer than ethyl-chloride for the reason that it does not require the same concentration as does the latter. It is the same in convenience, rapidity in action and absence of after-effects and is more economical. Compared with ether, these anesthetics are inferior in adaptability and safety. They compare better with nitrous oxide gas than any other anesthetic. All three are particularly valuable as precedents to ether in general anesthesia. Ethyl-bromide and chloride as precedents to chloroform are quite unnecessary, if not dangerous. These anesthetics are administered by the so-called air restrictive methods. The ethyl-bromide is generally placed upon gauze or a handkerchief and closely applied to the patient's nose and mouth; anesthesia is almost instantaneous. With ethyl-chloride various devices have been employed for restricting the waste of the anesthetic; at the same time they also restricted the amount of air. As both the anesthetics are extremely volatile, especially the latter, a certain amount of concentration must be practiced, but this should never be at the expense of the air inhaled. It is far better and safer to use a large quantity of the anesthetic with a free complement of air than a small quantity with a small portion of air. The devices used for ethyl-chloride are tending toward this latter method, a particularly dangerous one. The inhaler used is described as follows: A thin metal horizontal cylinder into the center of which is set a chamber for gauze upon which the anesthetic is placed; upon the superior surface of the horizontal cylinder is placed an expiratory valve protected by a metal box perforated with apertures to give vent to the exposed air. Immediately anterior and posterior to the anesthetic chamber is placed an inspiratory valve, and it is by these valves that both active and passive evaporation of the anesthetic is completely avoided, thereby affording the greatest possible economy in the quantity of the anesthetic used. Both ends of the apparatus are open, affording the freest passage of atmospheric air with the anesthetic during inspiration, while during expiration the anesthetic chamber is entirely closed, the expirations passing through the expiratory valve. When ethyl chloride is used, the small opening in the center of the cap covering the chamber is opened. This affords an aperture just large enough into which the capillary end of the graduated tube fits. Ethyl-bromide may be introduced through this opening or the entire cap may be removed. The valves are made of mica discs perforated in the center with springs just strong enough to effectually close the openings and not impede in the least either inspiration or expiration. The face-piece is made of transparent celluloid with a pneumatic rubber rim; this celluloid feature permits a perfect view of the nose and mouth during administration.

Depending upon the nature and duration of the operation, activity of respiration, the type of patient, weight, etc., from two to five cubic centimeters of either anesthetic is at once placed in the chamber, which is tightly closed and the inhaler applied to the face. After from three to five or six inhalations, anesthesia is induced for the performance of the operation. Before a second application of the anesthetic is made, the patient should become, at least partially, conscious. Neither of these anesthetics should ever, under any circumstances, be administered as chloroform is. [T. M. T.]

5.—G. W. McCaskey reports a case of the above condition in which the interesting features were remarkable disturbance of the sensibility to cold. Thermal anesthesia in cases of hysteria is not perhaps so very rare, but is nearly always associated, according to Oppenheim, with analgesia, as was the fact over the lower extremities of the case reported, although there was no analgesia over the trunk and upper extremities. So far as the author can recall dissociation of the sensibility to heat and cold has not been reported in hysteria, although it has been recorded as the result of organic disease. Dejerme and Thulant, for instance, have reported a case of syringomyelia with complete dissociation of sensibility to heat and cold. In their case, however, there was complete loss of sensibility to heat over a large area. As a matter of fact in the author's case, above reported, thermo-anesthesia in the proper sense did not exist at all. It was rather a hyperesthesia of the sensations excited by cold, the perception being recognized as that of heat instead of cold. Associated with it, however, were other phenomena of the true anesthetic type. [T. M. T.]

6.—E. H. Griffin's treatment of mycosis of the tonsils and base of the tongue is as follows: The patients' throat was treated by the application in succession of chromic acid, carbolic acid, nitric acid and sulphuric acid. This treatment seemed to irritate and produce an extension. It was discontinued and boric acid, nitrate of silver and various other applications were used, but these seemed to act as fertilizers and the growth increased in size. The patient was then ordered to smoke, cigars or pipe, as often as circumstances permitted. This seemed to retard the growth of the plant and greatly diminished the growth on the palate. The next procedure was picking out the root with forceps. The part was then cauterized with chromic acid by a bent probe. The membrane was carefully sprayed with alkaline solution to limit the action of the acid. As the treatment was only partially satisfactory, the patient was given a prescription of iron, glycerine and water, a drachm every three hours to be used without water as a gargle and then swallowed. This solution seemed to have more effect upon the growth than any other preparation. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

December 12, 1901.

1. Twelve Cases of Pneumonia Treated by Antipneumococcus Serum. GEORGE G. SEARS.
 2. Use of Antistreptococcus Serum in a Case of Septicemia Following Mastoid Operation; Recovery. MARY F. HOBART.
 3. A Synopsis of a Three Months' Service in the Gynecological Department of the Boston City Hospital. CHARLES M. GREEN and FRANK A. HIGGINS.
 4. The Treatment of Tumors of the Breast. JOHN H. GLEASON.
 5. Massage and Movements of Hemiplegia. DOUGLAS GRAHAM.
1. Sears reports 12 cases of pneumonia treated by antipneumococcus serum. Six of the patients were over 30 years old; of the other 4 cases one was excessively alcoholic and 2 confessed to its moderate use. Of the 8 cases referred to, 3 used alcohol to excess, 2 others had mitral regurgitation, nephritis and 1 arteriosclerosis. Albumin was found in the urine of 10. There were 9 recoveries from this unpromising series. The only conclusion that can be drawn is the negative one that the course of the disease is not lengthened by the use of serum. It is certainly no specific against the pain resulting from the inflamed pleura. While in some cases a drop in the temperature of a degree or 2 followed an injection, the author was unable to succeed.

by repetition of the injections, in keeping the temperature down, and as an equal rise was occasionally noticed, it is impossible to assert that they produced any influence on the fever in these cases. Skin eruptions, together with pain and swelling in the joints, were occasionally produced.

[J. M. S.]

2.—Hobart reports the case of a woman aged 63 years, who, after complaining of slight malaise, awoke at 2 A. M. with some carache and after that slept very little. At noon her temperature was 102°, pulse 120 and of high tension, face anxious and flushed, and there was great pain in the ear and much tenderness over the mastoid. Paracentesis of the tympanum resulted in a free discharge of blood and serum, after which there was general improvement for 5 days. Then the patient seemed less well, had more pain in the head and the pulse became higher in tension. It was then decided to open the mastoid cells. These were found filled with granulation tissue and pus. After the operation delirium became marked, there was constant restlessness, the temperature had reached 105.2°, pulse 122. Three cc. antistreptococcus serum were given and, 2 hours later, 10 cc. were injected and oxygen was administered. At midnight the pulse became regular and fell to 120, and toward morning the patient slept more. At 10, the following morning, the temperature was 103°, pulse 112 and regular. About this time erysipelas developed in the wound and spread over the eye on the same side, and eventually attacked the nose and the other cheek and eye. The pus, on examination, was reported loaded with streptococci. Two other doses of antistreptococcus serum were injected. The patient recovered.

[J. M. S.]

3.—Green and Higgins report the results of three months' service in the gynecological department of the Boston City Hospital. [J. M. S.]

4.—Gleason divides tumors of the breast into 3 main divisions for treatment: (1) Those coming early in the disease for operation; (2) well advanced cases; (3) inoperable cases. It is of great importance to make a prompt diagnosis; for if we are to save our cases we must get them early in the disease. The author hopes for the early success of those men who are working on the specific organism of carcinoma; that they may soon produce a serum—an antitoxin—which, when developed through careful laboratory experiment and clinical investigation, may stand the test of time. Then we may be able to combat with the knife primary growths and broken down tissue; and to fight successfully, hypodermatically, that great enemy of good results—metastasis. ([J. M. S.]

5.—When paralysis of central origin has come on suddenly, Graham prefers to abstain from the use of massage until the perturbation in general has subsided, and the patient has become somewhat accustomed to his natural condition. Interference with the supply, and return of the circulation, lowering of temperature, passive hyperemia; hypertrophy of interstitial connective tissue with subsequent cicatricial retraction, giving rise to contracture and atrophy of the muscular fibres; formation of adipose tissue or fatty degeneration; vasomotor and trophic disturbances are all rational indications for the use of massage, either as a preventive or as a palliative. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

December 14, 1901.

1. The Surgical Treatment of Biliary Calculi with Special Reference to Hepatotomy. W. E. B. DAVIS.
2. The Role of the Myocardium in Pericarditis. ALFRED STENGEL.
3. Adherent Pericardium. ROBERT H. BABCOCK.
4. Tubercular Pericarditis. C. F. M'GAHAN.
5. Cardiac Lesions as Observed in the Negro, with Special Reference to Pericarditis. FRANK A. JONES.
6. Some Points in the Treatment of Pericarditis. FRANK P. NORBURY.
7. Complete Recovery from Double Neuro-retinitis, etc. C. A. VEASEY.
8. The Value of Excision of the Superior Cervical Sympathetic Ganglion in Glaucoma. GEORGE F. SUKER.

9. Report of a Case of Peculiar Form of Carcinoma of the Skin of Slow Growth. WILLIAM FRICK.
10. Rhinoscleroma. CHARLES W. ALLEN.
11. The Role of Mast-cells in Acute and Chronic Infections. HERBERT W. WILLIAMS.
12. Some Investigations upon Antivenere. JOSEPH M'FARLAND.
13. A Case of Localized Amnesia. EDWARD E. MAYER.
14. The Treatment of Fractures of the Femur with the Ambulatory Pneumatic Splint. WALTER B. METCALF.
15. Remarks on the Traumatic Neuroses. HUGH T. PATRICK.
16. Notes on Smallpox. S. L. JEPSON.

1.—W. E. B. Davis, in his presidential address at the 11th Annual Meeting of the American Association of Obstetricians and Gynecologists, chose for his subject the surgical treatment of binary calculi with special reference to hepato-tomy. In every case in which gallstones can be diagnosed they should be removed. Reference is made to the great rarity at the present time of binary fistulae after cholecystostomy, due to the fact that the gallbladder is sutured to the peritoneum and fascia instead of to the skin. When gallstones are found during pelvic operations, Davis suggests that they should be removed after the pelvic wound has been closed and not as recently suggested by Kelly. Cholecystectomy is indicated "in gangrene of the gallbladder, multiple or perforating ulcers, stricture of the cystic duct, phlegmonous cholecystitis, empyema with great danger to the walls of the viscus, and malignant disease." The operation is not recommended in cases of chronic cholecystitis; in such cases it is thought that drainage is better. The writer refers briefly to the history of the various operations upon the gallbladder and its ducts. When a stone is present in the common duct and cannot be pressed up into the gallbladder or down into the duodenum, it should be removed through an incision into the duct which should not be closed with sutures, but allowed to drain. Kehr is quoted as supporting drainage in these cases in preference to closing by suture. Kehr's unusual success in the treatment of these cases (six deaths in ninety-seven choledochotomies) is thought to be due to his having drained in extreme exhaustion and cholemia and when marked cholangitis was present. Davis refers to the operation of hepatotomy which he has suggested in cases of obstruction of the ducts with enlarged liver where the gallbladder or ducts cannot be isolated or the patient's condition from exhaustion or cholemia will not permit of a protracted operation. The operation is only exceptionally called for, but the writer relates a number of cases in which he has freely incised the liver, where the ducts have been obstructed, with the most satisfactory improvement in the patient's condition. When this drainage of the liver has resulted in its contraction and improvement in the patient's condition, an exploration of the gallbladder and its ducts can be made. [J. H. G.]

2.—Stengel believes that symptoms occurring in pericarditis are largely the result of the underlying myocardial disease. He emphasizes that pericarditis is the source of danger in one of the three ways. (1) As a focus to infection, (2) as the cause of mechanical or reflex disturbance of the heart action, (3) as a starting point for a spreading inflammatory lesion. He thinks that the sign elicited by a physical examination offers the best evidence of myocardial disease associated with pericarditis. Hypertrophy of the heart develops rapidly in acute cases of pericarditis. He contends that we are forced to adopt the view held by Jürgensen "that pericarditis is the diagnosis of the future, its type may be endocarditic, pericarditic, or myocarditic, but the immediate result and the final prognosis are to a large extent dependent upon the degree of involvement of the myocardium. A few dangers, such as general infection,

embolism, or mechanical interferences with the heart with extensive effusion, are independent of the condition of the heart wall, but, these conditions excepted, the important criterion for prognosis is the condition of the heart muscle."

[F. J. K.]

3.—See Philadelphia Medical Journal, June 15, 1901. Page 1128. [F. J. K.]

4.—See Philadelphia Medical Journal, June 15, 1901. Page 1128. [F. J. K.]

5.—See Philadelphia Medical Journal, June 15, 1901. Page 1128. [F. J. K.]

6.—See Philadelphia Medical Journal, June 15, 1901. Page 1128. [F. J. K.]

7.—See Philadelphia Medical Journal, June 15, 1901. Page 1141.

9.—Wm. Frick reports an interesting case of carcinoma of the skin that extended over a period of 35 years. The growth did not present either clinically or microscopically the usual appearance of carcinoma. Sections of the growth are reproduced as illustrations in the article. The fact that the tumor had its origin in the epidermis and that the cylindrical cells alone proliferated separates it from the ordinary cutaneous epithelioma. It is thought that the case is similar to one described by Krompecher as "carcinoma epithellale adenoides." It resembles also a growth described by Brooke as "epithelioma adenoides cysticum" and by Fordyce as "multiple benign cystic epithelioma." The patient refused operation and the growth was removed by an arsenical paste. The resulting cicatrix is being carefully watched for a recurrence. [J. H. G.]

10.—Allen reports two cases of rhinoscleroma. The first occurred in a married woman, 64 years of age. When the patient first came under the observation of the author, the growth occupied the whole thickness of the lip and extended well within both nostrils. On the right side it extended almost to the labio-nasal fold and on the left to the labio-nasal fold. The growth had existed for 16 years. It first appeared as a small mass about the size of a bean in the upper lip. The growth increased in size and finally broke down in a gangrenous slough, exposing the bones of the upper jaw and nasal septum. Surgical interference was out of the question. The second case occurred in a male, 49 years of age. Nineteen years before the patient came under observation, he noticed a small growth upon the right side of his nose. For 13 years it did not increase in size. It then grew rapidly and at the time this report was made, the entire nose was much enlarged and the nares were almost occluded. The article is illustrated by photographs of both cases. [F. J. K.]

11.—Williams discusses the role of the mast-cells in acute and chronic infections. He is inclined to the view that it may be said when mast-cells become increased, plasma-cells are likely to be present in much greater numbers, and he further thinks that plasma-cells appear to be more closely associated with infectious processes than mast-cells. Finally, he states that sufficient evidence is lacking to show that mast-cells have any special relation to infections or to a particular infection. [F. J. K.]

12.—McFarland relates some investigations upon antivenene and suggests the following conclusions: "1. It is not difficult to produce immunity to the nervous poison contained in serpent's venom, as shown by Wolfenden, Phisalix, Bertrand and Calmette. 2. This immunity when carried to a high degree is associated with a marked antitoxic power of the blood. 3. It is very difficult if not impossible to produce immunity to the irritative poison of the venom. 4. Antivenene does not protect very powerfully against the irritative poison. 5. Antivenene protects against the nervous poisons of various venoms. 6. Immunity to the unmodified venom is better secured by intravenous than by subcutaneous injection. 7. Calmette's methods of immunization with the modified venom is greatly to be preferred to the method of immunization to the

modified venom as tried in these experiments, because of the modicum of danger and suffering to the horses used. 8. Calmette's antivenene is more useful for the treatment of the bites of cobras and colubrine serpents than for those of vipers, etc. 9. As the antivenene protects against the chief death-dealing elements in the venoms, it is of great use in the treatment of all serious bites, and should be used whenever possible. 10. The neutralization of the nervous poison of the venom by antivenene will enable the individual to devote all his vitality toward overcoming the local injury done by the irritative globulin in the venom. 11. All individuals—certainly not all horses—are not equal in their resisting power against venom. Two of my three horses succumbed quickly to the venom injections. 12. The antivenene producing power varies in different horses. 13. The quantity of antivenene in the blood varies from time to time, according to circumstances." [F. J. K.]

13.—See Philadelphia Medical Journal, June 15, 1901. Page 1141. [F. J. K.]

15.—Hugh T. Patrick, in discussing traumatic neuroses, asserts that the diagnosis or recognition of the condition is not difficult but that the essential step is the exclusion of organic disease and for this a single examination is not always sufficient. In my experience incorrect diagnoses are ordinarily made because of failure to recognize: 1, that pain, tenderness, paresis or paralysis, hyperesthesia, anesthesia, incoördination, tremor, dizziness, tachycardia, syncope attacks, vomiting, loss of weight even to emaciation, impaired speech, convulsions and poor vision, are not necessarily indications of organic disease, no matter how continuous or how long continued the symptoms may be; or 2, that atrophy, reaction of degeneration, incontinence of urine or feces, retention of urine (generally), loss of deep reflexes, bedsores, Babinski's sign, ocular or facial paralysis, optic atrophy or neuritis, hemianopia, glossy skin, rapid (five or six per second) and uniform ankle clonus, impaired pupillary reaction, semi-erection of penis, and anesthesia corresponding exactly to a peripheral nerve or spinal segment, indicate organic disease. In trying to elicit the presence or absence of organic disease one of the best methods is the establishment of the line between normal and abnormal sensation. In nearly every organic case it is impossible to definitely locate when anesthesia ends and normal sensation begins, whereas in functional disease the distance between complete anesthesia or analgesia and normal sensation is frequently not more than 1/16 or 1/32 of an inch. In order to bring out these points the patient must be blindfolded and the greatest care taken in the examination of the sensation. In functional sensory disorders it is also shown that if the patient is re-examined after a short interval, the line of demarcation will not remain the same and not infrequently the tender points will not be the same at the second as at the first examination. A traumatic neurosis is never produced complete and at once by an accident, but develops slowly. It is a product of evolution. The great necessity of an early diagnosis is shown since so much will depend upon the way in which the patient is treated. Attention is also called to the bad effect upon these patients of litigation, quack literature, and the advice and sympathy of friends. These patients "are to be protected from ignorant doctors, foolish friends, designing lawyers, and their susceptible selves." It is extremely important to divert the patient's mind from the constant thought of his injury and to get him back at work and into a wholesome and cheerful frame of mind. A settlement out of court of the damage suit will result in a much more rapid return to health in these cases. Stress is laid upon the fact that the diagnosis should be made early and the treatment should be prophylactic. [J. H. G.]

16.—Jepson mentions some of his views in regard to the mild smallpox, that has been so prevalent during the past two years, and he thinks that as yet no satisfactory explanation has been offered to explain the mildness of recent

cases of variola. He informs us that the mortality has nowhere been greater than 2% which is less than the mortality from whooping-cough. He states that we can do very little to prevent the spread of whooping-cough and believes that the only protection necessary against smallpox is to be found in vaccination. [F. J. K.]

AMERICAN MEDICINE.

December 14, 1901.

1. The Relation of Appendicitis to Infectious Diseases.
J. M. T. FINNEY and LOUIS P. HAMBURGER.
2. Chancre of the Tonsils with Report of 35 Cases.
JOHN EDWIN RHODES.
3. Instrumental Perforation of the Uterus.
WILMER KRUSEN.
4. Gunshot Wound of the Spine.
F. W. LANGDON and D. I. WOLFSTEIN.
5. Pertinent Observations Concerning Appendicitis in the Female.
ANDREW J. DOWNES.
6. The Cardiovascular System in Interstitial Nephritis.
W. J. CONKLIN.
7. What Protection Have the People Against the Dairy?
D. M. McMASTERS.

1.—J. M. T. Finney and Louis P. Hamburger discuss the relation of appendicitis to infectious diseases. During the past year they have observed cases of propagated appendicitis following in the wake of an enterocolitis. They have also seen three cases of appendicitis associated with arthritis which has called their attention to a second group—namely, those forms of appendicitis which may be the local expression of a general infection. In at least six instances during the recent epidemic of influenza the appendicular inflammation appeared soon after the attack. There seems to be occasionally an intimate relation between polyarthritis and appendicitis, and there may or may not be a family or personal history of rheumatism. It is important to note that the articular disease may precede, or follow the appendicular inflammation. It is well known that an acute disease or a trauma may produce an attack of gout, and postoperative and posttraumatic malaria are quite familiar to us. They believe that there is a relation between appendicitis and rheumatism observed in their series of cases, in view of the proof adduced in the case of influenza and the collateral support afforded by the production of appendicitis by infecting the blood of animals. Finally a third argument in favor of the existence of this class of appendicitis is the favorable influence which the salicylates exert. They would not, however, be understood to imply by this that our present view of the treatment of appendicitis should be influenced by the effect of the salicylates in these selected cases.

[T. L. C.]

2.—J. E. Rhodes reports a study of 35 cases of chancre of the tonsils. His conclusions are: (1) Chancre of the tonsils is often unrecognized because hypertrophy and inflammation are so frequent and are so closely simulated by the early symptoms, which often differ little from an ordinary sore throat; (2) an enlarged and indurated tonsil with a superficial ulcer upon its surface, accompanied by enlargement and induration of the contiguous submaxillary gland and which is unchanged by a prolonged course of treatment, renders a diagnosis of chancre probable; (3) the character of the chancre depends upon the original condition of the tonsil as to size, the amount of follicular inflammation and the coincidence of a mixed infection; (4) a certain diagnosis cannot be usually made until the general eruption of the disease; (5) the explosion of the disease is no more severe than in chancre elsewhere; (6) the disease is contracted by direct contact or by various media, carrying the virus; (7) when we consider the frightful contagiousness of syphilis and the frequency with which it is conveyed to innocent persons, the most careful use of the throat and nose, dental and other surgical instruments, clinical thermometers, etc., is necessary; (8) separate instruments should be used for examination and treatment of known syphilitics, but the possibility of contamination before the existence of the

inc has been recognized make it imperative that every operator should employ a rapid and efficient disinfection or sterilization of instruments after the examination or treatment of every patient.

3.—Krusen reports a case of **instrumental perforation of the uterus** without ill results, and gives a short review of several remarkable instances of this accident. In the case he reports a perforation large enough to admit of the index finger was found in the fundus, through which a piece of the omentum protruded. The patient was relieved by oeliotomy. [W. A. N. D.]

4.—F. W. Langdon and D. I. Wolfstein report a case of **gunshot wound of the spine**. Paraplegia with the persistence of the flexor plantar reflex resulted. An operation was performed and it was found that the canal was penetrated by the bullet. The fifth thoracic spine was found attached to this place. The dura presented a ragged opening. No gross lesion of the cord could be discovered. The plantar reflexes were present, and flexor in direction in all the toes. The necropsy revealed a condition of **central hematomyelia**. [T. L. C.]

5.—A. J. Downes discusses **appendicitis in the female**. He states that no surgeon is justified in diagnosing a case as appendicitis in the female without a deliberate and careful examination, including a bimanual vagino-abdominal one. Rigidity of the right rectus muscle alone is of no importance as a diagnostic feature. He recommends that the incision for appendicitis in the female should be with few exceptions either in, or close to the right semilunar line to control the pelvis and appendix. Gynecologists should in all cases, in which the abdomen is opened for pelvic disease, expose the appendix and remove it if it shows the slightest tendency of disease. [T. L. C.]

6.—W. J. Conklin discusses the **cardiovascular system in interstitial nephritis**. In this condition we have a slowly progressive degeneration of the kidneys, which ultimately results in granular contraction and atrophy. In addition there is a widespread and very constant cardio-vascular change which points to some profound toxemia, and renders the blood irritating to the entire vascular apparatus of the body as well as to the capillaries of the kidneys. The view most generally accepted regards the arteriosclerosis, which is the essential lesion of the circulatory organs, as secondary to the renal disease and dependent upon the failure of the kidneys to remove from the blood certain offending toxins. He considers the question of diagnosis of interstitial nephritis, the condition of the cardiovascular system in this disease, and the treatment of the condition. He states that a typical case of granular contracted kidney, even with extensive cardiovascular lesions, usually does well just so long as the vascular tone is maintained in good condition, but any failure in this direction adds immensely and immediately to the gravity of the prognosis. The only remedies to be needed are the vasodilators. A severe hemorrhage anywhere in the body not only justifies a bad prognosis, but life is rarely prolonged beyond two years. In the latter stages of a chronic nephritis, when we are confronted with dilated chambers, leaking valves, and serious degeneration of the cardiac muscle, the therapeutic problem is quite different. The paramount indication now is to improve the nutrition and tone of the heart and to lessen its work. This is best met by absolute rest of body and mind and with the so-called heart tonics, of which digitalis, strophanthus, caffeine and strychnine are those of choice. He believes that the diuretic wine of the *Hôtel Dieu* is an old but effective combination.

[T. L. C.]

7.—D. M. McMasters discusses the question: "What protection have the people against the dairy?" He believes that the law in regard to dairies should be such that a rigid inspection should be made twice yearly. It should be impressed upon the man in charge that the number of bacteria in milk depends upon four things: (1) The original amount of germicidal substance in the milk over which they have no control; (2) the number of bacteria falling in during the milking or afterward; (3) the length of time which has passed since milking; (4) the temperature at which it is kept. He advises physicians who suspect that milk is impure and is having a deleterious effect upon his patient, to have an examination

made at once. He also recommends that the Bureau of Health keep careful watch upon the milk from the time it reaches the city from all depots, and that it should be carefully examined if it is suspected. [T. L. C.]

VRATCH.

September 8, 1901.

1. On the Chemical Composition of the Capsules of Bacteria and the Nuclein Substances of their Bodies. N. P. KRAVKOFF.
2. Forms of Hypnotic Sleep and their Relation to Treatment. PII. E. RIBAKOFF.
3. On the Question of Epigastric Hernias. I. A. ROMANIN.
4. On the Casuistic of Extrauterine Pregnancy. G. W. WARSCHAVSKI.
5. The Composition of a Mineral Spring in the Government of Pskoff. N. A. ORLOFF and A. F. DRZSHEVETSKI.
6. A Case of Spontaneous Cure of a Fibroma of the Esophagus. K. D. SARKISOFF.
7. A Rare Case of Toxæ Gastritis with Complete Separation of the Gastric Mucosa. F. L. SAMSONOFF.

1.—Kravkoff has made some very important observations on the chemical composition of bacteria. Having cultivated the *b. pyocyaneus* in large quantities of bouillon at noon temperature, he separated the various constituents by a modification Schmiedeberg's method, as follows: A one-month bouillon culture of the organism was precipitated by successive and alternating portions of acetate of copper and caustic soda. Within 24 hours a well marked sediment formed, the clear supernatant fluid showing the biuret reaction. The sediment was removed by decanting the clear fluid, washed in water, dissolved in weak acetic acid, filtered and again treated with acetate of copper and caustic soda, this process being repeated several times until the supernatant liquid no longer gave the biuret reaction. The absence of the biuret reaction served as an indication that all of the albuminous substances were extracted from the bacteria. The sediment and the albuminous substances in solution were collected separately for examination. The sediment was freed from copper by repeated washing with weak acetic or hydrochloric acid, washed with water, alcohol, ether, and dried in the dessicator. When examined microscopically, it was found to be composed of the membranes of the bacteria, while a chemical analysis showed its composition to be closely allied to chitine, having the elementary composition of C-46.20, H-6.70, N-8.82 and O-38.28. When burned, the ash was found to be composed principally of oxide of iron (16%) and a little silica. This large amount of iron, the author believes, plays an important role in the fermentative and oxidizing processes in which bacteria are concerned. The albuminous substances in solution were precipitated by means of weak acetic acid, the sediment washed with water, dissolved in weak alkali, again precipitated, washed with water, alcohol and ether, and dried over sulphuric acid. A chemical analysis showed the substance to belong to the group of nucleo-albumins or nucleoproteins, showing the elementary composition of C-52.73, H-6.91, N-16.50, P-2.11, S-1.00, O-20.75. These nucleo-albumins were found to possess marked toxic and pyrogenic properties. This they shared with the nucleo-albumins of other bacteria and fungi isolated by Ivanoff by the author's method. The nucleo-albumins of pus were found to be pyrogenic to a far lesser extent, while those of the normal spleen and frog's eggs were devoid of pyrogenic properties, showing the specific nature of the bacterial nucleo-albumins. [A. R.]

2.—Ribakoff presents the following conclusions to his discussion of the forms of hypnotic sleep and their relation to treatment: 1. Practically, for therapeutic purposes, it is important to distinguish the forms and degrees of hypnotic

sleep. 2. Into the foundation for the classification of hypnotic sleep into various forms should enter the view which on the one hand does not exclude the possibility of taking into consideration the personal peculiarities of the hypnotic person, and on the other gives a representation of the degree of sleep independent of the fact as to whether the degree of sleep is a constant peculiarity of a given person, or may become more profound under certain circumstances. 3. The probabilities of a favorable therapeutic action, aside from the peculiarities of the disease, are determined by the suggestion as well as to the ability to permanently assimilate a given suggestion. 4. The degree of natural susceptibility bears no physiological relation to the intellectual development of the individual nor to the natural will-power. 5. Susceptibility to suggestion in one form or another is peculiar to every psychically normal person. 6. Congenital absence of susceptibility to suggestion is an indication of mental degeneracy. 7. The chances for therapeutic success, all things being equal, are in direct proportion to the natural susceptibility to suggestion. 8. Hypnotic sleep increases temporarily the natural susceptibility, and is therefore utilized for therapeutic purposes. 9. There is no direct relation between the stage of hypnotic sleep and the degree of the natural susceptibility to suggestion. In persons possessing this susceptibility to a high degree, the hypnotic sleep may be light and vice versa. 10. The extent of therapeutic action bears only a relative correlation to the degree of the hypnotic sleep (depending on the degree of natural susceptibility and psychical assimilation of a given person. [A. R.]

3.—Romanin's observations on epigastric hernia led him to the following conclusions: 1. Epigastric hernias were frequently met with, occupying the second place in relation to the other forms of hernia. In contradistinction to the inguinal and umbilical hernia, epigastric hernia is very rare in children. It is twice as frequent in men as it is in women. 2. The diagnosis of epigastric hernia is not difficult. It is much more difficult to determine whether the morbid symptoms of which the patient complains are due to the hernia or some other conditions. 3. The morbid manifestations in epigastric hernias may be very painful, but in the majority of cases the suffering is slight, and the patients submit to an operation much more rarely than they do in other forms of hernia. Statistics are given, comprising 829 cases of hernia among patients treated at the county hospital during a period of 3 years (total number of patients 36,340). According to age and the variety of hernia, the cases are tabulated as follows:

[A. R.]

Age.	Inguinal		Femoral		Epigastric		Umbilical	
	M.	F.	M.	F.	M.	F.	M.	F.
1-10	121	7	—	—	1	3	47	36
11-20	57	—	—	—	—	—	7	2
21-30	50	5	—	4	12	3	—	3
31-40	69	9	1	3	29	16	3	6
41-50	65	19	1	11	30	11	3	4
51-60	81	9	3	1	15	7	2	5
61-70	27	3	—	3	12	1	—	2
71-80	5	2	1	—	—	—	—	1
81-90	5	—	—	—	—	—	—	—
Total	480	51	6	25	169	44	62	59

4.—Warschavski reports a case of extrauterine pregnancy in a multipara, 38 years old, in whom the clinical picture led to a diagnosis of endometritis following miscarriage and ovarian cyst. The error was discovered upon operation.

This was one of those rare cases in which a tubal pregnancy ruptured into the tube. [A. It.]

6.—Sarkisoff reports a case of fibroma of the esophagus which was cured spontaneously. The patient, a girl of 27, suffered for 2 years from pain in the cardiac region and in the left of the chest. The pain was made worse by eating, drinking, lifting heavy weights and bending. One morning she fell nauseated and coughed violently. With the expectoration a bloody mass, the size of a pigeon's egg, was discharged. This, upon microscopical examination, proved to be a fibroma which had undergone necrosis. From the clinical symptoms the author concludes that the growth was located on a level with the sixth dorsal vertebra where the esophagus crosses the left bronchus. After the discharge of the growth all subjective symptoms disappeared. [A. R.]

7.—Samsonoff reports a rare case of toxic gastritis, with complete necrosis of the gastric mucosa, in a man, 39 years old, who ingested two tablespoonfuls of strong hydrochloric acid with suicidal intent. At first the patient suffered from excessive vomiting due to the irritation of the necrosed mucosa. This soon subsided and a condition of stenosis of the pylorus supervened. Death from inanition followed at the end of three months. [A. R.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

July, 1901. (Volume 60, Nos. 3 and 4.)

12. The Microscopic Relations of Subcutaneous Fractures in the Long Bones. ZIEGLER.

13. A Rare Case of Resection of the Stomach.

FELIX FRANKE.

14. Deformities of the Extremities.

ERNST PAGENSTECHER.

15. The Influence of Artificial Hyperemia upon Stiff Joints Resulting from Injury or Long Immobilization.

BLECHER.

16. Senile Hip Disease. WALTHER STEMPEL.

17. The Removal of Foreign Bodies in the Esophagus through the Stomach. WILMS.

18. Implantation of the Urethra into the Rectum.

PAUL ROSENSTEIN.

19. The Surgical Treatment of Acute Peritonitis with Epi-typhlitis. H. von BURCKHARDT.

20. Mechanical Disturbance in the Growth of Bones.

MAX HERZ.

21. Traumatic Intraperitoneal Rupture of the Bladder.

KARL DOHRN.

12.—Ziegler relates in detail the results of his experiments upon fractures of the long bones in guinea-pigs. Healing occurs as a growth of the inner layer of the periosteum first. Almost at the same time the cortical layer of the marrow and the endothelium of the Haversian canals begin to grow at some distance from the seat of fracture. Thus the bone grows almost as soon as the periosteum in the reparative process. In some cases cartilage seems to be formed very early also. The succeeding stages of the repair after subcutaneous fractures, in animals, are fully described. A number of plates show the microscopic findings. No conclusions can be drawn from his work. [M. O.]

13.—Franke reports a rare case of resection of the stomach for cancer of the lesser curvature and pylorus in a man of 79 years. Though the resection and gastroentero-anastomosis took two hours and a half, under anesthesia, and pneumonia with empyema which necessitated resection of a rib followed, the old man recovered after a siege of three months. The carcinoma covered a large part of the stomach walls, being about 12 cm. in diameter, and 2.5 cm. thick. The only symptoms, beside the tumor, were anorexia, vomiting, and slight emaciation. The position of the tumor could not be diagnosed by abdominal palpation. The operation was complicated by the age of the patient, the pneu-

monia, which came on two days after operation, and the empyema. Franke believes that careful examination of all patients will reveal operable cases of the stomach early. [M. O.]

14.—Pagenstecher reports the case-histories of three deformities of the extremities. The first case was a case of brachydactylia in a girl of 21, the fingers of her left hand being much shorter than those of the right. The left hand is also smaller. Röntgen photographs show that only the phalanges are shorter. The second case was one of pollex valgus in a boy of 11. The terminal phalanx of one thumb was sharply bent toward the ulna. The boy had upon that hand another thumb which was amputated. The third case was a girl of 20, with luxation of the head of the right radius, the metacarpal bones of both thumbs included in the hands, and the phalanges of the thumbs abnormally abducted. Röntgen photographs show that the metacarpal bones of the thumbs are lengthened. Besides, numerous contractures existed in many of the fingers. While heredity may predispose to such anomalies, chance alone can explain them. [M. O.]

15.—Blecher gives the case-histories of 16 patients with joints which had become stiff from injury or following immobilization. In every case hyperemia was produced artificially. In all but a few cases great improvement with excellent movement resulted. No other influence was exerted in any of these cases. The long shrunken muscles again become well nourished, and normal motion soon develops, as a rule. Unabsorbed remains of old injuries are then rapidly absorbed, all signs of them disappearing quickly. Two other case-histories are reported, in treating which Blecher employed not only artificial hyperemia, but massage and mechanical exercise also. The improvement was then more marked and recovery more rapid. Blecher used the Dumreicher-Helferich method of producing passive hyperemia. He suggests that the hot air treatment afterward, added to this combination of passive hyperemia, massage, and mechanical motion, will, by the production of an active hyperemia, surely cure any stiffness that may remain. [M. O.]

16.—Stempel gives a most detailed review of the literature of senile hip disease, mainly dating from long ago. He then reports the case-histories of his 58 cases in full. To show how rarely this affection is recognized nowadays, Stempel states that it was correctly diagnosed in but four out of the 58 cases which he observed. Exact examinations and regular movements of the hip-joints in every case seen will reveal this condition at once. The affection is common among farm laborers, generally between 50 and 60 years of age. It has been noted, rarely, as early as thirty years. Constant hard work, exposure to all sorts of weather, and subsistence upon very little food, seem to predispose to this affection. Trauma may also cause it. Senile hip disease is slightly more prevalent among men than women. A gradual destruction of the cartilage of the acetabulum and the end of the femur takes place, with a thickening of the bone and the surrounding soft parts. The joint-capsule changes its shape, and the bone becomes deformed, as in arthritis deformans. This deformity is often palpable. There may be pain in the hip, back, thigh, leg, etc., increased in severity upon motion. Crepitation may also exist. Both hips were affected in about one quarter of the cases. In 44 cases the other joints were found normal; in 9 cases the shoulder; in 4 the knee; and in one the hand and vertebrae were also affected. Both emphysema and arteriosclerosis were present. Atrophy of the muscles of the leg followed. In 17 of the 58 cases the attending physician had made a diagnosis of sciatica. Arthritis deformans alone resembles this affection. While senile hip disease can not be cured, care, friction, baths, massage, electricity and a support will benefit the condition. Stempel trusts that in the future physicians will recognize senile hip disease. [M. O.]

17.—After giving a detailed list of the operations and

the experiments found in the literature upon the removal of foreign bodies from the esophagus through the stomach. Wilms reports the case of a man of 28, who had swallowed part of his false teeth. Rontgen photographs showed that the teeth were lodged between the eighth and ninth dorsal vertebrae. An incision was made into the abdomen, to the edges of which the stomach was then sutured. The fundus was opened and the index finger introduced up through the cardiac orifice of the stomach into the esophagus. A sound was introduced at the same time through the nose, and the foreign body directed out through the gastric opening, pushed by the sound and dislodged by the finger. In some cases it will be necessary to insert the whole hand into the stomach. The only danger is infective peritonitis, which, however, seems to be rather rare. The gastric incision must be made near the cardiac end, not near the pylorus. His patient recovered by the sixteenth day after operation. [M. O.]

18.—The good results achieved by von Eiselsberg in implanting the ureter into the rectum led him recently to try implantation of the urethra in the rectum, in a case of epispadias. Rosenstein reports this operation upon a boy of eight. The urethra was first laid open up to the bladder, a distance of only $\frac{1}{3}$ cm. The inner end of the urethra was then bent upward at an angle of 270° , which had no effect upon the incontinence of urine. Three months later perineal and anterior incisions were made, and the urethra implanted into the rectum, a catheter being left in place. About six weeks later pain and tenesmus were noted with urination and defecation. Examination through the rectum showed that the urethral opening had contracted. This was slit open and another catheter put in. For three months he remained continent and well. Then the pain returned. Gradual dilatation of the urethral opening into the rectum was kept up; but the urine continued flowing from the anus, drop by drop. Finally a fistula was established by the Witzel method, and the urethro-rectal connection severed. The boy is now continent, the fistula closing well. There is only a slight cystitis. A catheter is inserted when he wishes to urinate. Rosenstein believes that much can be learned from the different operations undertaken upon this case. He describes them all in full. [M. O.]

19.—von Burekhardt believes that the terms diffuse, general, or total peritonitis should not be used. He prefers progressive peritonitis. Most cases of peritonitis with epityphlitis he believes are cases of progressive, dry, septic peritonitis. He has operated upon 17 such cases, three of the patients dying. A table follows, showing the salient features of each case. He divides them into three groups, the acute group, serious in from 12 to 24 hours; those in which the serious symptoms occur later; and those in which a circumscribed focus of inflammation had existed before the progressive peritonitis appeared. von Burekhardt leaves drainage in the abdominal wound as a rule. The entire article is written to protest again against Sonnenburg's opinions upon peritonitis following appendicitis. [M. O.]

20.—Herz discusses the experiments performed recently by Maas, and compares his deductions with those of Lorenz. Herz believes that the conclusions drawn by Maas, while more plausible, are yet less substantiated by experiment than those of Lorenz. No doubt exists, however, that bone production occurs in spite of mechanical pressure or traction, and that when this is removed, the bony process goes on to recovery as far as is possible. [M. O.]

21.—Dohrn reports a case of intraperitoneal rupture of the bladder in a man of 41, from an accident. Laparotomy was performed 48 hours later, and the patient left the hospital in excellent condition three weeks afterward. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

October 17, 1901. (XIV Jahrgang, No. 42).

1. Cellular Pathology and Immunity. RICHARD PALTAUF.
2. Bacterial Hemolysins and Antihemolysins. RUDOLF KRAUS and PAUL CLAIRMONT.
3. Iso-agglutinin and Isolysin in Human Serum. PHILIP EISENBERG.
4. A Pathogenic Sarcina. ALBERT SCHLAEFRIG.
5. Pulmonary Anthrax. BERTHOLD KREISSL.
6. Cytogenesis in the Spinal Cord. EMIL SCHWARZ.
7. Dextrocardia and Dextroversio Cordis. RICHARD PALTAUF.
8. The Occurrence of Lateral Furrows in the Spinal Cord in Porencephalia. RICHARD PALTAUF.
9. Pseudoxanthoma Elasticum. E. G. von TANNENHAIN.
10. A Case of Incarcerated Hernia of the Lateral Abdominal Wall. CARL STERNBERG.
- 11.— Multiple Sarcoma of the Small Intestine. CARL STERNBERG.

1.—Paltauf, in a brief review of the theories of immunity in cellular pathology, states that the irritability of the cell both protects it and causes its death. [M. O.]

2.—Kraus and Clairmont review their former experiments and detail some later series of investigations. Serum from horses treated with diphtheria toxin, pyocyanus, colon, and pest bacilli cultures exerts an antihemolytic influence upon tetanolysin and staphylolysin. Diphtheria immune horses show an increased antihemolytic action, greater against tetanolysin than against staphylolysin. The cause of this specific action is unknown. Normal animals show less antistaphylolysin than antitetanolysin. In pig's serum antitetanolysin, antistaphylolysin, and antivibriolysin were found. When treated with immunizing serum, the antistaphylolysin is found unchanged by the vibriolysin. These investigations prove the difference and specificity of the bacterial hemolysins and antihemolysins. [M. O.]

3.—Eisenberg gives a thorough review of the literature upon the hemolytic influence of a human serum. He reports his investigations in the examination of the serum of 150 patients with different diseases. A positive reaction was found only in cachectic individuals. This is a reaction of immunity, caused by the absorption of the erythrocytes or their component parts, causing the production of iso-agglutinin and isolysin which, while seen exceptionally in normal subjects, are commonly found in the infectious diseases and croupous pneumonia. The isolysins of a serum are ineffectual against the erythrocytes of the individual from whom the serum originates, and can cause no hemolytic influence in that organism. Eisenberg concludes that the occurrence of iso-agglutinin and isolysins is not specific in the infectious diseases, and is of no diagnostic value, being the simple expression of the reaction of the organism following the absorption of the erythrocytes. [M. O.]

4.—Schläfrig reports a case of *ozena* existing for several years in an old farmer. A pure culture of a micro-organism was obtained which proved pathogenic in mice, guinea pigs, and rabbits. It retained its pathogenicity after being passed through several animals. Schläfrig states that the bacteria resembled the *micrococcus tetragenus*, and were undoubtedly *sarcinae*. [M. O.]

5.—Kreissl reports the autopsy in a case of pulmonary anthrax. There were serous effusion in the pleurae, infiltration of the intrapleural and subpleural lymph-glands, bronchopneumonia in the right upper lobe, edema of the mediastinum, bloody infiltration of the bronchial and jugular lymph-glands (without any affection of the upper air passages, gastrointestinal tract, or skin), multiple hemorrhages of the cerebrum, ependyma and meninges, and on bacteriological examination typical anthrax bacilli. Clinically the symptoms resembled those of cerebral hemorrhage, with dyspnea, evanescence, pleural effusion, and bronchopneumonia later. [M. O.]

6.—After fully reviewing the literature, Schwarz states that proliferation of the spinal cells occurs by mitosis, indirect division, and never by amitosis. When a cell

divides, there can be no doubt that the smaller cells are the younger cells. These may contain granules. When a cell shows no signs of proliferation after long watching, it has reached its final form. The changes occurring are twofold, biological, showing the ordinary proliferative changes, and methodical, showing granules and specific staining properties. Staining is exceedingly difficult. Schwarz concludes that all the cells of the spinal cord are reproduced with mitotic changes. One sort of cell never becomes another. Cells containing granules develop in embryo only from those without granules. Later they may form young cells with granules. [M. O.]

7.—Dextrocardia is very rare. Paltauf reports a case in which he performed the autopsy. This occurred in a woman of 22, in whom rheumatism and aortic insufficiency with hypertrophy and complete adherent pericardium followed. The other organs and the large blood vessels occupied their normal positions, the liver alone showing a depression under the heart. Paltauf believes that in this case the heart developed normally, but then was turned to the right, instead of to the left. He shows this *dextroversio cordis* in a series of diagrams, and cites other similar cases. He suggests that a fetal pericardial effusion may cause the condition. While true dextrocardia involves the transposition of the large vessels with the heart, *dextroversio cordis* is the condition in which the heart alone is twisted to the right side, its relations to the other organs, etc., remaining unchanged. [M. O.]

8.—Paltauf reports the case of a child of nine months with chronic hydrocephalus, paralysis and contractures, that died of marasmus following chronic gastro-intestinal catarrh. He describes the occurrence of furrows reaching in from the meninges, in the upper part of the spinal cord, as far down as the thoracic cord. These furrows reach in some distance laterally, below the median line. The pyramidal tracts could not grow on account of the bilateral affection of the cerebrum. Such a condition has never before been described. [M. O.]

9.—von Tannenhain reports a case of *pseudoxanthoma elasticum* upon the shoulders and hips of a woman of 74. The lesions are described fully with histological drawings, showing marked changes in the elastic fibres. Other cases are quoted from the literature. [M. O.]

10.—Sternberg relates the history of a woman of 61, in whom a hernia of the lateral abdominal wall occurred. She refused operation, and died on the fourth day. The autopsy showed an incarcerated hernia of the lateral abdominal wall, a rare condition of unknown cause. A few such cases were found in the literature. [M. O.]

11.—Sternberg also reports a case of multiple sarcoma of the small intestine occurring in a man of 41. Twelve polypi were found in the jejunum, an intussusception in the ileum, and an invagination in the jejunum. The mucous membrane was thickened in places, while the retroperitoneal and mesenteric lymph-glands were enlarged. Histological examination showed the condition to be primary sarcoma of the small intestine. A review of the literature of the subject follows. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

August 22, 1901.

1. The Treatment of Rupture of the Liver. WILMS.
2. Traumatism and Diabetes. F. HIRSCHFELD.
3. Further Communications Concerning Angina Produced by Spirochetæ Bacilli. H. SALOMON.
4. On the Question of the Destruction of Rats with the Danysz Bacillus. J. BRONSTEIN.
5. Some Advances in Our Knowledge of the Sense of Sight. G. ABELSDORFF.
6. Prophylaxis and Therapy of Tuberculosis in Childhood. Collective Abstract. H. NEUMANN.

1.—To be continued.

2.—Hirschfeld refers to a considerable number of cases collected chiefly from the literature in which there seems to be a more or less definite relation between accidents of various kinds and diabetes. He admits the relation between pancreatic lesions and diabetes, but mentions cases in which old pancreatic lesions existed with acute diabetes

and other cases in which either the pancreas was involved without diabetes, or there was diabetes without pancreatic disease. He inclines to the belief that something besides disease of the pancreas must be active in the production of diabetes. He believes that trauma probably causes changes in the pancreas itself more frequently than we are accustomed to believe, and he strongly inclines to the belief that trauma is a very active cause of diabetes, but offers no very definite proof of this. [D. L. E.]

3.—Solomon refers to the bacilli which he described in 1899 which produce a condition resembling diphtheria in some cases. He also refers to the statistics of 737 cases in which examinations of the throat for the presence of diphtheria bacilli were made, and in 30% of which diphtheria bacilli were present. In 3 instances the spirochetæ bacilli were present, and in all of these instances the diphtheria bacillus was absent. He refers to the results of other workers also, and decides that since this bacillus was practically never present with true diphtheria, its presence indicates the absence of diphtheria. He has been able to find no instance of mixed infection with diphtheria reported in the literature. He reports however, some instance in which an angina produced by these bacilli occurred in association with secondary syphilis of the mouth and throat. In the large number of cases of stomatitis which he has investigated he has found these bacilli present in but one instance.

[D. L. E.]

4.—Bronstein found that by passing the Danysz bacillus through a series of animals (infection per os) the virulence of the bacilli became markedly reduced; a fact which is of very great importance if one attempts to use this bacillus for the purpose of producing an epidemic in rats. The chief causes of this are the unfavorable influence of the acid gastric juice of the animals upon the bacillus, and the marked acid production in cultures. In order to overcome these unfavorable factors he grew the bacillus on strongly alkaline agar, and instead of making a suspension of the bacilli in salt solution, he used fairly concentrated soda solution. The results were that the animals were killed in large numbers, and cultures obtained from them were still extremely virulent. The species of rats also had some influence upon the grade of virulence. If a culture was increased in virulence by passing according to the above method, through white rats, it became less active with gray or brown rats, and vice versa. He therefore recommends that in attempts to kill rats in large numbers, a culture known to be virulent with that species of rats should be used. He believes that this bacillus can be satisfactorily used in exterminating rats. [D. L. E.]

BOLNITCHNAIA GAZETA BOTKINA.

June 13, 1901. (Vol. XII, No. 24.)

1. On the Biology and Morphology of Old Diphtheria-Cultures. V. I. NEDRIGAILOFF.
2. On the Physiology of the Pyloric Portion of the Dog's Stomach. A. I. SCHEMIKIN.
3. Contribution to the Biology of the Labferment.

V. N. OKUNEFF.

1.—Nedrigailoff found that diphtheria bacilli kept on blood serum in sealed tubes preserved their vitality for a period of over 4 years. When tested as to virulence and toxin production, the cultures showed no appreciable change. The observation of Spring (*Centralblatt f. Bakteriologie*, Vol. XXVI) on the mycelium formations in old cultures could not be substantiated by the author. He did find these mycelia, but, as shown by cultivations on agar, they were due to a contamination with moulds. By the use of carbol-fuchsin and methylene blue (1 c.c. of each to 40 c.c. of water; stained 1 minute) he was able to demonstrate the gradual disappearance in old cultures of the Babes-Ernst granules (the *Biophoren* of Marx). The author's conclusions are: 1. Diphtheria bacilli may without reseeded preserve their vitality on horse's blood serum for over 4 years. 2. During this period no changes in the

virulence or toxin production of the bacilli take place. 3. The Babes-Ernst granules are the only morphological elements on which the vitality of the bacilli depends. 4. True spores are not observed in old cultures. [A. R.]

2.—Will be abstracted when concluded.

3.—Okuneff has made a further study of the labferment which, according to his investigations commenced in 1895, was shown to possess the double function of coagulating cases in milk and regenerating the peptones into an anhydrous form of albumin. His conclusions at that time were that the disappearance of the peptones from the digestive tract and their absence from the blood and lymphatics were brought about by a regeneration of the peptones into anhydrous albumin, this constituting one of the biological functions of rennin. The regeneration takes place in the stomach and small intestines and is greatly facilitated by the presence of sodium chloride. The ferment was found in the mucous membrane of the stomach, pancreas, Peyer's patches, the mucous membrane of the small intestines and in the liver. Twice it was found in the mucous membrane of the bladder, once in the mesenteric glands and once in the spleen. Later researches have established the fact that the labferment found in the stomach differs from that of the pancreas, the principal difference being in their respective behavior towards the reaction of the medium. Thus, while the gastric labferment is destroyed by even weak alkalies, the pancreatic labferment acts best in an alkaline medium. The regeneration of the peptones in the stomach is most active when the acidity dose not exceed 0.1% HCl. The favorable conditions are a saturation of the gastric contents with the products of digestion and a low acidity. It is thus seen that the labferment enables the organism to obtain an assimilable form of albumin irrespective of its original source, and at the same time it prevents the poisonous peptones and albumoses from entering into the blood current.

[A. R.]

REVUE DE CHIRURGIE.

October, 1901. (21me. Année, No. 10).

1. The Process of Repair in Bone Marrow.
V. CORNIL and P. COUDRAY.
2. Tumors of the Fallopian Tubes.
E. QUENU and L. LONGUET.
3. Surgical Analgesia by Subarachnoid Injection.
KALLIONZIS.
4. A Case of Goundou or Anakhre. PACHECO MENDES.
5. A Note Upon Goundou or Anakhre. E. JEANSELME.
6. A Study of Anthrectomy. OLIVIER LENOIR.
7. Genital Tuberculosis in the Female.
MARIE GOROVITZ.
8. A Case of Staphylococccemia.
E. REYMOND and ALEXANDRE.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

3.—Kallionzis, who has used the Tullier method of spinal anesthesia in over one hundred operations, believes that, though it is still in the stage of transition, it is not only valuable, but necessary in a number of cases. The technique of the procedure should be strictly watched, especially in details. [M. O.]

4.—Mendes has seen a case of goundou, a rare condition of the face. Though noticed in Africa occasionally, this is the first case reported in Brazil. All cases occur in negroes. In this case, a mulatto aged 24, the tumor was found just on the left side of the nose, spreading over the superior maxillary bone. It grew painlessly, and he remained perfectly well. The bony outgrowth was scraped off, and he is again in good health. Pathologically it showed the characteristics of an osteoma. Mendes considers it a trophic nervous lesion, an hypertrophy of the jaw bones, found only in descendants of the colored race.

[M. O.]

5.—Jeanselmé explains that goundou or anakhre consists of osseous growths about the root of the nose, increasing gradually, and is only seen in negroes. It is accompanied

by headache, epistaxis, and coryza. The condition is generally symmetrical. [M. O.]

6.—Lenoir has studied the subject of antrectomy, the operation, by which the petrous antrum is opened, as a preliminary step in the treatment of the complications of mastoid suppuration. This operation is not difficult, and is always necessary when suppuration occurs in the mastoid cells. The anatomy of the mastoid cells and the petrous portion of the temporal bone is described in full, with the different measurements in adults and children. Several diagrams of dissections illustrate the conditions found. The procedures in use by different surgeons are mentioned, and the entire literature is reviewed. Scissors are now generally used for the scalp incision, along the retro-auricular fold. In the adult the spot for trephining is below the supramastoid crest, in front of and above the mastoid-squamous suture, behind the auditory meatus. In children the mastoid antrum is slightly anterior to the position it holds in adult life, on the same horizontal line. This procedure is of service for curetting the mastoid cells, for draining the attic, the sinus, or lesions about the sinus and for reaching the cerebral or cerebellar complications of otitis media. Lenoir concludes that every one should be able to perform antrectomy, for it is not difficult, as the position of the mastoid antrum is easily located externally, and no important organ can be injured in performing the operation. The operation is exceptionally useful. [M. O.]

7.—Gorovitz states that genital tuberculosis in the female may be primary or secondary, the latter form being most frequently seen. Most often the Fallopian tubes are attacked, next the body of the uterus, the ovaries, vagina, uterine neck, and vulva. Genital tuberculosis is found at all ages, more especially from 20 to 40 years. Child birth and inflammation of the genital tract predispose to tuberculosis. In genital tuberculosis the bacilli may descend in the circulation, or they may ascend from the vagina. Besides, with enlarged retro-peritoneal or mesenteric lymph-glands, tuberculosis may descend indirectly by the lymph vessels; then the peritoneal lesions heal, leaving genital tuberculosis. Gorovitz details her experiments upon rabbits and guinea pigs. Tuberculosis of the vulva and vagina is rare. Yet, when it occurs, it is generally primary and resembles skin tuberculosis pathologically. The differential diagnosis from other ulcerations is difficult. The treatment of vulvo-vaginal tuberculosis is excision. Uterine tuberculosis is not infrequent, though tuberculosis of the vaginal portion of the uterine neck is very rare; while tuberculous lesions are found upon the uterine neck secondarily, they are much more frequent in the body of the uterus. It follows pregnancy, labor, or diseased conditions of the uterus. Very few cases of transmitted tubercle bacilli from the mother to the child in utero have been reported. Pathologically tuberculosis of the uterus may be acute miliary, or chronic in form. Upon the uterine neck it may appear as tumors or ulcers. In the body of the uterus there may be miliary tubercles, or tuberculous endometritis, which very rarely is polypoid in character. Amenorrhea, of metrorrhagia may be present, yet the diagnosis depends on the examination of the fungosities removed by curetting. When diagnosed, hysterectomy should be performed immediately. Tuberculosis may also affect the ovary, secondary to peritonitis, metritis, or salpingitis. Microscopical diagnosis is not at all easy; clinically it is always associated with salpingitis. Under tuberculous salpingitis comes the majority of the cases of genital tuberculosis. It may be primary, secondary, or associated with mixed infection. The tubercle bacilli reach the tubes from the intestine, across the peritoneum of the mesentery, by the lymph vessels; by the mucous membrane from the vulva or uterus; or directly by the circulation. Microscopically tuberculous salpingitis resembles salpingitis from other causes. It may be miliary, chronic and fibrous, or chronic and diffuse in form. The latter generally leads to surgical interference. The diagnosis is not always possible by microscopical examination. The clinical diagnosis is always difficult, unless peritonitis exists. These tuberculous lesions of the adnexa are an important cause of tuberculous peritonitis in women. Such cases have been

mistaken for typhoid fever. Ascites generally occurs in women from 15 to 30 years old, but has been found in all ages. Whether this peritonitis be acute or chronic, the prognosis is unfavorable. Laparotomy is always indicated, with removal of the diseased adnexa when possible. Not only is the literature of the subject fully quoted, but a long list of case-histories is given. Gorovitz concludes that genital tuberculosis in the female is much more frequent than is supposed. That tubercle bacilli enter the genital tract in the spermatic fluid during coitus has been proved experimentally and clinically. Experiments also show that tubercle bacilli placed upon the genital mucous membrane, without traumatism, will cause tuberculosis. [M. O.]

8.—Raymond and Alexandre report the case of a man of 31, with a **vertebral abscess** in the dorsal region following **furunculosis**. **Staphylococci** were found in the blood, urine, and pus of the abscess. He recovered after incision with drainage. The abscess was localized to those muscles which were most fatigued by his work. It is not generally conceded that staphylococcal infection can run so benign a course as occurred in this case. [M. O.]

LA PRESSE MEDICALE.

September 21, 1901. No. 76.

1. Benign Gangrene of the Eye-lids. H. ROGER and EMILE.

2. The Mechanism of Diabetes. PAUL MACQUAIRE.
3. The Treatment of Wounds. A. GOTTSCHALK.

1.—Roger and Weil report a case of **primary gangrene of the eye-lids** in a man of 33. Edema of the internal angle of the left eye occurred suddenly. This increased until both lids and the soft tissues about them were much reddened and swollen. There were fever, constitutional symptoms, and albuminuria. Upon this erysipelatous lesion appeared spots of gangrene, black and purulent. There were no phlyctenules, nor were the neighboring lymph-glands enlarged. The eye-lids were punctured and cultures made from the fluid obtained. These showed an aerobic micrococcus, pathogenic for rabbits and guinea-pigs, but not for rats or mice. Under hydrogen peroxid the condition cleared up slowly. Slight ectropion and conjunctivitis of the lower lid remained. Primary gangrene of the eye-lids must be very rare, since no case had ever before been reported. Like gangrene of the breast, of the gums, and of the male genitalia, in which aerobic micro-organisms have been found, this condition is curable. [M. O.]

2.—Glycosuria may be the result of the absence of the pancreatic juice, or of the presence of an excessive amount of pancreatin. Either an alteration or a suppression of the pancreatic secretion will cause diabetes. Experiments, which have recently been performed upon rabbits by Macquaire, show that pancreatin always causes glycosuria and marked glycemia. For the absence of pancreatic juice causes the absence of the diastatic ferment of the liver, and sugar ingested is not only not absorbed, and stored up in the liver as glycogen, but is simply held in suspension in the blood until the kidneys excrete it. If this hypothesis of Macquaire's is correct, pancreatin should be given in diabetes in doses of from 45 to 120 grains a day. [M. O.]

3.—Wounds are either aseptic or infected. While the former are rarely found, the latter may heal by first intention, in spite of the microbes present. In either case a moist aseptic dressing of layers of sterile gauze should be applied, after the wound has been thoroughly cleaned. If there is much exudation, this should be repeatedly changed, once a day at least. As soon as all discharge ceases, a dry dressing should be left upon the wound. Antiseptics and impermeable dressings are no longer to be used. [M. O.]

October 9, 1901. (No. 81.)

1. Orthostatic Albuminuria During Convalescence from Scarletinal Nephritis. CHARLES AUBERTIN.
2. The Ligation and Dressing of the Umbilical Cord. A. SCHWAB.

1.—Aubertin reports four cases of orthostatic albumin-

uria, two in men and two in boys, the albumin appearing only after standing, without symptoms of fatigue. Another case, observed by Professor Roger, is appended, a young girl with orthostatic albuminuria, also following scarlatinal nephritis. In all five cases the albuminuria became distinctly orthostatic after the scarlatinal nephritis had begun to disappear. Aubertin concludes that many cases of orthostatic albuminuria may be the terminal stage of a previous nephritis, or any disturbance of the renal circulation. Other cases observed and reported by competent observers, when viewed from this standpoint, seem to confirm Aubertin's theory. [M. O.]

2.—After an infant is born, it should be comfortably placed and left alone until the cord ceases to beat, at some distance from the umbilicus. Then a provisional ligature should be applied, 6 or 8 cm. from the umbilicus, and the child should be allowed to wait until the physclaea has flashed tending to the mother. For the permanent ligature Schwab advises using plaited silk, well sterilized, placed from 1 to 3 cm. from the umbilicus. The cord is then severed another cm. away. The closer it is cut, the quicker it will dry. Other methods of severing the cord have been described, but none compare to ligation. The dressing consists of dry sterile gauze, with powder occasionally. Baths given should be surely sterile. Otherwise they should not be given. [M. O.]

October 12, 1901. (No. 82).

1. The Deformities of Modern Bullets. UZAC.
2. Chronic Bronchitis in Children. R. ROMME.

1.—Modern bullets, of smaller caliber and with a metal envelope, are deformed by ricocheting or by passing through resistant bodies before striking. This occurs at any distance and the bullet may be broken into pieces. The deformity may be from lateral shock, causing a screw-shaped projectile, or from perpendicular shock, causing a mushroom-like projectile. In either group the metal envelope may remain intact, it may be ruptured and partially separated, or ruptured and completely separated, with fragmentation of the bullet. Drawings of these different conditions are given. The weight of the projectile does not change unless it is broken up, its form may be greatly changed, while it can easily become septic. The course of a deformed bullet may be complex, its velocity being generally decreased. The wounds caused are as a rule small, deep, and very irregular. The shape of the wound of entrance depends upon whether the bullet is deformed before it strikes, or not. A wound of exit is frequently not present. The course of the bullet is never the same in different individuals. Comminuted fractures occur, while explosive effects are seldom seen nowadays. When they are found, they are severe. The irregularity of the course of these bullets permits the formation of the diagnosis of a deformed bullet-wound. The prognosis depends upon its localization. Drainage is as a rule necessary, since suppuration is apt to follow. The Röntgen rays aid in the diagnosis. The newer bullets can cause more severe wounds than those formerly in use, but examples of these bad accidents are fewer than formerly. [M. O.]

2.—In simple chronic bronchitis in children the only symptoms found are cough and expectoration. It may follow cold, coryza, laryngitis, the infectious diseases, etc., frequently noted in the children of the gouty, rheumatic, or tubercular. There is no fever, pain, or other symptom, though the child may look pale and thin. Cough occurs in small paroxysms or attacks, and the sputum is mucopurulent but contains no tubercle bacilli. Some rales are generally heard, dry or moist, scattered over the chest. The affection is benign. Massage, alkaline waters, cod liver oil, iodide of arsenic, ipecac, mustard plasters, sodium sulphate, terpin, tannin, etc., may prove of service in the treatment. [M. O.]

EDINBURGH MEDICAL JOURNAL.

October, 1901. (Vol. X, No. 4.)

1. Primary Carcinoma of the Duodenum. W. SOLTAU FENWICK.
2. Volcanic Action as a Cause of Outbreaks of Epidemic Disease. NOEL BARDSWELL.
3. The Means of Arresting Acute Endocarditis. RICHARD CATON.
4. Phlyctenular Conjunctivitis. KENNETH SCOTT.
5. Notes on Surgical Cases Which Came Under My Observation During the South African Campaign. D. W. JOHNSTON.

1.—Primary carcinoma of the duodenum is met with once in about 1500 to 2000 necropsies in London, and thus presents a ratio to gastric carcinoma of 1 to 20. The great majority of duodenal carcinomata belong to the cylinder cell variety, but the spheroidal cell growths are not uncommon, and colloid carcinoma is relatively frequent. Like simple ulcer in the same situation, a malignant growth is more frequent in men than in women, and the average age at the time of death is 53 years. The symptoms of duodenal carcinoma vary according to the situation of the growth. It is therefore convenient to consider the clinical aspect of the disease, according as it is situated above, around, or below the biliary papilla. When the first portion of the bowel is affected, the patient presents all the indications of pyloric stenosis, and a differential diagnosis is extremely difficult. Disease of the second part is apt to involve the orifice of the common bile duct, that its location may often be determined during life by the coexistence of jaundice and enlargement of the liver, while a stricture of the duodenum below the biliary papilla is usually attended by bilious vomiting and the presence of pancreatic juice in the ejecta. Carcinoma above the biliary papilla may either form a ring around the bowel or produce a deep ulcer. The initial symptoms are flatulence after meals, acidity, loss of appetite, general debility and beginning emaciation. This is followed in a month by pyrosis and emesis, which is always acid with masses of undigested food and excess of lactic acid, severe pain in the epigastrium, with blood and bile in the stools. A tumor may be detected upon palpation. The subsequent course of the disease is similar to that of pyloric cancer. The second type gives jaundice as its first indication. The epigastrium is distended, the liver enlarged, the gall bladder distended, the stomach enlarged, but a tumor can seldom be detected. Carcinoma below the papilla begins in the same manner, but the vomit contains bile and pancreatic juice, is of green color and resembles chopped spinach. Attacks of intestinal obstruction supervene. The urine is greatly reduced in amount, and may be entirely suppressed, while that which is voided is alkaline in reaction and opaque from an excess of earthy phosphates. Symptoms of auto-intoxication are often present at this stage of the complaint, the stomach is enlarged and a succussion splash may be obtained as far outward as the right mammary line, or even in the lumbar region, due to the dilation of the duodenum above the site of stricture. If only a ring is formed, no tumor can be detected, but when the pancreas is infiltrated, a hard indefinite mass may be found to the right of the umbilicus. Regardless of site the average duration of the complaint was about 7 months, the extreme limits being 3 and 13 months, death resulting from either exhaustion or auto-intoxication, rarely from the hemorrhage, peritonitis or tetany. Disease of the first part of the duodenum has to be distinguished from benign and malignant strictures of the pylorus, and from the effects of pressure exerted upon the bowel by an external tumor of the second part of the duodenum; from carcinoma of the pancreas or of the ampulla of Vater, from gall stones, and from a simple chronic ulcer in the same situation; and of the third part of the duodenum from pressure on that part by a tumor of any neighboring viscus by undue tension of the transverse mesocolon, by enlargement of the superior mesenteric vessels, from impaction of a gall stone and from cleatization of a simple ulcer. The medical treatment does not differ from that of carcinoma of the

pylorus. Excision of the growth is rarely feasible, but gastro-enterostomy often prolongs life for several months [J. M. S.]

2.—Bardswell believes that earthquakes are responsible for outbreaks of epidemic disease, especially of cholera and typhoid. Even in England earth vibrations are now and again sufficiently severe to cause leakages from drains and water pipes, and when these diseases have previously existed in settlements above the site of leakage, outbreaks below the site are frequent. This was found to be particularly true in volcanic localities, viz.: Yokohama, Japan, and Naples, Italy. The Japanese Government encased the service reservoirs and other water receptacles in puddles freely used, and prepared and laid with greatest care, and used lead joints for the pipes. The health of the town, as regards epidemic disease, has greatly improved since these corrections, the mortality from enteric fever, especially, having notably diminished. This improved system was not in use during the earthquakes at Nice, in 1887, and Charlestown, S. C., in 1885, and for the following years the mortality in enteric fever, malaria, dysentery and cholera was greatly increased. The author also cites types of neurotic cases which may be met with in epidemics after earthquakes, viz.: nausea, vomiting, headache, vertigo, diarrhea, frequent micturition, hysterical epilepsy, disordered sensation, condition of nervous apprehension, depression and prostration, moral instability, loss of control, mania, insanity, paralysis of the limbs, railway spine, multiple neuritis, conjunctivitis, keratitis, tetanus and erysipelas. [J. M. S.]

3.—See Philadelphia Medical Journal, Vol. VIII, No. 18, p. 716.

4.—Scott lays stress upon the fact that the eruption of phlyctenular conjunctivitis which assumes the form of a small nodule, either single or multiple, and of varying size, is not a hollow vesicle containing fluid, as in herpes, but is of solid consistence, and is composed of cellular elements, and that it is a local manifestation of the scrofulous diathesis. In the matter of treatment, he emphasizes improving the general condition of the body, extra nourishment and dieting along special lines as of more import than drugs. Locally, he discountenances the classical method of the introduction of an irritant and tries to alleviate the inflammation, regarding it merely as a local manifestation of the more general bodily condition, rather than as an independent growth which has to be actively eradicated. The eye is put at rest by atropine which also, to some extent, exercises the antiphlogistic action pertaining to belladonna. In the milder cases the application of a dry-cotton-wool pad with a single thickness of muslin smeared with vaseline next the skin seems sufficient. In more severe cases hot fomentations of a mild solution of salicylic acid, tinctures of aconite, arnica, belladonna, and opium give satisfactory results. In eczematous conditions of the cheek, cold starch poultices are used, and when there is marked blepharospasm, canthectomy is advised. The small wound which has been made soon heals without special attention, and leaves no obvious trace. The foregoing treatment often aborts early cases and reduces the liability to the occurrence of permanent opacities and irregularities in more advanced ones. [J. M. S.]

5.—The wounds of the South African campaign were produced principally by the Mauser, Lee-Metford, and sharpshooter bullets. The statement that a soldier may be wounded without knowing he has been hit, or go until he faints from loss of blood, or until his attention has been drawn to the fact that he is bleeding, is not borne out; but instead they describe the effect as like that of a blow from a sledge-hammer, a brick or a crow bar. The character of the wounds of entrance and exit vary in accordance with the range, velocity, angle and the part struck. The bullet at its greatest velocity has an explosive effect and shatters the bone into many fragments, while with less velocity it has a drilling effect. The writer decries the practice of exploring wounds unless all modern antiseptic requirements are at hand, and even then prefers the skiagraph. Johnston believes the forefinger to be the best exploring instrument; a strip of gauze

squeezed out of iodoform emulsion to be the most satisfactory drainage and a small dry borie dressing to be unexcelled. Unless causing trouble, the rule should be to leave a Mauser bullet alone. This holds true in all portions of the body except the head, where thorough exploration for fracture should be made. Conservatism in place of laparotomies in many instances of serious visceral injuries proved the better procedure. Unless the bullet has divided the vessels so as to cut off the blood supply in the extremities, amputation is rarely required. The author states it to be his experience that all the Mauser bullets removed have turned, and the point of the bullet is directed towards the aperture of entrance. He advocates the extreme value of a timely hypodermic injection of morphine, on the field if possible, and before the removal of the patient. In all cases of bad gun-shot injury, as it makes the removal more bearable and lessens the shock considerably, thus possibly in many instances prolonging, if not saving, life. [J. M. S.]

JOURNAL DE CHIRURGIE.

September-October, 1901. (Première Année, No. 9.)

1. Two Cases of Osteospathyrosis. A. GEVAERT.
2. The Danger of Internal Urethrotomy. LAUWERS.
3. Traumatism upon a Hernia, with Intestinal Perforation, Peritonitis, and Death. H. VERNEUIL.

1.—Gevaert reports two cases of that rare condition, *osteospathyrosis* or *fragilitas ossium*. One, a girl of 5, first began to show fractures at the age of two years. All the bones of her legs and left forearm had been broken, and she entered the hospital with 12 fractures. One day she fell and broke her left femur again. Another day she slipped upon the tiled floor, and again fractured her left femur. She had never been ill, but was always pale and thin. At the seashore she improved, but fractured more bones when she returned. The other case was a girl of 14, who had rachitis. She had 18 fractures. Both her brother and father showed a tendency to fractures also. This condition is very rare, but occasionally seems to affect certain families. [M. O.]

2.—In three cases of internal urethrotomy reported by Lauwers, signs of marked infection followed the operation. All eventually recovered upon his treatment. The infection undoubtedly occurs from the peri-urethral tissue, and external urethrotomy may become necessary. [M. O.]

3.—Verneuil reports the case of a man with a left inguinal hernia for twenty years, who had received a severe kick upon his hernia, while intoxicated. He lost consciousness for some time. The pain persisted, and no bowel movements followed. There was no ecchymosis, but decided fluctuation and great pain were noted over the tumor. There was no fever. The sac was opened, and peritonitis with much fluid found. A perforation of the small intestine was seen. Drainage was left in the wound after operating. After an attack of delirium tremens the patient died. Verneuil believes that the traumatism produced a peritonitis, followed by intestinal perforation. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

October 20, 1901. (31me. Anné, No. 42.)

1. A Toxicological Study of Cacodylic Acid.

X. ARNOZAN.

1.—Arnozan agrees with Pery, who has written a thesis upon this subject, that aqueous solutions of sodium cacodylate become decomposed when kept for some time. Sodium cacodylate may be given by the mouth, rectum, or subcutaneous injection. Experimental investigation shows the last to be the best method. The better the arsenic is eliminated by the organism, the better is the resistance of the individual. Therefore when excretion is poor, care must be taken not to give too much cacodylic acid. Sodium cacodylate is eliminated in urine, perspiration, milk, and menstrual blood, in the form of metallic arsenic. Arnozan considers these facts of importance to the general practitioner.

[M. O.]

Society Reports.

THE DUHRING DERMATOLOGICAL SOCIETY OF PHILADELPHIA.

MEETING HELD TUESDAY, NOVEMBER 19.

The President, DR. DUHRING, in the Chair.

Dr. Stelwagon exhibited a man, aged 55, with circinate and segmental lesions upon the face, forehead and neck, dark red in color of several years duration, illustrating the superficial type of tubercular syphiloderma. It resembled ordinary ring-worm. There was a history of previous syphilis, and the areas are now in the process of involution following mixed treatment.

Dr. Schamberg exhibited a case of *Raynaud's disease* in a woman of 33. Her fingers were cyanotic and presented superficial ulcerations. On exposure to cold they become dead white, with burning and tingling. He showed a woman, aged 35, with a nodular eruption on the fingers and ears, varying in size from a pin-head to a pea, deep-seated and tender upon pressure. They gradually became superficial, underwent central necrosis, and disappeared in four or five weeks, leaving a slightly depressed scar. The outbreaks were more frequent in winter than in summer. The patient's brother died of phthisis. There was general agreement that the case was a form of *nodular scrofuloderma* occurring in regions subject to chilblains. He presented a man of 39 with multiple *epitheliomata*, there being almost 40 tumors upon his face, pinkish and shining in appearance, varying in size from a pin-head to a pea. Over the right eye-brow was a large, deep-seated ulcer, one and a half by one inch. The lesions first appeared when the patient was 24 years old. The large growth over the eye-brow appeared two years ago. A small tumor removed from the back showed, under the microscope, the structure of a cystic epithelioma. He also showed a case of *venous nevus* in a girl of 16. The lesions were purplish red, slightly elevated, somewhat verrucose, situated upon the leg from the knee to the great toe. The patches had recently become infected and covered with purulent crusts, for which curetting and cauterization had been done.

Dr. Pfahler exhibited a skin cancer treated with X-rays. The patient was a white woman, 56 years old, who had a cancer on the right side of her nose for two years. This growth was very painful, 2 cm. in diameter and 1.5 cm. in height. A section, removed and examined by the pathologist, showed that it was an epithelioma. Exposures to the X-rays were made on alternate days at a distance of six inches, on an average of ten minutes each. 17 exposures were made. The pains were relieved immediately, and in two months the growth had entirely disappeared, being replaced by glossy skin.

Dr. Hartzell exhibited a patient with *erythema elevatum diutinum*, a man of 45, with 5 bluish-red lesions upon the forearm, hand, and leg of the left side, one large pea-sized nodule on the flexor surface of the forearm, two smaller nodules on the inner side of the thumb, a dime-sized, flat, irregularly-oval plaque over the metacarpo-phalangeal joint of the middle finger, and an oblong plaque, about one inch by one-half inch, over the ligamentum patellae. These lesions are smooth, firm, and elastic, not tender on pressure, and readily movable over the underlying tissues. There are no subjective symptoms. The affection has lasted three years, and has undergone little change during the 18 months that it has been under observation.

Dr. Koch exhibited a child of 6 years with *monilethrix* involving the entire scalp. The hair was dry, lustreless, and broken off, presenting the appearance of a diffuse ring-worm. The condition had lasted for a number of years and was present in two other members of the family. Under the microscope the hairs were typically beaded.

BOSTON GYNECOLOGICAL SOCIETY.

MEETING HELD NOVEMBER 14, 1901.

Dr. G. W. Jones, who opened the discussion upon the surgical treatment of diseases of the gall-bladder, mentioned the important pathological processes met in diseases of the gall-bladder. Obstruction of the gall-bladder is liable to extend to the ducts, when surgical intervention becomes necessary. From 12 to 18% of all adults are affected, women having biliary calculi six times as often as men, possibly from the pressure of tight clothing. Gall-stones are rare in tropical countries. Persons may go through life without giving any indication of the presence of gall-stones, which are only found post mortem. Small calculi readily pass through the ducts, but large stones require surgical intervention for permanent relief. The most frequent demand for surgical treatment arises from calculi in the gall-bladder or their impaction in the gall-ducts. Dr. Jones decidedly opposed aspiration or exploratory puncture of the gall-bladder, since microorganisms may enter. If it becomes necessary to open the gall-bladder, the incision should be so large that the abdominal cavity is not subjected to infection. Cholecystotomy was performed by Bobbs in 1867 and by Marlon Sims and Kocher in 1878. In 1882 cholecystectomy was practiced by Langenbuch. Courvoisier, Sir Spencer Wells, Bernays, Küster and Meredith were the first to perform "ideal" cholecystotomy, by closing the gall-bladder and the abdominal wound without drainage. Dr. Jones regarded this as the best method. If, however, the walls of the gall-bladder have contracted or have become fragile, the final closure of the wound will have to be delayed. The common bile duct not infrequently becomes permanently occluded, and a fistula may result. This may be treated by cholecyst-enterorrhaphy. If the calculus cannot be removed in the ordinary way, the duct may be incised and after the removal of the obstruction, the opening can be completely sutured. He regarded the immediate suturing of the incised tissues of the gall-bladder without leaving the parts united to the peritoneum, or to the abdominal parietes as the best method of operation. He prefers a longitudinal incision, immediately to the right of the rectus muscle. In performing cholecyst-enterostomy, he first raises a portion of the intestine and sutures it to the gall-bladder, and then opens the intestine. Gall-stones do not always cause cholemia nor are they a frequent cause of cancer. Dr. Godfrey Ryder said that the most common cause of gall-stones was the presence of bacteria, which cause the deposit of bilirubin. Dr. Ryder spoke of the difficulties in diagnosis. Clay-colored stools, tenderness over the site of the gall-bladder, and pain extending to the shoulder are important symptoms. He advises early operation. By the early removal of biliary calculi the dangers of infection and hemorrhage are lessened. Dr. A. P. Clarke said that gall-bladder surgery had been worked out lately. Gastralgia, indigestion, dyspepsia, nervous spasms, etc. may be due to gall-stones. Excess of animal food had been a prolific cause. Drainage is only indicated in suppurative cases, or in cases in which injury to the gall-bladder or its ducts has occurred. Gall-stones in the common duct are liable to be overlooked. He did not consider the operation of cutting down upon the gall-bladder and draining it or its ducts a difficult procedure. He prefers forceps, scoop, dilators and other such instruments for dislodging calculi. Experience shows that gall-stones are not only found in the gall-bladder, for the more dangerous ones are found impacted in the hepatic and in the common bile ducts. In answer to the question of Dr. W. S. Brown, Dr. Jones said that, in some cases, at the beginning olive oil is useful. He gives 8 drops of chloroform with 2 table spoonfuls of olive oil, three times a day.

Special Article.

THE VALUE OF BLOOD EXAMINATION IN DIAGNOSIS.

By FREDERICK J. KALTEYER, M. D.,

of Philadelphia.

In the issue of this journal of the 23rd of November, 1901, there appeared an article by Dr. John B. Deaver and Dr. Edward Kemp Moore on "some experience with blood examination" which has attracted more than ordinary attention. To the medical man unfamiliar with blood examination, its technique, the ease with which the various methods are brought into practical use and the physiological and pathological principles upon which hematology rests, the article may suggest adverse criticism as to the value of these examinations in diagnosis. These observers have based their comparison on the results of several thousand blood examinations with the actual pathological findings at the operating table. In this article the aids of hematology to surgical diseases are discussed seriatim under the following headings:—Parasites in the blood; serum examination of hemoglobin; erythrocyte count and leukocytosis.

They concur with the generally accepted view as to the diagnostic value of finding malarial parasites in the blood, but their experience has led to the conclusion "that the more irregular and atypical the case of malaria, the harder are the organisms to find, and therefore in a case where malaria is suspected a single blood examination should not carry much weight". From the above quotation it seems that their results are not in accord with those of most authorities on this subject. Craig, who has recently contributed to the literature of irregular and continued estivo-autumnal malarial fever, states "that it is in this class in malarial cases that the microscope is of the greatest value to the practitioner. These cases which present anomalous clinical symptoms and irregular or continued temperature curves, are very difficult of recognition and are often mistaken for other diseases. In many of them a diagnosis from the clinical symptoms is absolutely impossible, and it is in such that the microscope is of the greatest aid. A few moments study of the blood will often demonstrate the nature of a case which has baffled the diagnostic acumen of eminent practitioners for days". It also seems reasonable to infer that the more irregular the symptoms of tertian or quartan fever, the less difficult should be the finding of parasites in the blood because sporulation then occurs during a longer period than in typical cases and therefore organisms, in various stages of development, may be seen at a single examination.

In their experience bacterial studies of the blood are generally unsuccessful, and have, very little practical significance. They are also bitterly opposed to painful or disturbing examinations that do not promise the patient any benefit, but are made merely because they are interesting. It is hardly necessary to comment upon this point. As a rule, only one or two cubic centimeters of blood are required for a bacteriological study and the technique of procuring the blood is indeed a simple one—a sterilized hollow needle connected with the bulb of

a sterilized syringe is introduced through sterilized skin into a vein—the whole operation producing scarcely more pain than the subcutaneous insertion of a hypodermic needle. Far less pain and discomfort is brought about by this operation than by an examination of the abdomen in a patient suffering from peritonitis or by an examination of the chest in one afflicted with acute pleurisy. Bacteriological investigation of the blood has solved some of the perplexing problems of pathology and has been useful in the diagnosis of many obscure cases of septicemia. Ample proof of this may be found in a study of the literature of septicemia. Undoubtedly the diagnosis of ulcerative endocarditis, which presents great difficulties and is often perplexing to the most skillful physicians, may be aided if pyogenic cocci are isolated from the blood. Grawitz holds the view that in doubtful cases of malignant endocarditis repeated negative bacteriological results point strongly towards its non-existence.

They believe "that a positive Widal reaction can be obtained after the seventh or tenth day of enteric fever in a very large percentage of cases of this disease, but as a diagnostic aid to the surgeon its results are upon the whole disappointing". The agglutination test from a study of statistics is found to be positive in enteric fever in about 95% of the cases some time during their course. To the physician this aid in diagnosis is often of decided advantage, particularly in atypical cases. Drs. Deaver and Moore have found this clinical laboratory reaction most frequently fallacious in cases in which the clinical symptoms are most perplexing, and they may be further quoted: "That a positive Widal reaction is rarely of much value to the surgeon, however valuable it may be to the medical man. A negative Widal reaction, especially after an illness of two or three weeks, seems often of service; for if after two or three weeks the Widal reaction is persistently negative, we can be almost certain that the case is not one of typhoid fever." At the present day the agglutination test has won for itself a place in the field of diagnostics and should be classed among signs and symptoms, such as the occurrence in enteric fever of rose spots, nose bleed, headache, abdominal pain, enlargement of the spleen, etc.; nothing more or nothing less is claimed for this laboratory test. Osler informs us that in the Johns Hopkins Hospital two cases have been operated upon as acute appendicitis, which subsequently proved to be enteric fever. Mistakes of this kind are sometimes unavoidable, particularly during the first week of enteric fever. A positive agglutination reaction in a case in which the diagnosis between appendicitis and enteric fever is doubtful, should render some assistance towards the establishment of a correct diagnosis.

In their study of hemoglobin they have found that no matter what the percentage of color matter may be, an operation for the relief of such a condition as an acute suppurative process or acute or chronic hemorrhage, may be undertaken. They have records of several cases operated upon with only from 10% to 20% of hemoglobin that terminated favorably. It has been demonstrated by clinical

and experimental research that ether, given as an anesthetic, produces certain well defined functional and structural changes in the economy, particularly upon the red corpuscles, and that after an operation a fall in corpuscular hemoglobin occurs. While there are some instances on record in which a general anesthetic has been given to patients with a very low hemoglobin percentage with favorable results, the exceptions do not prove the rule, and therefore the conclusion seems justifiable that a general anesthetic must not be given except under the stress of absolute necessity if the hemoglobin is low. Estimation of the percentage of hemoglobin may be performed with sufficient accuracy for clinical purposes within a few minutes by various methods at our command.

They have also found the sign of leukocytosis "the most valuable and the most disappointing part of blood examination". Reference is made to the important conclusions drawn by Dr. John C. Da Costa, Jr., in regard to the rules governing the leukocyte count in appendicitis. They also detail the history of a case which they believe militates strongly against the value of leukocytosis, occurring in a young man admitted to the German Hospital, who presented symptoms of severe appendicitis and in whom a leukocyte count of 20,000 was present on the day of admission. As the case progressed, improvement in all the symptoms followed. The number of leukocytes gradually fell, until on the sixth day the count was 7,500 per cubic millimeter. An operation was performed at this time and an abscess containing 500 cubic centimeters of pus was evacuated. They contend that the blood examination in this case was entirely unreliable and that it does not take a very large number of such cases to severely shake their confidence in leukocytic counts. From the facts mentioned in the history of the above case it appears that the abscess was thoroughly walled off. It is a well established fact that if an abscess is walled off, a low leukocytic count (from 8,000 to 11,000) is usually present, and when this stage in a pathological process, such as acute appendicitis is reached, the function of the leukocyte has been carried out, the leukocytic forming tissues have rendered their services and are deserving of a rest.

Diffuse Hypertrophic Scleroderma with Coxo-femoral Periarthritis and Sciatica.—Edgar Hirtz reports a case of scleroderma in a man of 46, in the *Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, (July 4, 1901, No. 23). The patient came to the hospital with right-sided sciatic neuritis, the symptoms of which improved gradually. But almost complete ankylosis of the coxo-femoral articulation followed, with a swelling of the upper part of the thigh. Then the skin began to swell, to grow hard and thick, over the entire thigh. Reflexes were increased on the left side. Later the abdomen and thorax also became affected. Radiographs showed but slight periostitis of the femur. The cause of the condition is unknown. Hirtz could find no other reported cases of diffuse scleroderma with ankylosis in a large joint, due to periarticular lesions. He will try thyroid extract in the treatment. [M. O.]

Original Articles.

HEPATIC DRAINAGE.*

By JOHN B. DEEVER, M. D.,

of Philadelphia.

Surgeon in Chief of the German Hospital,

and EDWARD KEMP MOORE, M. D.,

of Philadelphia.

Assistant Pathologist, German Hospital, Philadelphia.

The future status of any of the various divisions of the science of surgery is practically impossible to foretell. Yet it is not thought a rash prediction that there is no part of general surgery that will receive more attention in the next few years and see more advancement than the surgery of the gall bladder.

The surgery of the gall bladder and the bile ducts is still in the stage of development, in spite of the able and valuable work that has been done on this subject by Hans Kehr, Mayo Robinson, Richardson, Murphy and many others.

Both the diagnosis and treatment of these conditions are still cloudy and there is much work to be done, which will be amply repaid before this subject is brought into the full sunlight of clear understanding. The diagnosis, in many respects, is still far from clear. What the work of the future will reveal is a method of early diagnosis that will enable us to recognize the very beginning of the pathological processes in this region; in order that a careful watch may be kept on its advancement and surgical interference instituted at that time which logic and surgical experience shall indicate as the best.

Diseases of the gall bladder and ducts occur with remarkable frequency. The best observers have said that in 9 per cent. of the human race gall stones are present, and if we add to that the large number of cases in which there is gall bladder disease without stones, we can see how large a percentage of our patients must have imperfect gall bladders. However, since the overwhelming majority of these cases remains apparently latent and innocuous, the proper course to pursue is very puzzling.

Gall bladder disease is markedly protean in its character, perhaps even more so than appendicitis, and the wide variance in its seriousness calls for the closest study and the greatest care in classification. In its pathology, too, gall bladder disease closely follows the pathology of appendicitis. The same changes take place step by step, and in both, at any stage, there is always the ever present danger of an acute exacerbation that will in a few hours place the patient beyond medical or surgical aid.

The first step in the progressive pathologic condition is usually catarrhal inflammation, due to the irritation of stones or infection of the bile. Then an interstitial inflammation, and a pericholecystitis follows, resulting in an adhesive local peritonitis causing adhesions between the gall bladder and the neighboring viscera. Finally, contraction of the gall bladder making traction on the adherent viscera and causing obstruction of the bile ducts, partial obstruction of the duodenum or the transverse colon,

and a host of other symptoms in which the part played etiologically by the gall bladder is often entirely overlooked. Hand in hand with these changes go the effects of extension of the inflammation along the interior of the bile ducts; obstruction of the bile stream through inflammatory tumefaction of the ducts and the grave results of cholangitis and pancreatic inflammation.

Going back to the similarity of gall bladder inflammation and appendicitis, the stones play the same part as the fecal concretions—causing ulceration and strictures of the ducts.

The progress of gall bladder disease is not usually, we believe, a steady onward march, but a succession of exacerbations and periods of latency. The fact, however, must not be overlooked that the individual exacerbations may be so slight that the disease is not even suspected until the advanced stages are reached.

It were well if all cases of gall bladder disease had this slow progression, but unfortunately at any stage a sudden crisis may develop of the utmost gravity, though an acute gangrenous cholecystitis, a pericholecystic abscess, or perforative peritonitis again reminding us of the pathology of appendicitis.

Perhaps as useful a classification of the symptoms of chronic cholecystitis as any, is the division of the symptoms into three groups.

First.—Those caused by the presence of stones and extension of the inflammation along the interior of the ducts; second, the symptoms due to the pericholecystitis, and third, the symptoms of cholangitis.

This classification is to a great extent arbitrary and all its divisions are blended in a broad pathological picture; but their separation is useful in our efforts to determine the stage reached in the disease and the exact lesion present.

The stones, if they remain in the gall bladder, are practically innocuous and are rather the result of the inflammation than the cause, or perhaps they may be better considered as going hand in hand with the disease, sometimes preceding, sometimes following the inflammation. Their presence in the ducts is a more serious affair, as here they furnish the nidus for strictures and by their bulk aid in the obstruction of the bile current. Practically all modern writers have abandoned the theory of mechanical obstruction due to the wandering of a stone for the more reasonable one of inflammatory tumefaction which explains the conditions found at the autopsy and the operating table in a much more satisfactory manner.

The symptoms caused by a catarrhal inflammation of the gall bladder and ducts vary widely in different cases. In some, where the consequent swelling of the mucosa is not sufficient to seriously impede the flow of bile, the only symptoms are a slight enlargement of the gall bladder with a little tenderness in that region, a slight elevation of temperature and a very moderate feeling of malaise and anorexia.

In many cases the occurrence of these mild attacks are the only indication of a gall bladder disease that is progressing steadily, and when operated upon on account of an acute exacerbation or intercurrent disease, we are surprised to find a condi-

*Read before Southern Surgical and Gynecological Association, Richmond, Va., November 10th, 1901.

tion of the gall bladder much more advanced than the duration or severity of the symptoms had led us to believe.

In other of the catarrhal cases only a little more severe grade of inflammation will produce the most alarming symptoms. The lumen of the cystic duct may be obstructed and severe gall stone colic occasioned, the inflammation may obstruct the common or hepatic duct and a marked grade of jaundice develop and yet the causative pathological process be in reality but little more severe than in a case of mere "biliousness."

The symptoms of pericholecystitis are most confusing and difficult of diagnosis. Adhesions to the duodenum often in the consequent contractions so obstruct its lumen that a dilatation of the stomach results. Adhesions to the transverse colon or other parts of the intestines may cause symptoms of intestinal indigestion, and adhesions to the stomach may very closely simulate gastric ulcer.

If in cases with these complications the individual acute exacerbations of inflammation have not been marked, it is only with the greatest acumen that we can arrive at the true nature of the trouble.

There is no doubt that a large percentage of the cases of chronic dyspepsia and intestinal indigestion are caused by the adhesions of cholecystitis and appendicitis, and no chronic case of this nature should be passed without a careful consideration of these two conditions.

Of the chronic symptoms of gall bladder disease none are more serious than those of cholangitis. The obstruction of the bile ducts by an infectious inflammation permits of a spread of the infection up to the smaller ducts of the liver, and produces a marked cachexia and a very serious form of hematogenous jaundice as well as the other manifestations of hepatic infection.

Gall bladder disease is a progressive process with very little tendency to self-limitation. There are perhaps a few cases of spontaneous cure by the discharge of all the stones and a subsidence of this inflammation; but in these cases, if there has been a pericholecystitis with adhesions to the surrounding viscera, symptoms due to these adhesions will persist without even the slightest sign of gall bladder disease. This point is very important in the causation of dilated stomach and other intestinal troubles, and, as said before, should never be lost sight of.

The progress of gall bladder disease is, however, remarkably slow in many instances, an individual may have a slowly progressing gall bladder disease extending over the course of his whole life, which never at any time causes more than a few days indisposition at irregular and often widely separated intervals. Yet in other cases a few days, or even hours, may be sufficient to terminate his life.

Gall stone disease was formerly divided into the infectious cases and those in which the symptoms were caused by the mechanical action of the stone. This classification is not correct, to our minds, for we believe that all the cases are infectious in their nature. Not that a gall bladder once infected always remains so, but that each exacerbation is due to an infection which even the slightest enteritis is

sufficient to light up in the already damaged gall bladder.

Again returning to our analogy between gall stone disease and appendicitis, we can divide the symptoms into those which are occasioned by pericholecystitis and those caused by defective drainage. The symptoms of pericholecystitis are those occasioned by the adhesions in great measure, and freeing the adhesion will relieve them, but the prevention of their reappearance lies with their cause, the defective drainage of the gall bladder and liver. So no matter what the nature of the symptoms, their cure lies in securing free hepatic and cystic drainage.

The flow of bile is so free that unless this is interfered with, the serious infection of the gall bladder, or more particularly the liver, is hard to conceive. Therefore, our success in the treatment of gall stone disease depends upon our ability to establish and maintain free drainage.

The waters of the Sprudel Spring at Carlsbad have long had an enviable reputation for the cure of gall bladder troubles, but we believe that no medicinal water is able to restore a damaged gall bladder to normal. What is accomplished is the freeing from infection of the hepatic drains, and by thus reducing inflammatory tumefaction to make room enough for the establishment of free drainage. Yet the pathological lesions are still present and ready at the slightest infection again to show themselves as a continual menace to life.

If we are able to diagnose gall bladder disease in its earliest stages before any marked anatomical changes have occurred; then temporizing and Carlsbad are indicated, but if the case first comes to our notice in the late stages when adhesion, contraction and strictures have made groundless the hope that nature will restore to normal the drainage system of the liver, then temporizing is dangerous.

The mortality of operations for gall stones lies not to the charge of the operation, but to the time at which it is done. Any operation performed upon a patient suffering from severe jaundice and an infective cholangitis is sure to have a high mortality, and the only way to avoid this is to operate early before the patient has developed these conditions.

Gall bladder surgery ought not to be relegated to a "last resort" procedure, but should be done at the time when the chances of recovery are best. The "last resort" surgery in all departments is the cause of the majority of unsuccessful operations. The widespread conviction that a surgeon is to be called in as a last resort is a great detriment both to the science of surgery and to the patient. How many deaths from appendicitis, cancer, sarcoma, gall stone disease and many other conditions are due to this relegation of the surgeon to the role of a "last resort."

In an operation for gall bladder disease, if there is any marked change in the gall bladder, it is better to remove it. This applies especially to the cases operated upon early in the disease, for this procedure insures a freedom from this trouble in

the future, and adds very little to the gravity of the operation.

The gall bladder is an organ of very little function in the human race; this is proved both by the result of its removal and by the cases in which stones have completely filled it, yet without symptoms.

The day is not yet, but we believe that experience will in the future show us that the removal of the gall bladder is nearly as necessary an adjunct to the operation for gall stones as is the removal of the appendix in appendicitis.

In the early cases removal of the gall bladder does not render the operation more formidable, but less so, for it prevents many an embarrassing case of biliary fistula and assures us that we have removed the seat of the beginning of nearly all cases of defective hepatic drainage.

In advanced cases with cholangitis it is essential to freely open and drain the bile ducts, for in the free escape of the infected bile lies our only hope for the cure of the condition. Then, too, gall stones are often met with in the ducts and a complete operation cannot be done without their removal.

A STUDY OF THE INITIAL SYMPTOMS IN 100 RECENT CASES OF SMALLPOX.*

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of Philadelphia.

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An important factor in the limitation of the spread of contagious diseases is their detection at the earliest possible moment. The initial stage of variola is characterized by a group of symptoms constituting a syndrome of great diagnostic import. Whilst it would be hazardous to base a diagnosis upon the initial manifestations alone; nevertheless the complex of symptoms is often sufficiently characteristic to excite a strong suspicion and lead to isolation of the patient and vaccination of exposed individuals, especially when smallpox is prevalent. It should not be forgotten that whilst smallpox is most contagious during the pustular and desiccative stages, the disease may be transmitted even during the invasive period.

After slight malaise the symptoms of smallpox commonly appear suddenly and often with considerable violence. Some patients complain of vague general pains, fatigue and loss of appetite during the latter days of the period of incubation.

The earliest symptom is most frequently a chill. This may be severe enough to be accompanied by chattering of the teeth or it may consist of a succession of creepy sensations scarcely sufficient to attract the patient's attention. Synchronously with the chill or immediately following it the fever appears. The temperature on the first day often rises to 103° or 104° F. and on the second and third day, with perhaps the exception of slight morning remissions, it rises still higher, frequently reaching 105°

and in some cases even 107°. The elevation of temperature is usually sudden; in but few diseases does it rise so quickly from the normal to a high degree. Even in varioloid the early symptoms are not infrequently equally severe, although occasionally they are so mild as to escape attention. But the eruption of unmodified smallpox never appears without being preceded by a well marked invasive stage.

While the fever continues, the skin, of course, is hot and sometimes dry, though more frequently covered by a moderate perspiration. The pulse is full, tense and rapid; its frequency generally corresponds with the temperature curve. In adults it may vary between 100 and 130 while in children it not infrequently reaches 160. The respirations are almost always increased in frequency, especially when the temperature is excessively high. Prostration is often extreme, being out of all proportion to the length of the illness. Strong and robust patients are frequently unable to stand without support, and when in the upright position soon become pale and liable to be attacked by vertigo or syncope. Thirst is great, the lips and tongue are parched and dry, and there is complete loss of appetite. Constipation is common. The tongue is usually coated with a thick yellowish covering and the breath is heavy and offensive. According to some authors the odor from the body of a patient at this stage of the disease is so peculiar and distinctive as to make it possible for the diagnosis of smallpox to be made by this symptom alone. We must confess that our olfactories have not acquired this degree of acuteness.

Irritability of the stomach is a very frequent manifestation. Occasionally the first symptom noted by the patient is severe and persistent vomiting. In such cases the disease has on more than one occasion been regarded as gastritis. The vomiting often continues for two or three days. It is apt to be accompanied by marked tenderness of the epigastrium. The irritability usually ceases when the eruption appears, and when it continues longer, it should be viewed with some solicitude. Especially in hemorrhagic smallpox is this symptom, together with pain in the pit of the stomach, apt to be distressing and prominent. Nausea and gagging are present in some cases, without actual emesis.

Headache is the most prominent among the early nervous symptoms. It usually follows shortly after the chill, but in a certain proportion of cases it precedes it, being not infrequently the earliest evidence of illness. Its intensity varies greatly corresponding in a measure with the height of the febrile action. At times it is so excruciating as to cause even self-restrained individuals to cry aloud. The face is often flushed, the carotids visibly pulsating. Restlessness and sleeplessness are common symptoms during this stage. When the temperature is high, delirium is prone to supervene. This usually takes the form of talkative incoherence, although some patients become quite violent. Coma is a rare exception in children. Convulsions are very common among children, more so perhaps in this disease than in any other of the exanthemata.

Pain in the back is a symptom so commonly observed that it is believed to be of special diagnostic value. It is not as constant as some of the other

*Read before the Medical Section of the College of Physicians, December 9, 1901.

symptoms, yet it occurs in more than one half of the cases. In perhaps one third of the cases it is sufficiently severe to cause the patient to volunteer information concerning it. Its diagnostic import, therefore, is due rather to its infrequency in the other acute infectious diseases, than to its constancy in smallpox. The lumbar and sacral regions are the parts to which the pain is usually referred, although it may extend to the dorsal region. As a rule it is more severe in unmodified smallpox than in varioloid, yet this rule is subject to many exceptions. In hemorrhagic cases the pain is often of an excruciating violence. Lumbar pain is more constantly seen among female than male patients, owing to the fact that the menstrual function is very liable to be excited by the initial illness of smallpox, causing the menses to appear out of their regular period. Pregnant women are exceedingly liable to suffer from abortion or premature delivery. The pain in the back owing to these causes is given greater prominence, therefore, in women.

General aches and pains are frequently complained of, appearing at the same time as the headache and backache. These may occur anywhere, but are usually referred to the lower extremities, particularly about the knees. The soreness of the general muscular system may lead to confusion of diagnosis with "la grippe". Vertigo, which is particularly manifest upon the patients assuming the erect position, is a common early symptom. It is often well marked in mild cases, for these patients are more apt to rise from their beds. Syncopal attacks may occur in weak individuals.

Peculiar prodromal rashes often make their appearance during the initial illness. Where they develop it is usually upon the second day of the invasive fever. They disappear ordinarily in from 24 to 48 hours. The frequency of these rashes appears to vary in different epidemics. During the wide spread and malignant epidemics of 1871-1872 they were very common. We have observed quite a few of these eruptions during the past months, although they are apt to fade before the patients are received at the hospital. The most common type is that resembling measles, with which disease, indeed, it is liable to be confounded. The eruption has a rather irregular distribution, being at times generalized and at other times limited to certain regions of the body. It moreover differs from the eruption of measles in that the rash is not elevated above the level of the skin and therefore scarcely appreciable to the finger passed over it. Its ephemeral character is also a differentiating feature. This roseola variolosa, as it has been designated, has a close analogue in the roseola vaccinosa which occasionally appears about 8 or 10 days after vaccination. The scarlatiniform type is, in our experience, rather less common than the morbilliform eruption. It, too, is inconstant in its distribution and extent, and equally evanescent. A third form of prodromal rash is the purpuric or hemorrhagic variety. This consists of closely aggregated, pin point to pin head sized petechiae which are in such close juxtaposition as to produce the impression of a diffuse redness. This type has a predilection for the lower portion of the abdomen, the groins, the inner aspects of the thighs and occasionally the axillae and lateral surfaces of the chest.

These eruptions are of diagnostic importance, for in association with classic initial symptoms, they afford strong presumptive evidence of smallpox. Prodromal rashes are more common in cases of varioloid than in unmodified smallpox.

One hundred patients recently admitted to the Municipal Hospital were closely interrogated as to the character of their initial symptoms. There was no attempt at selection of any particular type of smallpox. The number includes 28 cases of confluent smallpox, 15 patients with very profuse and semi-confluent eruptions, 29 eruptions of moderate severity, and 29 cases of mild varioloid. Of this series of 100 patients twenty-two died. Headache was the most constant of the initial symptoms. The various symptoms were present in the following percentages: Headache 86%; chills or chilliness 78%; backache 70%; vertigo 57%; vomiting 55%, with nausea in 10% more of cases.

In some of these cases the symptoms were of marked severity, whilst in others they were extremely mild. An effort was made to determine the earliest symptom observed by the various patients. It is recognized that some inaccuracy must arise from an attempt to chronologically arrange the symptoms from the histories given by the patients.

Chills were the first symptom in 35 cases.

Headache was the first symptom in 26 cases.

Backache was the first symptom in 16 cases.

Vomiting was the first symptom in 9 cases.

General aches and pains were the first symptom in 7 cases.

Vertigo was the first symptom in 2 cases.

In but two patients out of the hundred was there complete absence of initial illness. These occurred in a man 26 years, with a very mild varioloid, and in a colored woman aged 27, with an eruption of moderate severity. Upon close inquiry this patient admitted merely experiencing fatigue upon the day preceding the eruption. It is possible that some negative histories of this character may be due to poor memory and poor powers of observation on the part of the patient.

In the severe cases the initial illness was always well marked, although the classic symptoms were not invariably present. A man of 55 years who had a fatal confluent attack had merely as prodromes a severe chill, fever and prostration; headache, backache, vertigo and vomiting were absent. A male patient, 29 years of age, with an eruption of moderate severity, experienced during the initial stage, fever, repeated vomiting and pain in the stomach, the other symptoms being absent. On the other hand quite a number of patients with very mild eruptions gave a perfect history of the initial classic syndrome. A young woman of twenty years, for instance, with only three or four lesions on the face and a few upon the arms and hands, experienced at the outset of the disease headache, backache, repeated vomiting, severe chills, vertigo and aching in the legs.

The duration of the initial stage of smallpox is commonly 48 to 72 hours. It is rarely less, but it may be somewhat prolonged. Some text-books state that the temperature falls upon the appearance of the eruption. This statement requires qualification being true only in a general way. In our experience

in unmodified smallpox there is usually no decided remission in the fever until the second or third, and sometimes not until the fourth day of the eruption.

In conclusion we desire to call attention to the fact that in a large percentage of the cases of smallpox admitted to the Hospital during this year, the initial symptoms were interpreted by the physicians previously in attendance as the early manifestations of typhoid fever.

OPERATIVE TREATMENT OF BLADDER DESCENT AND SACCULATION.*

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Displacement of the bladder in the female may take place in several directions,—forward, upward, backward, laterally, and downward. Only in the downward direction is sacculation and imperfect evacuation liable to occur with any frequency, but its secondary effects in the causation of disease of the bladder are very important. The writer has seen but one case of pathological *forward* dislocation, in which instance what was really a hernia of the bladder occurred when the organ was full, owing to an extraordinary separation of the recti muscles in front of the abdomen, associated with a large ventral hernia. Here pressure of the hernia was required before satisfactory urination could occur. The *upward* displacements are caused by the growth of tumors, which may drag an adherent bladder, base and all, entirely out of the pelvis and spread it over the anterior abdominal wall. This is the variety usually caused by fibromata of the uterus. Irritation of the bladder follows, but seldom retention or cystitis from residual urine, as drainage is good from below. Tumors may develop in the true pelvis entirely below the bladder attachments, pushing as they grow the base of the bladder, with the uterus, out of the pelvis and compressing the urethra against the pubic bone. This is a more serious condition than where the bladder is pulled out from above.

A very troublesome case of the writer's, unique in his experience, was a multilocular cystoma with thick fleshy walls, probably a cystosarcoma. The pelvic basin was floored over with absolutely rigid new tissue in which cysts developed. One followed the line of least resistance and grew downward into the vagina, displacing the uterus above the pubic bone, partially shutting off the urethra by pressure against the pubis, so that catheterization was frequently necessary and there was much residual urine. This had resulted in cystitis and secondary nephritis. The tumor was attacked above and the solid portion proved to be absolutely irremovable. Relief was given by drainage of cystic portions of the tumor from below, which cured the bladder, and for a year and a half has made the patient fairly comfortable. The prognosis is, of course, ultimately unfavorable, though the patient is now doing well.

The *backward* displacements generally involve the fundus of the bladder and do not greatly affect the base; consequently less harm is done by interference

with drainage, though much distress may be caused. Some well marked instances have been observed by the writer when operating for encysted collections in the lower abdomen. When the pus lies outside the tubes, ovaries, and broad ligaments in certain forms of pelvic abscess, such as the tubercular, or when Nature is making an effort to dispose of a large blood mass after the rupture of an extrauterine pregnancy, the bladder fundus may become densely adherent to large and small bowel and by shrinkage of adhesions or other mechanical processes may be drawn well backward over the top of the uterine fundus. Such a condition is referred to in the report of a case of extrauterine pregnancy by the writer. *Annals of Surgery*, August, 1901.

Operative treatment involves the careful separation of the bladder from its normal attachments and the surgical management of the primary lesions. The *lateral* displacements are of little moment and are generally due to tumors. None of the above described forms call for treatment directed to the bladder condition primarily. An occasional fibroma of the uterus will require removal, more because it grows under the bladder attachments and so creates trouble, than because of its size or other features.

There remain for consideration the *downward* displacements of the bladder. Some of these are associated with procidentia or prolapse of the uterus

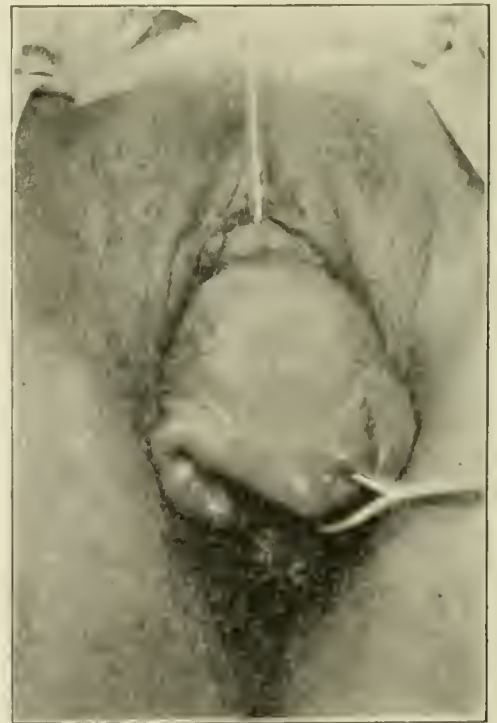


FIG. 1. Hypertrophied and torn cervix with bladder and vagina protrudes much more when patient is standing. Bladder cannot be fully emptied till reduced. Woman aged 41 years. Tonnuculum shown in centre of cervix uteri at lower edge of bladder. Catheter in urethra. Parts foreshortened to less than half natural size. Following operations done at one sitting: (a) Curettage. (b) Hypertrophied stripped out and amputated. (c) Median part of vaginal wall excised over cystocele and edges united. (d) Perineum repaired. (e) Two sub-peritoneal fibroid nodules excised (rubber gloves) from uterus and ventro-suspension done. Pulse at end of operations was 78. Highest pulse during convalescence was 52. In feeble patients the abdominal operation should be done at a later day.

* Read before the Medical Society of the State of Pennsylvania, September, 26, 1901.

and some occur when the uterine body is in situ. I have seen a large cystocele protruding from the vulva, when the uterus was held well up by pregnancy. Nearly all are originally associated with injuries to the pelvic outlet, usually occurring during labor, but the extensive subsequent displacements are due to the slow action of gravity, to straining, and to intra-abdominal pressure. In certain cases of uterine prolapse nearly the whole bladder and all of its base may be pressed outside the vulva. Again there may be more bladder descent than the location of the neck of the uterus would account for, as the bladder attachment has been peeled off, as it were, from the cervix, so that when a sound is put into the bladder, its tip appears almost at the external os. Such a condition requires special care to avoid wounding the bladder when it is to be separated from the uterus. Operations from above the pubis, such as those upon the round ligaments or by uterine suspension, have little immediate or no permanent effect upon the bladder position, if unsupported by other measures. In uterine procidentia the bladder descent is only a feature of the general condition of hernia through the pelvic outlet. The plan usually adopted for its cure by the writer involves several operative procedures, which may be thus enumerated. They may all be done at one sitting, if the patient can withstand either for an hour and a half. First, curetting the uterus. Then stripping out the hypertrophied cervix for one or two inches from bladder in front, from peritoneum behind, and from the broad ligaments at the sides; thorough ligation of the lower lateral uterine blood supply to bring about involution of the uterus; amputation of the cervix at a point regulated by the amount of tissue hypertrophy; attaching the vagina higher up to the uterus; taking in all slack in the anterior vaginal wall; thorough repair of the perineum, with special care to pick up the lateral fasciae. As a final step the abdomen is opened and the uterus suspended. It is firmly attached to the anterior abdominal wall in women beyond the child-bearing age. In young women a light attachment is made well in front of the plane of the cornua. This is the most satisfactory series of operations yet devised, and, if properly performed, rarely fails to cure the procidentia and to hold up the bladder as well. In well marked cases no one of these procedures can well be omitted, though probably the suspension can be first withheld as the cases lessen in severity.

The point to which it is especially desired to call attention is the method of taking up the redundant anterior vaginal wall and supporting the bladder. It is applicable whether there is descent of the uterus or not. The methods advocated by Sims and by Emmett of denuding various shaped areas on the anterior vaginal wall have been abandoned as too superficial and as not securing a sufficiently firm support from the lateral fascia. The method of Stoltz, which involves an oval denudation and a purse-string suture, is considered objectionable, because superficial and likely to take up as much slack in an antero-posterior direction as from side to side; though in some instances where there is increase in length of the anterior vaginal wall this must be overcome by the method of suturing. The normal

attachment of the anterior vaginal wall to the pelvic fasciae is mainly at the sides, the attachment to the bladder along the median line being by loose areolar tissue which can be readily separated by the knife handle. The best method is to cut out completely all of the anterior vaginal wall down to the loose areolar tissue underlying the bladder. Inspection will show where the greatest stretching has taken place. A free incision is made directly down to the bladder wall in the median line, extending from the cervix forward as far as any widening has occurred. With the knife handle and a few snips of the scissors the bladder is then peeled off the vagina freely right and left, few vessels requiring temporary clamping, usually none. The flaps are then



FIG. 2. Operation on anterior vaginal wall to support bladder. The cervix has been amputated and is not in sight. Vaginal wall is shown stripped from the right half of the cystocele. The flap drawn down off to the patient's right will be cut away entire, and the other half of the cystocele uncovered in same way back to dotted line or beyond. Flaps are to be so cut away that remaining portions of vaginal wall will just meet when drawn from opposite sides to the median line.

trimmed away on both sides with the scissors until, when their edges are brought together in the median line, all redundant tissue has disappeared. The opening may be oval, or it may be broader near the cervix than at any other point, according to the location of the greatest relaxation. Two or three continuous rows of fine catgut are inserted and buried one over the other, running from before backward in the cellular tissue underlying the bladder, or in the wall of that organ. They serve to obliterate dead space and firmly unite all portions of the wound surface except the cut vaginal edges. These are best held together by a continuous fine silk suture, which alone pierces the vaginal mucous membrane. When finished, the direction of all these rows



FIG. 3. The flaps have been cut away. One antero-posterior row of continuous catgut suture has been placed in cellular tissue, obliterating part of the denuded area. Needle shown continuing second row of buried suture.

of sutures is from before backward. All bleeding is stopped by the suturing and no ligatures are re-



FIG. 4. Vaginal flaps have been finally united with fine silk over three buried rows of catgut. Line of suture three inches long. Sims' speculum is in vagina, catheter in urethra. The next step is to be perineal repair.

quired. Primary union is always obtained, as the operation is done under a continuous stream of water, and only instruments are brought in contact with the wound. Where there is much separation of the whole vagina from the pelvic fasciae, the greatest care must be taken in operating on the posterior vaginal wall and perineum to catch fascia in the stitches. The operation in these cases must always include very thorough perineal repair, the method of Emmett being preferred.

The method as here outlined commends itself because of its ease of execution and certainty of results. With whom it originated I do not know. It is almost always done as one of a series of operations performed at a single sitting, simply because descent of the bladder and anterior wall of the vagina are almost always accompanied by other lesions, such as lacerated cervix, relaxed outlet, subinvolution and descent of the uterus.

The result of thus indirectly restoring the bladder to its proper place in the pelvis is soon seen in the improvement in the irritability of the organ. Drainage becomes more complete and the tendency to urine decomposition disappears. Another symptom cured is the slight incontinence of urine, as when coughing or sneezing occurs. Where well-developed cystitis exists, a cure by the usual methods is made possible.

A number of cases have been operated upon by this method in the past two years—some twenty-five in all. There was usually present much distress due to bladder tenesmus, burning, frequent urination, imperfect evacuation. In some urination could only be accomplished after using the hand to replace the bladder. Several had serious interference with sleep. The results have been very satisfactory as regards anatomical cures and the cessation of symptoms.

ON THE VALUE OF THE RECTAL TEMPERATURE IN PULMONARY TUBERCULOSIS.*

of Cotswold, England.

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No one can deny that a true knowledge of the amount of pyrexia in a given case of pulmonary tuberculosis is of the greatest importance, as it is, firstly, to a great extent the most reliable indication of the amount of active mischief going on in the lungs; and, secondly, one of the most important of data in giving a prognosis.

At the present time there is a great difference of opinion as to where the temperature should be taken—in the mouth, in the axilla, or in the rectum. The vast majority of medical men still hold to the time-honored custom of taking an oral or an axillary temperature, but a few are more inclined to follow the plan carried out by Walther at Nordrach and to insist upon the superior value of the rectal temperature. The rectal temperature either gives important results and is, therefore, well worth the extra trouble and annoyance which it may cause patients, or it is a mere fad and unworthy of acceptance at

*From advance Sheets furnished by our representative at the Congress on Tuberculosis, London.

†The charts referred to in this article have been unavoidably omitted. They are not essential to an understanding of the paper.

the hands of the profession. The object of this paper is to endeavor to show that the rectal temperature is of grave importance, and that it is well-nigh imperative in cases of pulmonary tuberculosis, especially when patients are living in the open air all day long.

The esthetic reason for not taking a rectal temperature, which is sometimes put forward, should not, we think, be allowed to bias our judgment when we are simply acting in the interest of our patients. It is surely a self-evident fact that if we are to control a patient's actions for the whole day and to regulate his walks entirely by the temperature chart, this temperature should be as free from error as possible. I believe that this is to be found in the rectum. It has been known for many years that the temperature in pulmonary tuberculosis may be apyrexial if taken in the mouth or in the axilla. Without denying for one minute the occasional occurrence of active disease with apyrexia, I nevertheless believe that apyrexia is far less common than is generally held, and that many cases apparently apyrexial when tested in the mouth or axilla show, on the contrary, distinct pyrexia when the thermometer is placed in the rectum.

The first three charts are the records of the oral temperature in three different patients, all of whom had active disease going on, though the charts give no indication of the same. Chart I. is taken from a patient with disease in both lungs and very active mischief at the left apex. Physical examination revealed softening and rapid breaking down, but the chart here shown denotes no rise in the temperature; in fact, for the whole fortnight, as shown, the temperature never rose above normal. Chart II, is from a case with abundant physical signs of consolidation in both upper lobes with a cavity at the left apex. The temperature on two occasions in the course of a fortnight rose only to 99° F. Chart III. records the temperatures of a patient of excitable temperament with active disease at the apex and at the base. Here again during a whole fortnight there was no rise of temperature above the normal.

The question now arises, what is the normal rectal temperature and what limits may be allowed in tuberculosis when exercise is being taken? I consider the temperature of a healthy man when taken in the rectum should be normal or subnormal in the early morning—97.8° or 97.6° is a good morning temperature. After breakfast the temperature will rise to 99° or rather more, and exercise will have the effect of raising it a few points further. In the evening the temperature should again fall to normal. Exercise and food raise the temperature about one degree Fahrenheit. Wunderlich gives the average temperature for the twenty-four hours thus:—When taken in the the axilla, 98.6°; taken in the mouth from 98.78° to 98.96°; and in the rectum, from 99.14° to 99.5°. Guttman again gives the average temperature for the twenty-four hours when taken in the axilla as being from 98.6° to 99.14°. (See Chart IV.) As regards the limits allowed, I think that the temperature should be normal in the morning, before walking is permitted. Certainly if any exercise is taken, it should be the very slightest, and then only on the level for, say,

ten minutes at a time. A rectal temperature which is continually 99° in the morning, even though it keeps under 100° during the whole day, indicates activity and contra-indicates exercise, I think, and if rest be persevered in, these temperatures almost invariably in the long run come down to normal. It is in these very cases that the rectal temperature is so important, as in very many the oral temperature is below normal, and if so guided, we are not likely to allow our patients to take exercise to the extent that we should, if we followed the oral reading. Chart IV. indicates what a rectal temperature should be in a patient who is doing well and is walking several miles a day. In this case there was disease in the left lung of fibro-caseous type and early laryngeal disease. The temperature after exercise was generally under 100°, and it dropped to under 99° if no exercise was taken. This is not an isolated case; in the cases of all patients who do really well, a chart similar to this may be expected to be found. Of course there are exceptions. The sanatorium treatment of tuberculosis demands individualization in every particular, especially in feeding and in exercise, because if a patient is in other respects doing well, there is no reason to restrict his walks if his temperature should rise to 101°. It may be idiosyncrasy or due to undue nervous, excitement. Chart V. indicates this very well. The patient, who was exceedingly nervous, used to worry during the whole of his walk about his temperature lest he should be too high; in fact, he even went so far as to take his temperature during his walk if a suitable opportunity arose, with the result that it was almost always 101° or thereabouts. When sent out with a companion so as to divert his thoughts from himself, the temperature was frequently almost a degree lower, clearly showing that the rise was simply due to nervousness. Again, I am acquainted with a typically healthy man whose rectal temperature is always over 100° after exercise, and between 101° and 102° after a ride on horseback. There are cases in which one must individualize. The height to which the temperature rises after exercise is not, in my opinion, of great importance provided that it drops directly the recumbent position is assumed. It is of the utmost importance that the temperature be taken directly after exercise, as a delay of fifteen minutes may cause the difference of one degree, and all observes who do not insist upon this, will be led to believe that muscular exertion does not raise the temperature to any extent.

I wish now to show the value of the rectal temperature in tuberculosis. I cannot speak of other diseases, because I have had no experience with them, but I have heard Dr. Cayley say that he has seen no advantage from this method in enteric fever, and this is only what might be expected for reasons that I shall state presently. There is no doubt at all in my mind that in many cases of tuberculosis there is often no resemblance between the temperature taken in the mouth or in the axilla and that in the rectum. On the other hand, I acknowledge that in other cases there is little or no difference between the oral and rectal temperatures, though why this should be I cannot at present explain. This much I know, it is in the lower ranges that we find the greatest discrepancy and in the higher ranges the

greatest resemblance. Thus in Chart VI., that of a patient with early infiltration of the upper lobe of the left side, there is a great difference between the two records; in some records there is almost four degrees of difference, the rectal temperature rising after exertion and the oral falling as much as two degrees. On the development, however, of an acute caseous tuberculosis of the lower lobe on the left side, the temperature rose in the rectum to 104.2° and in the mouth to 103.6° , and during the whole time that the temperature kept up; there was very little difference between the oral and rectal temperatures, but when with a subsidence of the acute symptoms the pyrexia diminished, the difference between the rectal and oral temperatures was as marked as ever. Chart VIII. is the record from a female patient who was kept in bed for fourteen days consecutively with the result that no comparison between the two temperatures can be traced. The rectal record denotes active mischief, but it would be difficult to demonstrate this from the oral record or even to diagnose tuberculosis unless one be led to do so by the subnormality of the temperature. Chart IX. gives the temperature of a patient with infiltration at both apices. This shows a typically good rectal record, being normal morning and evening and with a rise on exertion to under 100° . The oral record is typical of nothing. Chart X. shows great dissimilarity between the rectal and the oral records, the rectal in many instances rising, while the oral is falling to a corresponding degree. Chart XI. shows regularity of temperature, but always two degrees of difference between the rectal and the oral after exercise. Chart XII. gives the temperatures of a patient with considerable disease at both apices, and Chart XIII. those of a man, aged thirty-six years, with fibro-caseous tuberculosis of the left lung. Charts XIV. and XV. show the dissimilarity between the oral and rectal temperatures in the cases of two different patients. I also think that a glance at Charts XVI., XVII., and XVIII. will show how unreliable the axillary temperatures may be in some cases. The rectal record in each instance shows very strongly the activity of the disease, whilst the axillary record would mask any progress that the disease might make.

All the above records have been carefully taken for at least five minutes, the regulation time, and in most cases with new tested thermometers. I trust that by these charts I have been able to show the value of the rectal temperature. I think that mistakes are bound to be made in apportioning exercise unless the temperature is taken in this way. It is a very common experience to hear patients say that they have taken their temperature regularly at home for some weeks, and that they have no pyrexia, and yet when the rectal temperature is taken the thermometer in almost every case reveals a degree of pyrexia more or less marked.

Walther of Nordrach, as is well known, is very emphatic upon the importance of the rectal temperature, and so are all his followers. I fail to see how any man who has given this method a fair trial in tuberculosis could ever rely on any other; in fact, I am always afraid of being misled by an oral temperature—I mistrust it; but with a rectal tem-

perature, on the other hand, I see exactly what degree of activity is going on, feel sure of my ground, and can be decided in the matter of exercise. With many patients it must mean all the difference between rest and exercise, progressive disease or convalescence. Exercise is one of the most important and yet one of the most difficult points to be decided; on that to a great extent hangs the great issue at stake. More patients probably come to grief through over-exercise than through anything else; it is to my mind the secret of the open-air treatment, the *crux* of the whole matter, when to allow exercise, and how much. If we made it a cardinal rule, and I most assuredly do so, that pyrexial patients must have no exercise, then surely we must know when we have to deal with pyrexia, and need not grope self-complacently in the dark with an oral temperature, buoying ourselves and our patients up with the false idea that there is no fever, and therefore that all is going well, while all the time there is pyrexia, there is actual disease going on, and yet we know it not. It is so easy to take an oral temperature and to shut our eyes to the rectal, easy for the physician, and gratifying for the patients, because with a low temperature the treatment is not so irksome or so monotonous, and patients think that they are doing well, which is half the battle, but they sorely resent being kept at rest for slight degrees of pyrexia as shown by the rectal record.

In conclusion, I think: (1) that in many cases the oral and axillary temperature records are untrustworthy; (2) that in a few cases there is very little difference between the rectal record and the oral record; (3) that the greatest discrepancy is found in the lower range of the temperature and conversely the greatest similitude in the higher ranges; (4) that the rectal temperature gives in almost every case a truer idea of the amount of pyrexia; and (5) that if we wish to do ourselves, our patients, and our treatment justice we should insist upon taking the temperature in the rectum.

HALLUCINATIONS: THEIR PATHOGENESIS, CLINICAL IMPORT AND MEDICO-LEGAL VALUE.*

By J. LEONARD CORNING, M. D., LL. D.,

of New York.

Hallucinations are among the most interesting phenomena that confront the alienist; and some understanding of their nature and significance is certainly indispensable to every physician. They are among the most common manifestations of insanity, but are also found in those otherwise apparently sane. They may be evoked, too, under certain circumstances by suggestion and by the use of various drugs. The word itself has been greatly abused by writers, both lay and professional. Sometimes it has been applied to illusion, more commonly, however, and more flagrantly to delusions. The last misapplication is frequently encountered in works of fiction, whose authors, bent upon the achievement of sensational effects, chill the spines of their readers at the expense of truth. Nor is this the worst of it; many—and supposedly competent—

* Read at the Semi-annual meeting of the Medical Society of the State of New York, October 15th 1901.

writers on psychiatry—I recall at this moment one particularly flagrant instance of it—have used the term in such an impossible fashion as to place ones mind, at the very outset of study, in an utterly false attitude towards the whole subject of mental diseases.

It would be a great assistance, could we tell in terms of causation, of simple physiology, precisely what happens in the brain when an hallucination is induced. This, unfortunately, is not satisfactorily to be done, in the present state of knowledge, save in a purely inferential way. The most we can do, now, is to analyze the phenomenon itself, in the light of current psychology, and frame our definition accordingly, leaving to a future, and perhaps more perfect, cerebral physiology, the task of completely unravelling the knot.

Bearing in mind, then, that a true, a normal, sensory perception requires something external, something outside of the cerebral ganglia, and usually outside of the organism itself for its initiation, we may say at once that an hallucination, in the strict sense of the word, takes its rise in the ganglia, is due to something—an excitation, in the language of common speech—having its seat in the gray matter of the hemispheres, and probably in those parts of the cortex which are active in normal perception.

Further, and casually, it is said by some (1) that "the centres aroused by incoming peripheral currents are probably identical with the centres used in mere imagination."

The bearing of this dictum upon the morbid physiology of hallucinations is obvious. By provisionally accepting it, the mind is set on the way at once to a reasonable conception of the mechanical elements rendering possible the participation of the imagination in the genesis of hallucinations, and more especially of those instigated by suggestion.

To return again to the original thread of the argument, a true sensory perception presupposes as a *sine qua non* physiological stimulation of the sensory nerves. No such stimulation is, however, necessary to the genesis of an hallucination, which arises in consciousness with all the vividness, all the verisimilitude of a true preception, in the complete absence of a normal sensory provocation. Those who are subject to hallucinations—of sight, for examples—may be acutely aware, may bear vividly in consciousness visual images, which have no counterpart in reality. The like applies to all the other senses.

There are several other interesting facts that might here be set down; but I venture to believe the bent of thought established by what has been said sufficient to warrant the intelligent framing of a definition, a definition explicit enough, so far as the manifestation is concerned, to enable one to recognize and intelligently interpret the phenomenon whenever and wherever encountered.

An hallucination may be defined then as a phenomenon which—in the absence of physiological incitement through the peripheral nerves—looms in consciousness with all the qualitative and intensive characters of a true sense-impression.

Deriving its being from within instead of from

without; dispensing entirely with the physiological offices of the peripheral nerves; bearing no resemblance to the external, the objective reality of the moment; yet, looming in the consciousness of the subject with all the characters of sense reality—such a phenomenon is, in the last analysis, nothing more than a kind of perceptive counterfeit, a vivid imitation of a sense-impression, deriving its elements, however, entirely from hoarded sense-memories—to speak graphically—and bearing, therefore, no relation whatever to the external reality of the moment.

In its nature, then—irrespective of all questions of immediate incitement—this counterfeit sense impression, this hallucination is central, while the true, the physiological sense impression is peripheral in its origin.

It follows as a self-evident corollary that those who have never seen can never—be they sane or insane—suffer from a visual hallucination; there are absolutely no visual memories to draw upon. The same principle is applicable to the other senses. Where the sensory loss has occurred long after birth—years perhaps—the principle does not hold, however, with the same force.

The resemblance between the hallucinatory phenomena of dreams and the hallucinations of the insane has elicited a good deal of interest among psychologists and alienists alike. This interest has something more than a purely academic justification.

Thus Heerman¹ who has investigated the phenomena of dreaming in the blind, found that visual sensations and ideas were entirely absent from the dreams of those who had lost their sight previous to the fifth year. His conclusions in this regard were based upon the careful study of fourteen cases.

The interesting conclusions of Heerman have been confirmed by Jastrow.² Of thirty-two persons who became blind before the fifth year not one saw in dreams. On the other hand, of twenty persons who became blind after the seventh year all had dream vision. It is evident, therefore, that the period between the fifth and seventh year is the critical one, in so far as the hoarding by the memory of visual impressions is concerned. When one considers the essential similarity between dreams and hallucinations, the bearing of these observations upon the genesis of hallucinations is obvious. If the sensory centres, instead of being educated by the constant reception of sensations shrivel, functionally speaking, for lack of such stimulation, there can, of course, be no revival of sensory memories or ideas which simply do not exist. Physiologically, these are interesting data; clinically, they are hardly less so; legally—in cases of alleged insanity in persons suffering from a sensory defect, particularly of sight or hearing—they may at any time become so.

Fascinating as the study of hallucinations is in the sane—in those assumed—erroneously, I think—

1. "Beobachtungen und Betrachtungen ueber die Traeume der Blinden," Monatschrift fuer Medicin, etc., Leipzig, 1838.

2. Jastrow, "Dreams of the Blind," Princeton Review, July, 1888.

to be in an otherwise perfectly normal mental condition, the length and rather casual nature of the present outgiving precludes it, save in a purely incidental way, save as it bears on the analysis of the phenomenon itself. With this reservation, let us confine ourselves to hallucinations as they arise in the insane. For the purpose of convenient discussion, hallucinations may be divided into primary and secondary;—the first, those excited by an irritation—*not physiological stimulation*—of some nerve of special sense or of its cortical termination; the second, those evoked by a dissociated idiational process. Hallucinations following middle ear disease or cerebral exhaustion are instances of the primary variety; those found in delusional insanity, or much of it, of the second.

While it is probably true that persistent brooding on a long-existent hallucination of primary origin may ultimately eventuate in the mental alienation of the subject, it is none the less true that in the great majority of mental affections the hallucinations are secondary to derangement of thought, either conscious or subconscious. But this fact detracts not at all from the importance of the hallucination itself, but, on the contrary, emphasizes it. How often, indeed, does it happen that the declaration of an hallucination is the first symptom to arouse obtuse relatives or friends to the serious mental condition of the subject. Brought, moreover, through such a warning under the observation of a competent examiner, how characteristic, in most instances, is the attitude of the subject towards the strange phenomenon which has stolen into consciousness! Creature as it usually is of his morbid mood and ideation, and partaking of their qualities, he will usually convince you by his language that he believes in its reality, logical and even sensory proofs to the contrary notwithstanding. Here is the dividing wall between primary so-called sane hallucinations, of whose spuriousness the subject becomes usually fully aware, either through his own uninvolved senses or through the arguments of others—especially in the beginning—and those of secondary origin, those arising as a sequence of pre-existent morbid ideation.

A proper understanding of the psychological relations herein implied is of assistance in the clinical examination; is valuable in framing the prognosis, and may, under certain circumstances, rise to supreme importance in a court of law. Among all hallucinations of the insane, those of hearing are the most common by far. Ringing, whistling, rushing and other indefinite noises are common to acute insanity, especially melancholia and the toxic insanities. In systematized delusional states voices are heard and externalized by the subject—voices uttering words, sentences, or carrying on protracted conversations.

Sometimes, however, the voices are not referred to the environment by the subject, are not externalized—so-called “psycho-motor” hallucinations. These have been attentively studied by Legros, but, in my opinion—as so often happens in neurological and psychiatric matters—he has over-classified them.

Hallucinations of sight, while relatively infre-

quent in common idiopathic insanity, are sometimes present in hysteria, and certain forms of epilepsy. They are exceedingly characteristic of poisoning by various drugs—mineral and vegetable, and of alcoholism;—in short of all toxic derangement of cerebral function. Of the impossibility of their occurrence in those born blind, or in those deprived of sight at a very early stage, mention has already been made.

Rarer are hallucinations of smell and taste. Even when they exist, it is often difficult if not impossible to determine whether they are primary or secondary—whether due to the incitement of gastro-intestinal derangement or to the suggestive sway of erroneous ideas. Like the hallucinations of sight, they are rather distinctive accompaniments of alcoholism and other toxic psychoses, of epilepsy and of systematized insanity.

Tactile hallucinations, false sensations of pain and hallucinations of the muscular sense possess a uniquely disagreeable interest to the alienist, because of the hypochondriacal and persecutory ideas that are readily built upon them. Various allegations of sexual violence—castration by men, obscene outrage by women; the assertion that they are beset by insects, so that the patient may disrobe in the ward of the hospital, or, if at large, on the public street; the belief that they are insidiously attacked by electricity, or other hidden agency are familiar illustrations.

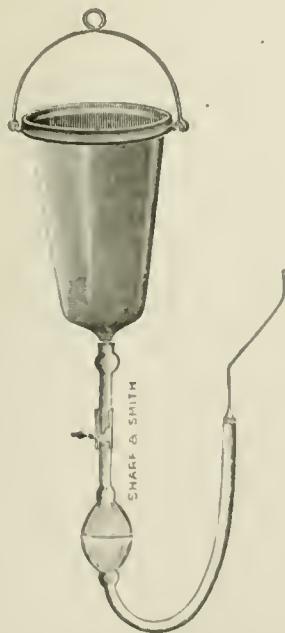
In concluding this rather hasty sketch, I cannot refrain from entering a protest against the habit of regarding hallucinations as compatible with perfect cerebral health. Nor, on the other hand, is there the least evidence to warrant one in looking upon these phenomena as a distinct pathological entity. They are but parts—albeit integral and important—or a more general, a more basal cerebral mischief; and as such are to be both considered and managed with the whole.

TREATMENT OF CERTAIN PURULENT CONDITIONS OF THE ANTRUM OF HIGHMORE THROUGH THE NATURAL OPENINGS.

By NORVAL H. PIERCE, M. D.,
of Chicago.

The subject of this paper was chosen, first, because it is apparent that the ostium and accessory openings into the antrum of Highmore have not been used with the frequency they should be in the diagnosis and treatment of empyema; second, in order to make public the excellent results the writer has achieved in the treatment of certain purulent conditions of the sinus maxillare through the natural openings. Before proceeding to the chief part of this essay, it may not be amiss to take advantage of this excellent anatomical preparation from Dr. John W. Murphy's interesting collection to make a few prefatory remarks on the parts involved. The hiatus semilunaris lies in the middle meatus. In order to see this, we raise the middle turbinated body and now behold a rounded eminence, the bulla ethmoidalis, which contains the aperture of the middle ethmoidal cells. Below this is the infundi-

bulum which we may trace upwards and forwards to the opening of the frontal sinus. Its lower extremity leads to the sinus maxillare which receives the openings of the anterior ethmoidal cells and the ostium maxillare. The form and size of the ostium maxillare varies greatly. Most frequently it is an elliptical slit; it may be round or kidney shaped. The smallest ostium Zuckerkandl has seen had a diameter of 3 mm., the largest 19 mm. It was absent in only two of his enormous collection of skulls. Beneath this is found what Zuckerkandl denominates the accessory openings into the maxillary sinus. These accessory openings are pictured also in Henle's "Handbuch der Anatomie" and in Cruveilhier's and Sappi's anatomical works. They usually occur bilaterally, and they may be placed in any position in the middle meatus, but they are most frequently found in the regions of the hiatus semilunaris; they are oval or round in form with sharply cut edges and vary in size from a millet grain to a lentil; occasionally they are still larger. Giraldis believes that these openings are the result of pathological processes, because they are not found in young individuals. Zuckerkandl confirms this view inasmuch as he has observed rarefaction of the mucous membrane at points corresponding to these accessory openings. The importance of a knowledge of the existence of these openings must be clear to all who have to do with the treatment of disease of the maxillary sinus. According to Zuckerkandl, these openings were found in 10% of heads which he examined in his anatomical investigations. Hartmann believes that these openings are found more frequently in persons suffering from sinusitis. We can see how readily the ostium in the specimen which I hold in my hand may be reached by passing a properly bent probe through the anterior nares along the middle meatus. In washing out the sinus I use Moritz Schmidt's canula; this is attached to a bulb syringe which in turn is connected with a gal-



lon percolator jar. The apparatus may be held by an assistant during the process of irrigation or may

be suspended by an iron standard at the level of the patient's head. The amount of force of the current is regulated by pressure on the bulb of the syringe. It is unnecessary to say that a solution of cocaine and suprarenal capsule is used in order to contract and anasthetize the parts. It is best applied by means of a cotton carrier, the point of which is bent so as to enter well into the sulcus. Causes which preclude catheterization of the ostium maxillare are: narrow nasal chambers, deviations and spurs of the septum, polypi, hypertrophies, localized hyperplasia, synechia, osteoprytes about the region of the hiatus and an inaccessible ostium. During introduction of the canula the patient's head is inclined somewhat backward. When the canula is in place the patient's head is bent forward in the median line and the solution from the nose is received in a receptacle held beneath the patient's chin. The canula is introduced under illumination with crook directed upward. When the point arrives opposite to the middle of the middle turbinated body, the instrument is gently insinuated into the middle meatus, and the opening into the antrum felt for. When the instrument passes into the ostium or an accessory opening, sight and touch make us aware of the fact. It is my experience that in many cases of antral disease the ostium or an accessory opening may be found without the aid of vision as easily as the opening of the Eustachian tube. With the aid of illumination and anterior rhinoscopy the procedure becomes much easier. Exploration of the ostium maxillare is by no means a recent device. The dentist Jourdin in 1765 employed this method to ascertain the patulane of the ostium without illumination, depending entirely on the sense of touch. When the canula is in the sinus we have the choice between aspiration, inflation and rinsing the cavity. In the diagnosis of antral disease all of these procedures may be of value, but the latter procedure is the most important, inasmuch as the exudate may be small in quantity or very thick and only appear in the washing. All fluids used in washing should be sterile and bland. For diagnostic purposes sterilized Thiersch's solution is the most acceptable. We will frequently observe after such a washing the entire disappearance of the symptoms of an acute empyema, or they will be greatly diminished. Solutions which I have used in the treatment of maxillary sinusitis are: Thiersch's solution, solution of bicarbonate of soda, 2.5% carbolic acid solution, saturated solution of boracic acid, aceto-tartrate of aluminum (1 ounce of the saturated aqueous solution to 2 quarts of sterilized water). It is needless to say that these irrigations can be curative only in uncomplicated empyemas, though cases of dental origin have been reported where healing has taken place, notwithstanding the fact that the suspicious tooth remained. It is necessary in all cases to exclude all hindrances to healing, such as empyemas of neighboring sinuses, especially that of the frontal and ethmoidal. Polypi and hyperplasias or diseased teeth should receive the necessary attention.

One disadvantage of this method of treating disease of the maxillary antrum is that it necessitates a visit from or to the physician every time the antrum is irrigated. Very rarely do we find a patient who can find the opening himself, though I have

seen such an instance. In most acute and in many chronic inflammations, however, the diseased conditions are overcome after surprisingly few treatments. The following cases will illustrate the results obtained:

CASE I.—M. R., male, banker, aet. 39, sanguinous nervous temperament, was seized with a fever, rhinitis and pains in the head three days before I saw him. At the time he consulted me his temperature was 101.3°F.; the pain was localized to the right side of the face and he was in a highly nervous state from loss of sleep. He complained of sensitiveness of the upper teeth on the right side. The discharge was muco-purulent and much more profuse on the right side. Transillumination gave a marked right infraorbital shadow. The mucosa of the nose was greatly swollen. After thorough cocaineization muco-pus could be seen coming from the region of the hiatus. The canula was introduced with ease into an accessory opening. Purulent mucus in abundance came away in the Tiersch's solution, followed by clumps of thick brownish material. The patient experienced immediate relief and that night slept well for the first time since the beginning of the attack. Irrigations were continued daily, and the solution came away perfectly clear after the fifth treatment.

CASE II.—A medical student, male, aet. 23. Had attack of grippe beginning ten days before I saw him. Temperature ranged during this time from 100° to 102.5°F. He suffered from severe pain in the frontal and temporal regions, photophobia, lachrymation and great depression. There was profuse discharge from both sides which possessed a disagreeable odor. Both cheeks were slightly edematous, and pressure over them elicited expressions of pain. The patient gave a history of a similar attack about a year before. After application of suprarenal capsule and cocaine, both antra were irrigated through natural openings. Muco-pus came away from both. Headache, lachrymation, photophobia were relieved almost immediately. The distressing discharge which with the headache had kept the patient awake was lessened so that he slept. His recovery was continuous and at the end of six days complete. About two weeks later he came to my office complaining of slight tenderness over the left anterior antrum and increase of discharge from that side which seemed to have an odor. Irrigation revealed a small quantity of thick yellowish pus, which disappeared after the tenth irrigation. It is not unusual to observe relapses in these cases. Indeed, it is probable that in many cases the acute inflammation is but an accentuation of a subacute or chronic process of so slight a character as to produce little or no disorder.

CASE III.—S. K., female, married, aet. 29, complained of discharge and offensive odor from nose. The discharge was especially annoying at night as it ran back into the throat and caused cough; she suffered from recurrent attacks of neuralgic pain in the right side of face. Inspection revealed slight atrophy of both inferior turbinated bodies and the presence of thick muco-pus in both chambers. Transillumination gave right infraorbital shadow, canulization slightly difficult. Irrigation brought away about 2 drachms of thick yellowish matter. Iodoglycerine with vibratory massage applied to the mucosa of the nose. Patient employed irrigation by means of gravity douche twice daily at home. The nasal symptoms improved immediately. After about a month the solutions used in irrigations of the antrum came away perfectly clear. The discharge from the nose was reduced to a minimum. The neuralgic pains and odor had disappeared and the patient's appearance and general health had greatly improved. Probably in many cases of antral disease the absorption of septic material by the mucosa of the antrum causes a low grade of pyemic poisoning.

CASE IV.—B. K., merchant, aet. 38, married, complained of discharge into throat at night which awakened him and caused cough, he had similar attacks several times in past winter. Examination revealed tenacious muco-pus in the left middle meatus which during removal adhered to region of hiatus. Left infraorbital shadow on transillumination. Irrigation through opening in middle meatus revealed muco-pus. Operation was advised but refused. The irrigations through the natural openings were carried on daily for three months at which time the solution came away perfectly clear. He was kept under observation for six months without relapse occurring. Here we have a chronic

sinusitis cured by irrigation through the natural opening. Relapses, however, are common. Therefore the patient should be kept under observation for a long time. Cases might be multiplied, but that is unnecessary for our purpose, above quotations from my records being sufficient to show what may be done. It should be understood that not all cases may be treated through the natural openings, and that not all cases which may be reached through such openings will recover without further surgical interference.

In conclusion I would say:

1. That there is strong evidence to warrant the belief that in diseased antra accessory openings are more frequently found than in healthy antra.
2. That in a certain number of cases the ostium may be used to irrigate the antrum.
3. That we should in all cases whether for diagnosis or treatment try for the ostium or accessory openings before resorting to surgical puncture, whether through the inferior or middle meatus, the canine fossa or alveolar process.
4. That it is of no importance whether the opening through which we irrigate be the ostium or an accessory opening.

A CASE OF MORPHINE POISONING; SUCCESSFUL EMPLOYMENT OF COCAINE AS AN ANTIDOTE.

By ALBERT C. BARNES, M. D.
of Philadelphia.

The case herewith reported has many points of practical and scientific interest. 1. It illustrates the absorption of toxic quantities of morphine in an unusual manner. 2. It is, as far as the writer knows, the first case on record of the use of cocaine antidotal to morphine. 3. It offered an excellent opportunity of a detailed study of not only the toxicologic action of both morphine and cocaine, but illustrated clearly the antagonism of the physiologic activities of these two alkaloids.

The history of the case is as follows:

Girl, aged 17, employed in the laboratory of a firm of manufacturing chemists, was engaged in molding finely powdered morphine sulphate into hypodermic tablets. About two hours after beginning work the patient's companions, engaged at the same work, noticed that her mental powers became obtunded, her physical movements less, and that she acted in a dazed and peculiar manner. Shortly after the appearance of these symptoms, the patient's head dropped forward on her arms and it was found upon investigation that she was unconscious. The writer was called to see her within an hour after the development of unconsciousness, when from the history, and existing symptoms and physical signs it was recognized as a case of morphine poisoning. Absorption of morphine had probably taken place from the upper respiratory mucous membrane. Unconsciousness was profound; violent shakings, loud noises, etc., failed to elicit anything but most transitory—second or two duration—signs of mental life. The respiration, when first seen, was six to eight per minute; the individual inspirations were very deep. Later the respiratory movements became shallower and irregular and, still later, periodically shallow and irregular (Cheyne-Stokes type). At one time there was complete cessation of voluntary respiratory movements which necessitated artificial stimulation to respiration by means of alternate rhythmic contraction of the patient's chest, slapping the face with towels saturated with ice water, etc. During this period of respiratory stillstand her face was dark, cyanotic and covered with profuse perspiration.

The depression of the cardiac functions was almost equally pronounced. The individual heart beats, counted by direct auscultation of the chest, registered, at various stages of the poisoning, sixteen, twelve, and eight, respec-

tively per minute. The blood-pressure, estimated by the volume of the pulse, was apparently normal. The characteristic "pin-point" pupils were present; later, however, during the stage of respiratory cessation, the pupil became less contracted; this phenomenon is to be explained by the asphyxia.

Even from the start the case seemed very unfavorable; the occurrence of cessation of respiration and the marked cardiac centric depression were extremely ominous signs.

The usual well-known restoratives were applied before the writer was called. The patient was kept on her feet, compelled to exercise voluntary efforts at walking to and fro in the room, was given repeated strong decoctions of coffee, her face was frequently dashed with water, slapped with wet towels, etc. These procedures are of course useful adjunctive ones, but are unreliable as life-saving methods in severe forms of opium poisoning. The question to be answered, and answered promptly, was, what remedy, which could be administered hypodermically, is strongly and primarily stimulant to the central nervous system—the cerebrum, cerebellum, and the medulla with its contained cardiac respiratory and vaso-motor centres?

Atropine was not employed, because the pharmacological action of atropine is not, contrary to the accepted teachings, such as would indicate its use as an antidote to morphine. The elaborate studies of metabolism under morphine and atropine recently made by Professor Reichert, which, however, were not published until after the occurrence of the writer's case, shed much light upon the respective influence of morphine and atropine and show why they should not be used antidotal to each other.

At the time of the occurrence of this case the suggestion that cocaine be used as an antidote to morphine had never been made; nor are there, as far as the writer knows, any cases of cocaine-treated morphine poisoning on record. Cocaine was employed in this case because its primary physiologic activity is that of a descending stimulation, i. e., it first stimulates the cerebrum, then in succession, the cerebellum, medulla and spinal cord; in the case of morphine poisoning under discussion all of the functions of these parts of the central nervous system were profoundly depressed—in fact almost abrogated. Cocaine stimulates the respiratory centres, hence, accelerates respiratory movements. It stimulates the heart and vessels by direct action and also, by a specific effect upon the accelerator mechanism, produces increased heart activity. Cocaine produces rise of body temperature while morphine causes a fall of temperature. Moreover, the metabolic changes caused by cocaine are also directly opposite to those produced by morphine. It is therefore evident that the primary effects of toxic doses of cocaine are directly antagonistic to the late effects of toxic doses of morphine.

For this reason the writer's patient was given one-half grain of cocaine hydrochlorate, hypodermically; moreover this first injection was given at a time when the patient was apparently moribund. Marked improvement was not noticeable, so that a second injection of one-half grain of cocaine was given in one half hour. The effects of cocaine were plainly evident ten minutes after the second injection. The pulse and respiration became more rapid, and the patient showed signs of returning consciousness. However, there was not enough improvement to indicate that the stimulation had been sufficient, and it was therefore deemed advisable to give a third injection of cocaine. Accordingly, one quarter grain of

cocaine hydrochlorate was administered, with the result that within ten minutes the patient became conscious, the respiration and pulse (recorded at five minutes intervals) increased to 20, 46 and 80, respectively, per minute. It would have been ideal if these conditions had continued; but within a half hour after the third injection of cocaine the patient was garrulous, partially delirious, her heart beats registered 180 per minute, her respirations were quick, short and jerky, and she had tonic and clonic convulsive movements of the arms and legs. She had received *in toto* one and one quarter grains of cocaine. The case was now one of the first stage cocaine poisoning, but inasmuch as the morphine already in the patient's system would probably antagonize the development of dangerous convulsions, no fear of this danger was entertained. However, the later effects of toxic doses of cocaine consist of depression of all the functions primarily stimulated and this, added to the morphine depression, would most likely prove fatal. This depression did not ensue to sufficient extent to endanger life. The first convulsive effects of the cocaine passed away in the course of an hour and the patient, as far as consciousness, respiratory and cardiac activity were concerned, remained apparently normal for several hours. One half grain of elaterium was given in order to help remove both poisons from the system. Four hours after the last injection of cocaine the patient again showed symptoms of stupor with slow pulse and respiration, but these were successfully combated by strong coffee, forced voluntary movements in the open air, etc. She was under observation from 11 A. M., to 5 P. M., and at the latter hour at her own request she was removed to St. Agnes Hospital. Subsequent inquiry revealed that she recovered entirely from the effects of the poisons, but developed a condition resembling "typhoid fever" which necessitated her remaining in the hospital for five weeks. A study of her nitrogen metabolism during this period would have been most interesting and very likely productive of some new and important facts.

Inasmuch as this patient's life was unquestionably saved by cocaine, and as this latter remedy is the most rational physiological antagonist to morphine, it should find more general employment as an antidote. However, care must be exercised that the antidote be not given in too great quantities; in regard to this latter point the above mentioned case would seem to indicate that one-half grain of cocaine hydrochlorate may be given at half-hour intervals until consciousness returns and the respiratory and cardiac functions are sufficiently aroused. In this case, the stimulation was even more accentuated and extended to the spinal cord, producing convulsive movements.

Spontaneous Non-traumatic Fracture of the Ribs.—Chelmonski (*Gazeta Lekarska*, May 12, 1901) observed 13 cases of fracture of the lower ribs produced by muscular contraction. 8 were cases of tuberculosis and 5 of cachexia. According to Prszevoski, the facility with which the bones fracture in such cases is due to osteoporosis. [A. R.]

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended December 13, 1901.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	Los Angeles.	Dec. 3.	1	
ILLINOIS:	Chicago.	Nov. 30-Dec. 7.	2	
	Peoria.	Nov. 1-30.	41	
INDIANA:	Evansville.	Nov. 23-Dec. 7.	5	
IOWA:	Ottumwa.	Nov. 2-Dec. 9.	63	
KANSAS:	Wichita.	Nov. 30-Dec. 7.	4	
LOUISIANA:	New Orleans.	Nov. 30-Dec. 7.	3	
MASSACHUSETTS:	Boston.	Nov. 30-Dec. 7.	59	11
	Brockton.	Nov. 30-Dec. 7.	2	
	Cambridge.	Nov. 30-Dec. 7.	1	
	Chelsea.	Nov. 30-Dec. 7.	2	
	Gloucester.	Nov. 30-Dec. 7.	1	
	New Bedford.	Nov. 30-Dec. 7.	2	
	Somerville.	Nov. 23-30.	1	
MICHIGAN:	Grand Rapids.	Nov. 16-30.	3	
MINNESOTA:	Minneapolis.	Nov. 30-Dec. 7.	1	
	Winona.	Nov. 30-Dec. 7.	1	
NEBRASKA:	Omaha.	Nov. 30-Dec. 7.	14	
NEW JERSEY:	Camden.	Nov. 30-Dec. 7.	6	
	Newark.	Nov. 30-Dec. 7.	14	7
NEW YORK:	Buffalo.	Nov. 23-Dec. 4.	39	
	New York.	Nov. 30-Dec. 7.	17	2
OHIO:	Cincinnati.	Nov. 30-Dec. 7.	6	
PENNSYLVANIA:	Lebanon.	Dec. 2-9.	3	
	Norristown.	Nov. 23-Dec. 7.	11	
	Philadelphia.	Nov. 23-Dec. 7.	185	23
TENNESSEE:	Memphis.	Nov. 30-Dec. 7.	2	
TEXAS:	San Antonio.	Nov. 1-30.	3	
VERMONT:	Burlington.	Nov. 30-Dec. 7.	3	
WASHINGTON:	Tacoma.	Nov. 19-26.	4	
WISCONSIN:	Green Bay.	Dec. 1-8.	9	

SMALLPOX—Foreign.

BELGIUM:	Antwerp.	Nov. 16-23.	7	
BRAZIL:	Rio de Janeiro.	Oct. 20-Nov. 3.	153	
CANADA:	Winnipeg, Man.	Nov. 16-23.	5	
	St. John, N. B.	Nov. 30-Dec. 7.	17	2
	Halifax, N. S.	Nov. 30-Dec. 7.	8	
	Windsor.	Nov. 30-Dec. 7.	1	
	Quebec, Quebec.	Nov. 30-Dec. 7.	30	
COLOMBIA:	Cartagena.	Nov. 18-24.	5	
	Panama.	Nov. 23-Dec. 2.	100	
FRANCE:	Paris.	Nov. 16-23.	9	9
GREAT BRITAIN:	Glasgow.	Nov. 22-29.	1	
	London.	Nov. 9-23.	764	44
CUBA:	Havana.	Dec. 4.	1 case from S. S. Alphonso XIII.	
INDIA:	Bombay.	Nov. 5-12.	1	
	Calcutta.	Nov. 2-9.	2	
	Madras.	Nov. 2-9.	2	
ITALY:	Naples.	Nov. 16-23.	25	6
RUSSIA:	Moscow.	Nov. 9-16.	6	
	St. Petersburg.	Nov. 9-16.	6	1
	Odessa.	Nov. 16-23.	5	1
	Warsaw.	Nov. 9-30.	3	
SPAIN:	Barcelona.	Nov. 16-30.	5	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Oct. 20-Nov. 10.	3	
CUBA:	Havana.	Nov. 20-Dec. 3.	1 case from Br. S. S. Ardanmohr.	
			1 death from Sp. S. S. Buenos Ayres	
MEXICO:	Morilla.	Nov. 9-16.	3	
	Vera Cruz.	Nov. 23-Dec. 1.	20	8

CHOLERA.

INDIA:	Bombay.	Nov. 5-12.	3	
	Calcutta.	Nov. 2-9.	35	
	Madras.	Nov. 2-9.	18	
JAPAN:	Yokohama.	Nov. 2-9.	1	

PLAGUE—Insular.

HAWAIIAN ISLANDS:	Honolulu.	Nov. 27-Dec. 10.	2	1
PHILIPPINE ISLANDS:	Manila.	Oct. 12.	1	

PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro.	Oct. 20-Nov. 3.	42	
INDIA:	Bombay.	Nov. 5-12.	189	
	Calcutta.	Nov. 2-9.	14	

JOURNAL DES PRATICIENS.

August 31, 1901. (15mc. Année, No. 35.)

1. Scrofulous Bronchitis in Children. A. BRETON.

1.—By scrofulous bronchitis Breton means that form of chronic bronchitis of childhood, tenacious, recurring superficial, and of long duration, which remains unaffected by treatment. It is seen from one to seven years of age, as a rule, though it has been found in children of eleven. It is most common in city children. Improper feeding, bad hygiene, too much clothing, too many sweets, irregular bowel movements, pertussis, etc. may all predispose to scrofulous bronchitis, as do alcohol, syphilis, and tuberculosis in the parents. The condition may develop from a coryza, diarrhea, or with teething, in winter or summer. It is commonly seen in either tubercular or rachitic children, with cervical adenitis, scoliosis, conjunctivitis, chronic rhinitis, etc. The lymph-glands are enlarged all over the body, there is no pain, a few rales being the only symptom. Occasionally there is some fever, with expectoration. Dyspeptic symptoms may appear. Laryngismus stridulus follows frequently, or emphysema, while phthisis may develop; or the chest may remain undeveloped. Mentally and physically these children are backward. The prognosis is unfavorable for the future development of the child; the diagnosis difficult, especially the differentiation from phthisis. Prophylactically hygiene, exercise, etc., are of use. A change of air, diet, the removal of existent adenoids, are beneficial. Cod liver oil, the iodides, etc., should be given. Graduated gymnastics may aid greatly during recovery from scrofulous bronchitis. [M. O.]

September 14, 1901. (15mc. Année, No. 37.)

1. Abscess of the Subcutaneous Tissue of the Prepuce, due to Gonococci. ALEXANDER RENAULT.

2. The Prophylaxis of Tuberculosis in the Country. QUELME.

3. Massage. KRIKORTZ.

5.—A man of 42 contracted gonorrhea and was cured in six weeks. Then, as he imbibed freely, the discharge reappeared two weeks later, followed by cystitis. An entire month elapsed before an abscess was discovered in the subcutaneous tissue of the prepuce. Pus from this abscess was full of gonococci. Such a condition, occurring so long after the primary attack of gonorrhea, and so far from the urethra, is extremely rare. [M. O.]

2.—In order that the people living in the country may benefit by the recent advances made in the treatment of consumption, Quelme believes that new methods should be taught to the country physicians. Tuberculosis to many of them means approaching death for the patient, and no means are undertaken to stop the progress of the disease. Besides, they must be shown that phthisis is contagious, and how to prevent this contagion. Quelme concludes that the people in the country should be made to understand that the term tuberculosis means but the beginning of phthisis; that it is contagious; and that a physician should be consulted early in every case. [M. O.]

3.—Physiology has shown that muscular movements aid the venous circulation in propelling the blood toward the right ventricle, and thus it is that **methodic exercise** is of service in heart disease. Rapid, automatic movements act as a sedative to the heart, and are of use in the functional heart troubles, as arrhythmia, irregular pulse, or unstable vaso-motor innervation. Passive, circumductive movements have the same effect. Slow, inhibitory movements increase arterial pressure and act as a tonic to the heart. They are useful, therefore, in hypostole, and in some cases of dilatation of the heart. Abdominal massage and forced expiration reduce arterial pressure, also; while forced inspiration raises it. Massage of the abdomen and legs often acts as a diuretic. While harm may be done by ill-advised massage in heart disease, well regulated, it will give satisfactory results. [M. O.]

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See Advertising Page 8.

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An Official Report on Food Adulteration.—One of the most extended investigations into the use of preservatives and coloring matters in foods and beverages has just been concluded in England by the publication of a government blue-book, containing full reports of testimony taken by a departmental committee and presented to Parliament. The work of the committee began in July 1899, and closed, as far as taking testimony was concerned, in May, 1900. Seventy-eight persons comprising physicians, chemists, pharmacists, factors, and purveyors were examined at considerable length and with much care and discrimination. The report fills five hundred closely printed pages. The information presented includes statements of actual practices in regard to food adulteration with the views of experts as to the probable effect of such practices. As might be expected, differences of opinion on the latter question are to be noted often, but the committee seems to have so controlled its work as to secure a fair representation of competent authorities and check the exploitation of eccentric or selfish views.

Great attention was given to the additions to milk and milk products. On this point the experience of the Aylesbury Dairy Company which has a very large business in the west end of London is instructive. This company finds it necessary to use some coloring matter in milk during much of the year. The managers are not desirous of doing this, but whenever the color is omitted, complaints begin to come in that the milk is too pale and is not pure. On the other hand, the company has been able to collect milk from farms many miles from London and distribute it over a considerable area without using preservatives and without dissatisfying its customers.

The extended use of boric acid and borax (usually in mixture, under the name of "boron" preservative) is clearly indicated. The principal foods so preserved are meats, milk and butter.

Sodium benzoate now so much used in the United States for preserving jams, jellies and other package foods has apparently not made much headway in England, as salicylic acid is still reported in large

use. The question of the use of borates in butter is one of worldwide importance, for a mixture of borax and boric acid is now used very largely as a substitute for salt. The quantity of preservative is usually about eight ounces to the hundred pounds, that is 0.5 per cent. By this use the amount of salt may be much diminished which may be regarded as a sanitary gain, whether, however, a net gain or not cannot be positively stated.

While the medical witnesses were mainly in agreement concerning the necessity of restricting the use of preservatives, there were marked differences as to the specific toxic effect of these substances in full dose. Thus one experienced hospital physician stated that boric acid is likely to produce serious dyspepsia; another apparently equally experienced witness had seen no trouble arise from the free use of the substance. The experiments of Tunnicliffe and Rosenheim as to the effect of boric acid and formaldehyde when administered with the food of children (noted a few months ago in this journal) failed to show any injurious action.

The following are the conclusions of the committee, which will, in all probability, be of considerable influence on the methods and rulings in the United States. The conclusions seem to be conservative in the best sense of that word. Dr. Tunnicliffe dissents from the prohibition of copper coloring in vegetables and appends a special paragraph in which he states that he finds no evidence that the small amount of copper can produce disease.

That the use of formaldehyde or formalin, or preparations thereof, in foods or drinks be absolutely prohibited, and that salicylic acid be not used in a greater proportion than 1 gr. per pint in liquid food and 1 gr. per pound in solid food. Its presence in all cases to be declared.

That the use of any preservative or coloring matter whatever in milk offered for sale in the United Kingdom be constituted an offence under the Sale of Food and Drugs Acts.

That the only preservative which it shall be lawful to use in cream be boric acid or mixtures of boric acid and borax, and in amount not exceeding 0.25 per cent. expressed as boric acid. The amount of

such preservative to be notified by a label upon the vessel.

That the only preservative permitted to be used in butter and margarine be boric acid or mixtures of boric acid and borax, to be used in proportions not exceeding 0.5 per cent. expressed as boric acid.

That in the case of all dietetic preparations intended for the use of invalids or infants chemical preservatives of all kinds be prohibited.

That the use of copper salts in the so-called greening of preserved foods be prohibited.

That means be provided either by the establishment of a separate Court of Reference or by the imposition of more direct obligation on the local Government Board to exercise supervision over the use of preservatives and coloring matters in foods, and to prepare schedules of such as may be considered inimical to the public health.

The Open Air Treatment of Tuberculosis in Germany.—The Imperial Health Office at Berlin has just published a statement showing remarkable success in Germany with the open air treatment. In the Spring of 1901 there were sixty institutions in the empire with a capacity for five thousand patients devoted to this class of cases. Of the number admitted from the beginning of 1899 to the middle of 1900, there were 5059 male and 1214 female patients. Nearly half were between the ages of 20 and 30 years. The report takes up the social condition of the patients, the influence of occupation, heredity, duration of the disease before admission to an institution, the duration of treatment and the success of the treatment in general. In 56 per cent. the social conditions were favorable, in 31 per cent. they were moderately good, and in 12 per cent. they were bad owing to poor housing and insufficient food. In half the patients the origin of the disease was alleged to be due to the continuous inhalation of dust involved in their employment; there were 182 cases due to metal dust; 129 from stone, coal or glass dust; 116 cases from wood dust; 111 cases from wool dust and 126 cases from the effects of various kinds of dust. Smoky workshops and rooms filled with chemical gases had an injurious effect on 81 persons. In 253 cases the disease was ascribed to a sedentary occupation connected with the keeping of the body in a bent position and living in damp rooms; 313 cases were the alleged results of weakening incidents, such as heavy night work with insufficient nourishment, irregular manner of living, excesses, accidents etc. It is interesting to note that in twelve cases the disease is said to have originated from infection in institutions and hospitals for consumptives or through other professional inter-

course with tuberculous patients. It is probable that 2177 or 34.7 per cent. were directly infected, or had become tuberculous by infection in the family. In just one half the cases the disease had existed for less than one year before admission to an institution.

The average duration of treatment in an institution was 92 days. At Dannenfels, St. Blasien, Grabowsee, Reiboldsgrün, Harlaching and Albertsberg the treatment extended from 100 to 202 days.

The results reported are remarkable. Out of 6108 cases 67.3 per cent. were perfectly fitted to pursue their former occupation; 7.1 per cent. were quite able to earn a living in a different vocation; 14.6 per cent. were partly able to earn a living and 11 per cent. were unfitted for work. It is stated by Frank H. Mason, U. S. Consul-General at Berlin (Report to the Surgeon-General of the U. S. Marine Hospital Service) that 87.7 per cent. were discharged as cured or improved and this remarkably good result is attributed to the careful selection of cases suitable for treatment in the institutions.

Shall We Heat Our Street Cars?—There has been considerable criticism in the daily press of late on account of the failure of the railroad companies to heat the street cars. It has been urged that motives of economy have led to the refusal of the railroad authorities to make these cars more comfortable; while, on the other hand, the companies assert that they believe it is preferable for the health of the passengers not to heat the cars. The sentiment of the press, as a whole, has been in favor of heating the cars, and it has been urged that in travelling in cold cars passengers have been thoroughly chilled, and that many cases of sickness, especially attacks of pneumonia, have resulted from this. Others have pointed out that smallpox is favored by a low temperature, and that riding in cold cars exposes one unnecessarily to the risk of this infection. In our opinion, whatever the motives of the railroad companies may be in refusing to supply heat in the cars, they have decidedly the better of the argument on scientific grounds. It has been stated by many authorities that the great prevalence of catarrhal conditions in this country is due in part to heating our houses to a degree quite unnecessary, and subjecting the inmates to sudden changes of temperature on exposure to the outside temperature. It is no doubt true that riding in cold street cars is uncomfortable, but in looking back a few years to the time when our cars were heated generally, we recall that travel was scarcely more comfortable, if at all so. When the car doors were closed the temperature rose to an uncomfortable point; when they were opened to

permit the ingress or egress of passengers the temperature dropped many degrees, and it is scarcely open to doubt that those sudden falls of temperature of such intensity are far more injurious than an equable temperature, however low. When no heat is used in the cars, the temperature within approximates the temperature without; the constant opening and shutting of the car doors, while it allows draughts, is nevertheless far less harmful in our opinion than a drop of perhaps 20 degrees, which would occur under similar circumstances if the cars were heated. A point which our people have still to learn is, that the more rational manner of living consists in accommodating oneself by the proper amount of clothing to the temperature which prevails. Hygienic science has much to exact from those who have charge of public conveyances, but we are of the opinion that cold ears, when it is necessary that frequent stops be made, are far less likely to produce ill health among the passengers than travel in heated conveyances.

The Report of the Surgeon-General of the Navy.—Surgeon-General Van Reyden's annual report is a voluminous document of more than 300 pages, and, covering as it does the operations of the United States Navy for a year, it contains much interesting reading. Perhaps the most important parts of it for the future student are the accounts of the operations in foreign lands, and the official report of President McKinley's case.

Only 34 deaths are reported among the sailors and marines who were engaged in the Chinese expedition. Such diseases as occurred were mostly due to the insanitary condition of the country and the unfavorable effects of the climate. Taken in conjunction with the favorable report of Surgeon General Sternberg of the Army, the satisfactory conclusion can be drawn that our Government has shown remarkable efficiency in looking after the welfare of our troops on duty in foreign countries.

The official report of President McKinley's case by Dr. Rixey is largely a repetition of the report, already published, of the attending surgeons and physicians. It is supplementary in the sense that it goes more fully into detail. It is in fact a complete diary of the case, giving every bulletin as published and every minute detail of the clinical history. In this sense it is the most valuable report of the case extant, and leaves nothing to be desired as a paper for future reference.

Dr. Van Reyden's annual report is too lengthy for complete review here. We may, however, in general terms, commend its wealth of information and the value of the many special reports from medical offi-

cers on duty in various foreign stations. Many of these are contributions to our medical knowledge that reflect credit on their writers and add materially to our medical literature. They remind us that we are reaping some advantages from being a "world power" if only in the breadth of view and opportunity for study which this enlarged activity confers.

The Remuneration of President McKinley's Doctors.—We notice that this subject is being discussed in some of the newspapers, and we trust it will be taken up by Congress at an early date and the accounts satisfactorily adjusted. Congress surely does not need to be reminded that these services were rendered to Mr. McKinley not as an ordinary citizen but as President of the United States. The obligation is a national one and should not be a charge against the martyred President's estate. In the case of President Garfield, this obligation was recognized by Congress, but if our memory serves us, there were some unnecessary discussion and some rather unseemly haggling over the settlement. It is not the part of outsiders to determine the value of these services or to suggest the size of the fees, but it is evident that these latter should be proportioned to the eminence of the patient, the importance of the services, the standing of the attendants, and the responsibility of the case. It is not inappropriate or indelicate to call attention to the fact that the mere risks to professional reputations involved in such a momentous and critical case are certainly as great as, if not greater than, any risks assumed by any professional men in any other circumstances whatever. From the legitimate business standpoint, such risks are not among those which physicians and surgeons can afford to assume for mere sentiment or should be called upon to meet without ample compensation. The medical conduct of the lamented President's case was conspicuously free from selfish, jealous and unworthy motives. The physicians and surgeons performed a grave public duty, without a taint of self-seeking or of vain-glory. It is appropriate now that they should be well remunerated by the American people.

The Scientists and the Poets.—Professor William L. Poteat, in *The Popular Science Monthly*, contributes an instructive study of the great Latin poet, Lucretius, who wrote a poem in which he forecast the doctrine of evolution, and who, although he lived two thousand years ago, had the spirit but not the methods of modern science. Professor Poteat takes pains to point out that the union of the scientific and poetical genius, so conspicuous in Lucre-

tius, is not so rare as it is sometimes, on superficial grounds, claimed to be. He reminds us that Tyndall and Huxley had been known occasionally to drop into verse. On the other hand the poet Goethe was said to be more proud of his scientific achievements than of "Faust". Of poets of the first rank who have maintained an interest in science, Tennyson was a striking example. "He studied medicine until he imagined that he had all the diseases set out in the books". It is interesting to us moderns to know that Lucretius, who died in 54 B. C., left a description of the great epidemic of plague in Athens, and that this description forms part of his poem. In the opinion of a competent critic he has given the history of this tremendous pestilence with the accuracy of an historian and the genius of a poet.

The Westphal-Piltz Pupillary Phenomenon.—

Among the endless array of reflexes, but few can be considered as diagnostic without accompanying clinical substantiation, and still fewer are *prima facie* evidence of any one disease. We do, however, find many which are valuable diagnostic adjuncts, and further observations may yet accord the Westphal-Piltz pupillary phenomenon a recognized position among the reflexes that are available for diagnosis. This reflex, described by Westphal and Piltz within a month of each other, consists of a contraction of the pupil, when the orbicularis palpebrarum is contracted energetically. It has been claimed that this phenomenon is most easily detected in medium sized pupils and in those that are immobile or extremely sluggish to light stimulus. Westphal found it present in cases of general paresis, and it was in a case of paretic dementia with typical Argyll-Robertson pupil, that Piltz first observed it. The phenomenon, as claimed by Piltz, disappears under homatropin mydriasis, which Wundt considers a physiological manifestation. In order to preclude any possible interference with the experiments by drug mydriasis, Fritz Schanz recently elicited the reflex in an incurable case of internal ophthalmoplegia, which led him to conclude that the pupillary contraction is due to the mechanical effect caused by the energetic contraction of the orbicularis. Furthermore, he attributes this mechanical impediment to a subnormal innervation of the iris, as evidenced by the coexisting loss of light reflex. As originally claimed by Westphal, the condition is present in most cases of reflex iridoplegia, and also in pupils not reacting to light but in which the convergence reaction is still preserved. Westphal and others attribute the phenomenon also to the

mechanical interference, but they believe it due to an increase mechanical determination of blood to the eyeball and especially to the iris, causing stagnation with subsequent motion of the pupil. While reflexes are pouring into the diagnostic armamentarium in great numbers, there seems to be an increased and justifiable skepticism arising among the more conservative, so that it may not be long before a newly described reflex must be supported by the strongest clinical evidence, before it is accorded a recognized and permanent position in diagnosis.

If Mr. Carnegie's gift to the nation carries with it any promise or prospect of enlarging the field of medical research, we shall of course feel duly grateful to him. Even a part of the income of ten million dollars, judiciously expended, would do something toward advancing this country on her destined way to become the foremost nation in the world of medical science. We have always contended that the genius of the American people—so inventive, so practical and so energetic—was just as well adapted to excel in original medical research as it has already shown itself to be in the mechanical arts. After all, much of medical research has become a higher form of the mechanical arts.

The season is suggestive of good will to everybody—if not peace on earth. It is gratifying to note that the hospitals and homes reap their full share from the benevolence that rules at Christmas-tide. What with evergreens and holly, some of the hospital wards acquire a home-like and holiday appearance that is good to look upon. The decorative scheme may even include a Christmas tree—an object which no person is ever too ill or too old to regard with indifference. Such decorations may not be strictly antiseptic—especially after they have stood for a week—but they have their wholesome influence nevertheless.

Current Comment.

THE CENSUS OF FRANCE.

France's census makes gloomy reading for that country's well wishers. According to "figures," there has been a renewal of collapse, and a writer in the *Figaro* points out that in French families there have been more bereavements than joyous births. France has lost 26,000 lives. For centuries France was preponderant in the world because her population was the most dense; to-day the outlook is terrifying, for the remedies suggested to the Senate by M. Piot and others are good intentions wasted. This census mathematically confirms M. Emile Zola's amazing statistics.—*The Boston Herald*.

EIGHTEENTH CENTURY REMEDIES FOR CANCER.

With regard to an annotation which recently appeared upon the traditional and medieval therapeutics of the violet a correspondent has written to us pointing out that

when the medicinal powers of the violet were most believed in it was never considered to be a cure for cancer. "The sovereign charm," he writes, "for that worst of human ills was the morel, a species of fungus said to be of tallow origin. Human milk, too, honey, and now bread, were ingredients in the plasters laid by forgotten leeches upon growths most probably non-cancerous, but suspected of malignancy in their action or developments. The human milk is, of course, a manifest survival of tribal cannibalistic ideas. It was still recommended among the ingredients of a 'precious medicine' which 'will bring forth a cancer, and pluck it up by the roots' in a popular chapbook of the date 1791. It is curious to note, when tracing the evolution of a recipe from such a book as this through such works as Sendall's MS. of the Commonwealth era to the early writers in Henslow's book, how persistently the mere ritual of the so-called cure survives when the components of the emplastrum or pill have changed half a dozen times. Morel gives place to the white of an egg, and both are now merged in a decoction of violet leaves, but the milk 'of one that hath been a mayde and hath given birth to a knave' is recommended at the dawn of the nineteenth century, while the directions as to the use of lint, a form of bandage rarely, if ever, mentioned in chapbooks, survive from the days of Rufus to the opening years of a new era of enlightenment. The ancient belief was that the lint or cloth, laid upon the growth, would bring it away 'in the morning.' 'In the morning thou shalt find the Cancer lead on the said plaister. This is most true. I copied this out of an old written book.' Nowadays there is no talk of growths being brought away in the night, but none the less the lint is used and the symptoms of the disease are recorded as vanishing in 14 days."—*The Lancet*.

CYCLING AND ITS ABUSE.

The curse of cycling, as of course with many other modes of exercise, is the tendency to carry it to excess. A striking and pitiable example of this human failing has been recently given in Madison Square Garden, where, for a week, a number of men toiled round and round that hall for hours at a stretch, making a spectacle of themselves, and like the gladiators of old, providing the inhabitants of New York with a Roman holiday. The brutalizing effect of contests of this nature was recognized years ago, and laws were passed which seemed to minimize the severity of long-distance races. Notwithstanding this legislation, the men who raced the past week appear to have suffered from the strain as much, if not more, as did the men who pedaled for the same period two years ago. Utterly exhausted, worn out in body and mind, several were forced to retire many hours before the stipulated time for the contest to end. Those who stayed to the finish were kept going by stimulants and drugs, which imparted to them sufficient fictitious strength to endure through their appointed task. Needless to say that such tests of endurance are useless, foolish, and even criminal. No good object is obtained by bicycle riding of this description, and it tends to bring the exercise into disrepute. Some of the men who played tricks with their constitutions in Madison Square Garden will suffer from the effects of their foolishness for years, perhaps for life. The heart is almost certain to be affected injuriously, and the strain put upon the nervous system is more than likely to sap the vitality of any but the strongest constitution. Medical journals everywhere should protest against bicycle riding—in itself a healthy exercise—being thus so grossly abused.—*The Medical Record*.

A DOCTOR IN AN IMPORTANT OFFICE.

Hardly second in interest to the medical profession is the office of the street cleaning commissioner. Doubtless true is this in the present instance, for the new appointee is himself a physician, Dr. John McGaw Woodbury. We need not point out the close connection between cleanliness of the streets and a normal sanitary condition of the city. In the army Dr. Woodbury has won an enviable reputation for executive ability, a prime essential in a street cleaning commissioner, and if there was to be found a worthy successor to the lamented Colonel Waring, we have every reason to hope that it is Dr. Woodbury. Many of our people have despaired of ever finding a second Waring, but we

believe Dr. Woodbury will prove himself such a man. Dr. Low is deserving of special credit for having exercised such rare discrimination in the appointment.—*The New York Medical Journal*.

CHRISTMAS FOR A PATIENT.

The clinic before several hundred students at the Jefferson Medical College a few days ago terminated in a species of donation party for one of the patients, in order to make a brighter Christmas for the sufferer. A little girl had been treated for some deformity of her feet due to an accident, and at length an operation had been performed. Although the operation was successful and healed nicely, nevertheless it did not restore to the sufferer the use of her feet, and the Professor stated to the class that the little girl would never walk again. "I saw some of you young men dispensing small change rather freely a few days ago," said the Professor to the several hundred young men in the amphitheatre about him. "Suppose you contribute a little toward making Christmas more joyful for this little girl." The response was prompt and generous. Showers of coins rained into the open centre of the structure, and when collected a tidy sum was realized. It doesn't take much to make happiness for some one about you. Try it. —*The Evening Telegraph*.

Correspondence.

MOSQUITOES AND YELLOW FEVER.

By GEORGE E. BEYER, M. D., of New Orleans, La.
To the Editor of the Philadelphia Medical Journal.

In an article in your valuable Journal of October 19, 1901, entitled "Mosquitoes and Yellow Fever," I saw myself quoted in two instances, which, however, lead me to think that these sentences of mine have been somewhat misunderstood, especially if they are quoted to disprove the possibility or rather ability of transmission of disease by these insects.

It is perfectly true that I could not lengthen the life of any of my mosquitoes in captivity beyond 22 days, but it must be borne in mind that my observations were confined to spring and summer and consequently to a period of full insect activity, but they have no reference to hibernation. Dr. Reed's experiments, quoted also in the above article, were all made during midwinter, and at a time when even in the tropical climate of Cuba these insects are forced to enter into a semi-hibernation. It may be by reason that the thermal or other conditions are not exactly suitable for the adults themselves or for the development of the eggs and larvae. I am sure, however, that in freedom, Dr. Reed's 71 day mosquitoes would have survived until such a time when the deposit of their eggs would have also engendered the further development of the larvae. Upon these same thermal conditions, which control the adult mosquitoes, depend, no doubt, the ability of the insect to transmit the disease, (yellow fever), and, instead of requiring an incubation of twelve days or more in midwinter, a much shorter period may be necessary during midsummer, as, for instance, quite recently demonstrated in New Orleans, when a period of seven days was found sufficient for the mosquitoes to convey the disease. It is quite true that *Stegomyia fasciata* have, in our section, at least, their winter quarters about the middle of April, sometimes earlier, sometimes later. This, however, can in my opinion not affect the ability of mosquitoes as disease transmitters. An infected mosquito may hibernate, and with it naturally the parasite which it harbors, as was amply proven by Reed's and Carroll's experiments. If, then, it should feast upon some hapless victim after emerging from its winter-retreat in April, the chances may be that the foundations for an epidemic have been laid then and there. But, on the other hand, as mosquitoes are not as plentiful about that time, no further infection of other mosquitoes may occur, and the patient either recovers or dies as the case may be. Such sporadic cases, unless too pronounced, are usually diagnosed as anything else but the true disease.

In fact, by reading over the entire article, and for that matter the one of August 3, 1901, as well, I feel convinced that the writer on mosquitoes and yellow fever has under-

taken too much in his endeavor to contradict facts by unreliable traditions and time-worn theories.

For such stories as, for instance, the one about the recurrence of yellow fever on board the U. S. S. Plymouth in 1879, are no longer tenable if confronted with facts elicited by modern and ever progressive scientific research.

REPORT OF A CASE OF RETAINED PLACENTA WITH ECLAMPTIC CONVULSIONS.

By JOSEPH W. LACKEY, M. D., Durango, Col.

Mary C., age 22, primipara, was confined at 8 P. M. She did not intend having an attendant until four hours later the placenta had not come, and she was having convulsions. When I arrived at 12 o'clock I found her flowing considerably; pulse weak and intermittent; cold sweats, and having convulsions every 15 or 20 minutes. She called it a chill, but did not feel cold. No pains. Her perineum was torn to the third degree.

I tried to start the expulsion of the placenta by hot drinks, whiskey, strychnia by hypodermic, and Crede method, but her convulsions kept getting worse; severe, so at 12.45 I gave chloroform, sterilized vagina and my hands, went into the uterus and loosened the attached portion with my fingers and then by traction on cord and compression of the fundus it came. I then sewed up the laceration with chromicized catgut. Her convulsions continued at intervals of about fifteen minutes until 2 P. M., when she went to sleep from an hypodermic of morphia I had given.

She did not lose consciousness, nor have any pains during convulsions. They would last about two minutes, tonic in character, but not typical eclamptic.

Next day urine showed trace of albumin, no sugar, sp. gr. 1025. Acid reaction, but loaded with acid phosphates. Microscopic examination showed calcium oxalate crystals and debris. She made a good recovery.

Puerperal convulsions may be (1) eclamptic, (2) hysterical, (3) epileptic, or (4) some cerebral lesion, which last three are to be regarded simply as accidental complications. The eclampsia is fortunately a tolerably rare event, its estimated frequency is about once in five hundred pregnancies. The mortality is about 32 per cent.

Usual symptoms: The attacks resemble those of epilepsy, the cry being absent, eyes wide open and fixed, pupil contracts, later may dilate. Convulsive twitchings start in all the muscles of the face. These convulsions extend to the muscles of the body generally, movements as a rule are more pronounced in the upper extremities. The convulsions are tonic and clonic. The face becomes cyanosed, breathing irregular, stertorous, pulse intermittent; if severe they become comatose.

As to the etiology and pathology of this condition, there is much diversity of opinion. Since Braum's work was published in 1857, the term eclampsia and uremia have come to be regarded as synonymous by the majority of practitioners.

Treatment is first preventive and of the attack itself. Preventive in albuminuric patients: ward off attacks of indigestion; keep them warm. If there is edema, a strict milk diet, drink plenty of the natural alkaline waters, such as Vichy, Seltzer, Lithia water, etc.; mild diuretics, and the skin should be made to aid the kidneys; also free catharsis. The attack itself. First, induction of premature labor, venesection is very useful here. Narcotics and anesthetics, saline enemata, intravenous infusions of normal salt solution.

Reviews.

Anesthetics and Their Administration, a Text-Book for Medical and Dental Practitioners and Students, by Frederic W. Hewitt, M. A., M. D., Cantab.; Anesthetist to His Majesty the King; Anesthetist and Instructor in Anesthetics at the London Hospital; Late Anesthetist at Charing Cross Hospital and the Dental Hospital of London. London: Macmillan & Co., Limited; New York: The MacMillan Company, 1901. Price, \$4.00.

This book is one which commends itself to all surgeons, and which should be studied by everyone who considers himself, or who is considered by others, an anesthetist. Its field of usefulness, however, is not confined to these

two classes of medical men, but also includes medical students and those who only occasionally administer an anesthetic. It is written by one who has devoted all of his professional life to the study and administration of anesthetics; his experience has been extensive and his book presents both the theoretical and the practical side of the subject in an authoritative manner. This second edition differs greatly from the first and is particularly enlarged by the addition of chapters on the history of anesthesia and the experimental physiology of the subject. The matter is remarkably well systematized so that reference to both facts and figures is made easy.

We are pleased to see that Hewitt gives the credit for the first use of ether anesthesia for the distinct purpose of producing insensibility to pain during a surgical operation to Crawford Long, of Georgia. Due credit is also ascribed to Morton, Wells, and Jackson. Chapters VI and VII are devoted to "Special Considerations in the Selection of Anesthetics and Methods" and contain matter of the utmost importance to every medical man. Especial attention is called to the various postures during anesthesia, a matter which should be given more consideration than is usually allowed it.

This work comes to us at a time when the subject with which it deals is being extensively studied in both this country and abroad, and we feel that the time has come when medical men generally should be better informed regarding the properties and the method of the administration of anesthetics. Hewitt's book may be considered a complete treatise on the subject, dealing as it does in a most thorough manner with every detail. [J. H. G.]

Annual Report of the Smithsonian Institution, 1900. Washington, D. C.

The Smithsonian Institution does more for the promotion of science in America, than any other single body, and it does it in a most rational and satisfactory way. Of course there are men interested in some particular small line who will be irritated at it because their particular small line is not given undue prominence, and there are others who, on account of their own failure to accomplish original and scientific work in spite of advantages and opportunities, prefer to condemn all other persons occupied in scientific pursuits, in order to minimize their own defects. But an examination of the annual report of the Institution from year to year is sufficient to convince anyone of the truth of our initial statement. This report consists essentially of the account of the business sessions of the Board of Regents and of the reports of the Committees and officials of the Institution, but it has been the custom to add, as an appendix, original papers, abstracts of papers, and reports of experiments which cover the general field of science and indicate the progress of events, and these papers are selected partly with the idea of instructing the ordinary non-scientific. They are chosen with rare skill, and there is hardly one of them which cannot be read with interest by any intelligent person. For instance, we find in the present number such popular articles as an account of the Zeppelin air ship, of Liquid Hydrogen, by James Dewar, of the Photography of Sound Waves, by R. W. Wood, of Unsuspected Radiations, by Prince Kropotkin, of the Restoration of Extinct Animals by Frederick A. Lucas, of Nature Pictures by Radcliffe Dugmore, of a Notable Advance of Color Photography, the latter illustrated by reproductions of the plate in various stages, and in its final form. We must say that the last stage is somewhat disappointing, and entirely too chromo-like. More popular articles are "Through Africa from Cape to Cairo," by Ewart Grogan; The "Yermak" Ice-breaker, by Vice-Admiral Makaroff; and a character study of a beaver, by Radcliffe Dugmore, and one which has a sort of moral quality: "The Loot of the Imperial Summer Palace at Peking," by Count D'Hérissou. The report also includes some valuable accounts of the progress of science in its various branches, such as astronomy, aeronautics, chemistry, geology, physics, electricity, psychiatry, and as a tribute to the increasingly scientific character of medicine, on the progress of medicine itself. There is also an article on the century's great men of science, by Charles S. Pierce, and two interesting articles on Huxley. Of course most of these articles

are due to the initiation of the new century. Of distinct medical interest are the articles on malaria, and on the transmission of yellow fever by mosquitoes, both by General George M. Sternberg. "One of the most interesting sections of the preliminary part is the report of the Superintendent of the National Zoological Park. An energetic effort is being made to complete a collection of American animals, and in many cases this has been successful. We note the acquisition of a Philippine deer, apparently the only animal from our new possessions, and of one buffalo calf, which was born in the Park; a very small result for a herd of ten. The total number of animals resident at the Park on the 30th of June, 1900, was 839. [J. S.]

The Medical News Visiting List for 1902. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 100 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, \$1.25. Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co., Publishers.

The Medical News Visiting List for 1902 shows the usual well known concise additions upon methods of keeping physicians' accounts, thermometric scales, ordinary weights and measures, the metric system, examination of the urine, dose tables and therapeutic remedies. Besides this, many excellent points are taken up. It is sure to be as useful as it has always been. [J. L. S.]

Principles of Surgery, by N. Senn, Ph. D., LL. D. Third Edition, thoroughly revised. Philadelphia and Chicago: F. A. Davis, Publisher, 1901.

This third edition of Senn's Principles of Surgery brings the able work up to date. Besides many noticeable changes in the former chapters, he has seen fit to add two entirely new chapters, one on "Degeneration" and the other on "Blastomycetie Dermatitis." The former of these new chapters follows that on "Regenerations" and precedes that on "Inflammation." It has to deal in a brief but comprehensive manner with atrophy, cloudy swelling, and fatty, mucoid, colloid, waxy, and amyloid degeneration. The portion of this work devoted to "Suppuration in Large Cavities" in which the author deals with brain abscess, empyema, suppurative pericarditis, etc., is both scientific and practical, presenting the most rational reasoning and the most reliable treatment. Considerable space is devoted to a discussion of "Hydrophobia" and its treatment. Senn is a strong advocate of Pasteur's prophylactic inoculations employed in the various Pasteur Institutes. A number of chapters are devoted to a most careful consideration of surgical tuberculosis. All the forms of this disease and their treatments are most comprehensively presented. It is this portion of the book which we consider most valuable. Anyone wishing information on the various surgical phases of tuberculosis will not be disappointed in consulting this work. This criticism, however, does not apply to what is written on tuberculosis of the kidney, the reader being struck with the small amount of space given to this subject. The discussion of tuberculous tendo-vaginitis takes up more than five pages, while renal tuberculosis is only allowed one-half a page.

Senn is to be commended, not only for what he says, but for the way in which he says it, his descriptions always being most comprehensive. We feel that this book is one which deserves to occupy the place won by former editions. [J. H. G.]

A Case of Primary Cancer of the Bronchus.—Sadovskii (*Medycyna*, May 26, June 2, 1901) describes a case of the above affection in a physician, 39 years old. During life the clinical picture resembled closely tuberculosis and pleurisy. The pus found in the pleural cavity, however, was due to perforation of the bronchus. [A. R.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

Philadelphia County Medical Society.—Dr. Lewis S. McMurry, of Louisville, Ky., read by invitation a paper on "The Shock of Abdominal Operations" before the Philadelphia County Medical Society on Wednesday, December 18th. After the meeting a reception was tendered Dr. McMurry at the University Club.

Ashley Bars Osteopathic Vaccinations.—Three hundred children of Ashley, Pa., may be turned out of the borough schools, because they were vaccinated by osteopaths. A number of students of the School of Osteopathy vaccinated hundreds of the poorer children, because their charges were less than those of the physicians. The School Board holds that the osteopaths have no legal standing, and that their certificates of successful vaccination are invalid.

Society Meeting Next Week.—The only society to meet next week, at the College of Physicians, Philadelphia, will be the Obstetrical Society, on Thursday evening, January 2, 1902, at 8.15 P. M.

Diphtheria at Wayne, Pa.—Dr. R. L. Pitfield, assistant bacteriologist to the State Board of Health, said that there have been fourteen patients with diphtheria at Wayne, all having been served with milk from one farm. One of the persons who did the milking is known to have had a suspicious sore throat a month ago, and it is possible that the infection may have arisen in this way.

Smallpox in Philadelphia.—Despite the continued cold weather, which is admitted as favorable to the spread of smallpox, only 76 cases of the disease were reported up to noon, December 21. This is 49 less than the previous week when 125 cases were reported. The disease is still practically confined to the wards where the outbreak is epidemic. There were 10 deaths from the disease during the week, two more than recorded last week. For the year, 1,041 cases of smallpox have been reported, with 137 deaths. There are now 363 residents of the city ill with smallpox.

Philadelphia Hospital.—The Finance Committee of City Councils has given the Department of Charities and Correction \$80,000 for a pavilion for consumptives at the Philadelphia Hospital, though the other new buildings asked for were disallowed. A new item of \$4000 for electrical apparatus for treating patients in the hospital was granted. Dr. Shoemaker proposes to erect eight pavilions, the framework to be of steel with walls of glass. The five hundred patients will be divided among the pavilions according to the stage of the disease. Practical isolation for each person will be effected by a system of ventilation and the constant generation of ozone. There will be static electric batteries in all pavilions. These reinvigorate the air and destroy the germs of tuberculosis, with which it is constantly infected by patients. They generate ozone rapidly. The new Children's Building will be erected on the ground owned by the city abutting on the University of Pennsylvania property, where now stands the Museum of Science and Art of that institution. This was decided upon at a meeting of the Board of Charities and Correction held December 20. The University had requested the city to cease work upon the building started a week ago, on the ground that the close proximity of the two buildings would be detrimental to both, and suggested that the city choose another site. Provost Harrison, of the University, offered to pay for the work already done by the city if the site were changed.

NEW YORK AND NEW JERSEY.

Stony Wold Sanatorium.—Five lots in Township Ten of the old military tract in Franklin county, N. Y., have been purchased by the Stony Wold Sanatorium as a site for its institution. The project for the establishment of this sanatorium has for its object the furnishing of a temporary home for dependent young women who are threatened with pulmonary diseases. The property was purchased from Arthur G. Leonard and Benton Turner, of Plattsburg. A nominal consideration only was paid Mr. Turner, he virtually donating his property. The tract is about 1,000 acres in extent and includes the Kushaqua Hotel property,

which will be utilized for the present. It also includes Round Lake, well known for its beauty.

Fordham Hospital Quarantined.—A patient with smallpox, discovered after he had been in the Fordham Hospital four days, has caused the revaccination of all the inmates of the institution, which has been quarantined for the next three weeks.

Dr. John McGaw Woodbury, Seth Low's street cleaning commissioner, is a graduate of Princeton and the Bellevue Medical College, and has studied the problem of garbage and waste disposal in all the great capitals of Europe. If he isn't a worthy successor of Col. Waring, all the appearances are deceptive.—*Boston Herald*.

Insane Asylums Overcrowded.—At the 29th annual meeting of the New York State Charity Aid Association, held December 19, the reports of the various State Insane Asylums showed that all the institutions were overcrowded, some containing 500 more inmates than they should accommodate.

The New Lying-in Hospital, the gift of J. Pierpont Morgan, will soon be ready for occupancy, and the annual report, just issued, shows conclusively the need of such an institution and its extensive field of help for the poor. The hospital is for the benefit of those who are unable to pay for medical attendance, and for whom the Department of Charities makes inadequate provision in this class of cases. There were last year 50,228 births in the borough of Manhattan, of which 24,917 were reported by physicians and 25,311 by midwives.

WESTERN STATES.

The Michigan State Board.—The State Medical Board of Michigan wishes to make it easy for a physician to be transferred from one State to another. As it is now, States have different requirements, some maintaining a higher standard than others. A meeting will be held in Chicago, some time in January, of the executive officers of the State Medical Boards of Wisconsin, Illinois, Indiana, Ohio, and Michigan, to form a nucleus of the western central States to discuss reciprocity. The Michigan law already provides for reciprocity, admitting such physicians from other States as are considered qualified. There are now 1587 duly registered physicians in Michigan.

The Health of Chicago.—Influenza, closely followed by pneumonia, leads the list of diseases reported in Chicago, Ill. While smallpox is spreading throughout Illinois, only six cases have occurred in the city of Chicago since October 1st, after an interval of entire freedom from the disease since August 12. Not one of these six patients, three of whom were imported from Rochester, Ill., and the other three of whom developed from them, had ever been vaccinated. The death rate remains low.

A Death From the Plague in Utah.—The Public Health Report of November 22 notes one death (page 2732) from bubonic plague at Salt Lake City, Utah. It will be interesting to know the source of infection in this case.—*Occidental Medical Times*.

Criminals to Aid Science.—Instead of hanging or electrocuting the criminals of the country, Dr. W. B. Fletcher, a physician of Indianapolis, Ind., suggests confining them in government hospitals where, in the cause of the advancement of medical science and the ultimate good of humanity, they can be subjected to probably fatal experiments that will lead to a broader knowledge of human anatomy. He believes that a criminal should not die as an example, but as a sacrifice; that the miserable life should go out for the benefit of mankind. Drs. W. N. Wishard and Albert F. Sterne also believe that the condemned criminal should be given into the hands of the experimenters, and not only will the letter of the law be satisfied, but humanity will likewise be lastingly benefited.

The Barron County Medical Society met at Cumberland, Wis., December 11, and a number of interesting papers were read and discussed. Some of the prominent physicians in the State and nearly all of those in the county were present. An exhibit of X-ray work was given and officers were elected for the ensuing year.

Western Reserve University.—The Rockefeller Institute for Medical Research, which has at its disposal the income of \$200,000 given by John D. Rockefeller, has allotted \$500 for this year to the Medical department of Western Reserve University. Under direction of the Professor of

Pathology W. T. Howard, Jr., this sum will be expended in the pathological laboratory in pursuing a research into the relation of the *bacillus mucosus capsulatus* to the infectious diseases. Dr. Roger G. Perkins, a fellow of the Rockefeller Institute, will conduct the research.

Medical College for Utah.—Prominent medical men of Salt Lake City and other of Utah's larger towns are projecting a medical school to be located at Salt Lake City. Considering the remoteness of Utah from the greater centers, and the great population which looks to Salt Lake City, a new medical school seems a wise move.

Wealthy Aliens Barred by Immigration Law.—In answer to a hypothetical question propounded by the Oceanic Steamship Company, whether or not an alien afflicted with consumption, traveling first-class and of ample means, might be allowed to land in this country, Commissioner of Immigration North, of San Francisco, has decided that such an immigrant is not entitled to admission.

Milwaukee Medical Society.—Steps to perfect the organization of the Milwaukee Medical Society were taken at a meeting December 18. The association was incorporated some time ago. Dr. Bartlett presided. A committee was appointed to draft a constitution and by-laws.

Leland Stanford University.—Mrs. Jane L. Stanford transferred to Leland Stanford, Jr., University by deed, bonds, stock and real estate valued at \$30,000,000, the largest single gift ever bestowed on any institution of learning. This gift places Stanford in first financial rank among the great universities of the world, and will enable it to carry out many projected plans. Leland Stanford, Jr., University stands today as one of the great educational institutions west of the Mississippi. With the University of California, it ranks in efficiency and scope with Michigan, Chicago, Pennsylvania and Cornell Universities.

A Case of Glanders.—Because of the rarity of such cases, the death of a woman in Oakland, Cal., from glanders contracted from a horse, has caused no little comment among medical men. Since Oakland had a Health Department and records have been kept of the causes of death, no such case has come to the notice of the authorities. About 10 years ago, however, a Portuguese vegetable farmer who was living near Temescal, outside the city limits, died from this disease.

Wisconsin State Medical Board.—Gov. La Follette on December 7th appointed Drs. J. R. Currens, of Two Rivers, J. V. Stevens, of Jefferson, and F. A. Forsbeck, of Milwaukee, as members of the State Board of Medical Examiners. All are reappointments except that of Dr. Stevens, who was formerly a member of the Board. Secretary H. M. Ludwig, of Richland Center, retires. The appointments are for four years.

Smallpox and Scarlet Fever.—Smallpox and scarlet fever are fast becoming epidemic in Chilton, Wis. Two more members of the Schabel family, which has been under quarantine with smallpox for some time, are ill: a bartender at Egerer's saloon is quarantined, and smallpox has broken out in the family of a miller. Three families are quarantined with scarlet fever. In many of the surrounding towns smallpox is raging to an appalling extent. The schools will probably be closed on account of the prevalence of these diseases.

St. Anthony's Hospital Laboratory, Denver.—A thoroughly equipped chemical, pathological and bacteriological laboratory has been established in connection with St. Anthony's Hospital. Physicians desiring to perfect themselves in this line of work may arrange for a private course of instruction. Dr. C. E. Cooper, recently at Johns Hopkins, is director of the laboratory. Prof. Philip Hill-kowitz, Prof. Edward Curtis Hill and Dr. George Henry Stover will have general supervision of the laboratory.

A New Antiseptic.—Dr. Novy and Professor Freer, of the University of Michigan, announced several months ago that they had made an antiseptic that cured guinea pigs inoculated with intestinal diseases. The preparation was styled benzozone. During last week five medical students have been the subjects of an experiment. They were not allowed to eat anything, and were to drink only sterilized milk. Each day the students went to the laboratory, took doses of benzozone, and drank milk. Repeated chemical analyses showed a total destruction of intestinal poisons. The next step will be to try the preparation on an actual case of disease in the human body.

The Rocky Mountain Industrial Sanatorium has furnished us the following data. The expenses are from \$35 to \$10 a month. A good table is furnished, as patients with tuberculosis cannot improve without nourishing food. Outdoor tent life is the policy of the institution, a method causing patients to improve quickly. The climate favors such a life and the sanatorium is protected from the north and west winds. The institution is not conducted for profit nor is it purely charitable, but is run upon the cooperative plan. The work is all performed by patients except the cooking, which is done by an expert in perfect health. There have been 27 patients in the institution since it first started, of which 13 paid, 11 were wholly self-supporting, and 3 partially self-supporting. The amount of compensation allowed will depend upon the strength and ability of the patient, as well as his competency in certain industries. The property consists of 10 acres under cultivation, while more land in the vicinity can be purchased as the institution develops. There are accommodations for a few more patients if properly recommended by the Advisory Board.

SOUTHERN STATES.

State Aid for the Insane.—The most important matter considered at the monthly meeting of the managers of the Springfield State Hospital, Maryland, held December 11, was a plan to have the State provide for the care and maintenance of the insane. Dr. Clarke, superintendent of the hospital, stated that there were 405 patients in the institution, filling both groups of buildings; and he believed that new buildings would soon be necessary. The most urgent need is a cottage for female epileptics, who are now kept with the other insane. As other similar institutions in the State are also overcrowded, some action looking to an increased accommodation for the insane of the State will probably be taken by the next Legislature. Dr. Clarke suggested that a slight increase in the tax rate be made, of about three cents, to provide for the indigent insane.

A Ruling in Osteopathy.—Judge Samuel E. Greene, of the criminal court in Birmingham, Ala., December 14, decided that osteopathy is the practice of medicine and any person engaging in the same in Alabama can be forced to procure a license for practicing medicine. His decision was based on the dictionary definition of the word medicine, which is the science which relates to the cure, prevention or alleviation of disease. The defendant claimed that osteopathy was not the practice of medicine, as no drugs were used.

To Combat Consumption.—Dr. John S. Fulton, secretary of the Maryland State Board of Health, called upon the Governor in compliance with a resolution passed at the last meeting of the State Board of Health in reference to State aid in the prevention and care of tuberculosis. The State Board is of the opinion that material benefits will accrue to the Commonwealth from the treatment of tuberculosis in its earlier stages in State institutions, and that the time is ripe for the State to begin sanatorium treatment. The Governor realized the importance of combating this particular disease and held the very broad view that if a particular malady exceeded all others in its power to destroy wage-earning capacity, such a malady should be prevented, whether the cost fall upon private resources or public funds.

Diphtheria in Delaware.—Two cases of diphtheria have developed in a family in Clayton, Del., and the house has been quarantined by the Board of Health. The disease had been prevalent in the town for several weeks, but was supposed to have been completely eradicated.

Army Medical Staff.—Surgeon General Sternberg said, in reference to that part of the speech of Dr. Chas. A. L. Reed, the retiring president of the American Medical Association, at Marion, Ohio, December 10, which alleged an inability to fill vacancies in the army medical corps, that Dr. Reed was misinformed with reference to the filling of vacancies in the medical corps of the army. The corps was increased by Congress at its last session by the addition of two colonels, two lieutenant colonels, ten majors and 115 assistant surgeons. This increase was out of proportion and in the absence of additional legislation would make promotions very slow for the fifty or sixty assistant surgeons at the foot of the list. But about eighty of the vacancies

created by the reorganization act have been filled during the present year, and a considerable number of applications are now on file. Up to the present time the failure to provide for more officers of the higher grades has not deterred young men from seeking admission to the medical corps of the army.

The Tri-State Medical Association met in Cumberland, Md., December 19. Papers were read by Drs. F. W. Stewart, of Pittsburg, I. N. Love, of New York; F. C. Johnson, of Pittsburg, Christopher Columbus Jacobs, of Frostburg, and A. F. Spelcher, of Elk Lick, Pa.

The Johns Hopkins Hospital Medical Society met December 16. Among the papers read was one upon the distribution of mosquitoes about Baltimore, by Drs. L. K. Hirschberg and S. C. Dohme, who related the results of their researches on mosquitoes, covering many weeks of patient work in and around Baltimore. They found the malarial mosquito larvae first on June 20 and the number of them was too great to count. They were found at Sparrows Point, where malaria is always present, until the end of October. They were found living in the Chesapeake bay, Patapasco river, marshes, pools, brooks, lakes and in old water logs. The little larvae which develop into the malarial mosquitoes were frequently captured as they tried to hide beneath seaweeds and bullrushes. They were also captured in water collected in boxes, basins, flower pots and tin cans. The culex mosquito, which does not cause malaria, was caught frequently with the anopheles. Fish, which have always been thought to eat the mosquito larvae, were seen living in the same streams with anopheles larvae. After heavy rains the anopheles larvae became much more numerous. When they placed anopheles larvae in an aquarium containing fish, the larvae were all quickly eaten by the fish. The color of anopheles larvae is usually black, but not always. They are most easily found at the edges of the brooks. They always move tail first as they wriggle about, but they take their food through the mouth while at rest on the surface of the water. In all they captured the larvae which cause malaria from 100 different places in and around Baltimore. They advise that ponds, swamps, and marshes be filled in where practicable. Slow-running streams should be banked. A few ounces of petroleum cast upon the water will free it from mosquitoes for two weeks. All patients with malaria should be protected by mosquito nets to keep them from infecting nearby mosquitoes, which in turn bite other persons. All cases of malaria should be reported to the health authorities. Houses should be built mosquito proof. Bedsteads should never be made without a patent adjustable mosquito canopy. This is especially important where mosquitoes prevail. Mosquito curtains should never touch the floor, but slide in grooves at the side of the bed.

MISCELLANY.

Syphilis in Morocco.—Raynaud says that syphilis is very common in Morocco, even far inland. The patient is kept in a dark room for 40 days, without eating meat, olives, or salted food. He is given unleavened bread and sarsaparilla. He is also sent to a spring near Fez, where bathing in the sulphurous waters is advised. Here thousands of natives are seen, and it is not uncommon to hear of others who have visited the baths for the treatment of syphilitic ulcerations.—*Le Caducée*.

Yellow Fever in Colombia.—Yellow fever is still epidemic at Buenaventura. Many deaths occur daily, especially among the government troops.

A New Treatment for Hysteria.—An attack of hysteria simulating unconsciousness in a woman may be stopped, by someone taking a pair of scissors and regretfully announcing that he will have to cut all the patient's hair off in order to make applications to her head. It is doubtful whether this bluff has ever been known to fail.—*Modern Medicine*.

An Old Indian Remedy.—An English physician has aroused discussion by an assertion that he has discovered a cancer cure in the leaves of the violet. Whether right or wrong, it is interesting to note that to the American Indian the violet cure is as old as his people. When bitten

by a snake the Indian binds across the wound a poultice of crushed violet leaves. Bruised wild violet leaves will relieve the pain of the sting of wasps, bees or any other poisonous insect. The Iroquois Indian of to-day compounds an ointment, of which the violet is an essential portion, which is described as being a rare remedy in vicious eruptions including cancerous growths.

Doctors in Madagascar.—The French have begun to carry out a great work of humanity in Madagascar. The Governor General several years ago established a school of medicine and a hospital. The medical school has already turned out fifteen native physicians competent to practice medicine. The Governor has therefore decreed that all branches of the medical service in the island shall be consolidated, and that hospitals similar to the one in Antananarivo, where 125 sick persons may be accommodated at one time, and where free medical service is dispensed to applicants numbering 100 to 150 a day, shall be established in the larger towns. Many natives trained for medical service will travel from one village to another distributing medicines and treating the ill. Particular attention will be given to the care of children, as the mortality among infants is actually 40 per cent. of the total deaths. Pamphlets are now being printed in the Malagasy language giving rules of hygiene. It is hoped that the measures which are taken to improve the health of the people will result in rapid increase of the population, which now numbers 2,500,000.

The Dietetic Role of the Microbe.—Kijanitzin asserts that animals placed in sterilized air emaciate and die in a few days. The injurious effects persist after removal from the sterile air. In breathing ordinary air the microbes inhaled are devoured by the leukocytes, and from them ferments extracted that are necessary to promote normal oxygenation. If the microbe supply is cut off, the ferments disappear from the blood, leukomaines accumulate and death finally ensues.

The Act of Dying.—The popular idea that the act of dying is painful often causes fear of death. But death from even the most painful disease is usually preceded by a period of cessation from suffering and partial or complete insensibility, resembling falling asleep, or the pleasant gradual unconsciousness caused by an anesthetic. The common phrase, "death agony," is not warranted by what occurs in natural death. When death is due to heart failure or syncope, it is sudden and painless, perhaps pleasant. Death by decapitation or electricity is only a momentary shock, hardly felt. Death by poisoning varies in painfulness according to the poison employed. Arsenic, strychnine, carbolic and mineral acids, corrosive sublimate, tartar emetic and other metallic poisons, inflict slow and torturing death.

The Influence of Color on Mosquitoes.—Osborne Browne has said that mosquitoes seek dark places to retreat into and believes that on this account walls and furniture should be light in color. To fight mosquitoes he thinks that one should pay attention to details, screen windows and doors, open the house to sunshine and fresh air, brush ceilings, corners, and behind furniture daily, put all dark clothes away, kerosene the tanks, keep natives (on the Gold Coast) at a distance, paint houses white, use a good net hung within poles of the bed, thrown up during the day and personally tucked under the mattress at night, use light-colored clothes, and avoid late dinners with friends. He does not believe that upturning the earth frees resting spores.—*The Journal of Tropical Medicine.*

America is the country that has the most lady doctors. The first was Elizabeth Blackwell, who graduated as physician in 1849. Three years later there were six in Philadelphia. In 1889 there were 3,000 lady doctors in the United States; in 1896 there were 4,555, and now there are probably 6,000, some of whom have very lucrative practices.—*Health.*

The Human Voice.—Eighteen miles is said to be the longest distance on record at which a man's voice has been heard. This occurred in the Grand Canon of the Colorado, where the voice of a man shouting "Bob" at one end was plainly heard at the other end, eighteen miles away. Dr. Young records that at Gibraltar the human voice has been heard at a distance of ten miles.

Notes.—Hong Kong is being fumigated in anticipation of the next visit of the plague.—There are 28 pounds of blood in the body of an average grown-up person, and at each pulsation the heart moves 10 pounds.—It is a curious fact that a negro has never been known to tame an elephant or any wild animal.—Rice, raw eggs, and venison are the easiest to digest. At the other end of the scale are pork, cabbage, and hard-boiled eggs, which take four hours to digest.—Antiseptic preparations may easily be forced into wood by causing them to follow the lines taken by its sap, otherwise it is exceedingly difficult to fully impregnate the wood with them.—Tall men, as a rule, have bodies out of proportion to their limbs, that is, smaller than they ought to be, with the natural result that they are unable to bear the same amount of fatigue as men more harmoniously proportioned.—A white disc a foot across can be seen with the naked eye at a distance of 17,250 feet.—Greenland is one of the very few countries where infectious diseases are unknown.

Coffee After Dinner.—It is difficult to give an adequate reason for this practice. One explanation is that coffee tends to neutralize the effect of alcohol which may have been consumed. The practice of taking cheese at the close of a meal is justified on the ground that it aids the secretion of gastric juice and thus favors digestion. This is probably correct, for a morsel of old cheese causes an increased flow both of saliva and of gastric juice. But the coffee question can hardly be solved on a like basis. Instead of favoring digestion, both tea and coffee retard it. Sir William Roberts questions whether this delaying effect on digestion may not after all be a beneficial feature. He argues that the perfection of cooking tends to present us with our food in a condition which favors not merely rapid digestion but too quick assimilation.

Japanese Life.—The Japanese do not use milk, cows being almost unknown in Japan. Milk, an animal product, falls under the condemnation which excludes everything that has pertained to life from the list of articles used for food. Animals taken in the chase are excepted, as are fish. The Japanese mother nurses her own child, continuing sometimes up to the sixth year, though other food is given in addition after the first or second year. The main food of the Japanese mother consists of rice, fish, shell-fish, and seaweed. Wine or alcoholic products are never used. Medical men think that the large use of the products of the sea is the reason why rachitis is unknown. Of course, the Japanese know nothing about butter, cream, cheese, etc., but they make an excellent substitute from a bean, rich not only in oil, but also in nitrogenous elements. Yet consumption is common among the upper classes in Japan. Mountaineers are, however, exempt from tuberculosis. The Japanese are a small people, smallness with them being a race characteristic.

Obituary.—Dr. John H. Sears, at Waco, Texas, December 4, aged 75 years.—Dr. William J. Van Eman, at Leavenworth, Kan., December 9, aged 52 years.—Dr. John E. Heers, at Danby, N. Y., December 5, aged 61 years.—Dr. Edward H. Zier, at Minneapolis, Minn., December 9, aged 44 years.—Dr. Peter Austin, at Carrollton, Mo., December 7.—Dr. Simeon J. Shaw, at Great Bend, Kan., December 10.—Dr. M. S. Stahl, at Guthrie, Ill., December 7, aged 75 years.—Dr. Timothy D. Wadsworth, at Warehouse Point, Conn., December 17, aged 64 years.—Dr. James K. H. Jacobs, at Centerville, Md., December 18, aged 45 years.—Dr. C. Otto Ficht, at Montclair, N. J., December 18, aged 83 years.—Dr. W. E. Bowman, at Elkhart, Ind., December 18.—Dr. George B. Henshaw, at New Rochelle, Mass., December 19, aged 34 years.—Dr. George Bayles, at Orange, N. J., December 20, aged 65 years.

GREAT BRITAIN, ETC.

Increase of Longevity.—According to the annual report of the Medical Officer of London, the average of life is increasing in the metropolis. During the last ten years the average mortality has been more than five per cent. less than in the previous decade. The average number of deaths from consumption in each year from 1890 to 1899 was 8,532. Last year the number was 8,030. Deaths from bronchitis decreased from 10,226 to 8,699. The main increases in disease have been in cancer, pneumonia and apoplexy. In view of recent experiments to find a cure for

cancer, there is additional significance in the figures showing the increase in London in the annual deaths from this disease from 3,800 to 4,261.

Poisoning From Dutch Cheese.—A number of cases have recently been reported in and near London of toxic symptoms following the ingestion of Dutch cheese. A number of the cases have been traced to one particular consignment of cheeses which reached London in October last. No deaths have occurred.

Colwyn Isolation Hospital.—The Colwyn Bay Urban District Council, Wales, will soon erect an isolation hospital at a cost of \$30,000. The buildings will consist of two ward pavilions, accommodating 16 patients each, and an administration building.

Smallpox in London.—On December 9, 199 cases of smallpox were actually under treatment in London. An expert view is that sixty cases of smallpox in London can be traced to one individual.

Queen's College, Belfast.—Professor J. Symington has been appointed registrar of Queen's College, Belfast, in the place of Dr. J. M. Purser, who recently resigned.

Obituary.—Dr. John Warren Edger, the oldest member of the English medical profession, has just died at Monk-seaton. He was 98 years old, took his degree in 1828, and practiced until a few years ago in Kirby Stephen. On November 20, Dr. Jenkin Lloyd, a graduate of Glasgow University, died at the Bethesda. He was 48 years old. On November 30, Henry Piers, Deputy Inspector-General of Hospitals and Fleets, a graduate of Guy's Hospital, died in Burnham, Somerset, in his 84th year. Dr. William Doblo, a graduate of the University of Edinburgh, died recently in Keighley, in his 67th year.

CONTINENTAL EUROPE.

The Depopulation of France.—The last two censuses in France have brought home with increasing force the fact that this country, owing to depopulation, is losing rank among the nations. It matters not that England, if things go on as at present, will also have to face the problem of depopulation. In the Senate, M. Bernard and M. Piot moved a resolution asking the government to appoint a commission to make a general investigation of the question of depopulation. France, at the opening of the Nineteenth century, was the most compact national group in Europe, with 25,000,000 inhabitants, Germany had but 15,000,000 and England 12,000,000. To-day France has a population of 38,000,000, Germany has 56,000,000 and England 41,000,000. Italy, Austria, Switzerland and Belgium have increased at the same rate. Compared with her neighbors, France is declining morally, financially, economically, and as a military power. The example of Germany, England, and Italy showed that numbers had something to do with a nation's standing. The decline in the French birth rate was due to several causes, chiefly the selfish desire of the French middle classes, who wish to have few children in order to bring them up to a more prosperous condition and leave them more money. The peasants in France are just as averse to large families as the middle classes. Continuing, the speaker said that depopulation could be arrested in two ways, by reducing the death rate, particularly among infants, and by legislation to increase the birth-rate. He was in favor of encouraging large families and of discouraging single persons. Legislation might be made an efficient weapon by a severe tax on single persons. M. Bernard did not say whether spinsters ought to be taxed equally with bachelors.

A Physician's Idea.—Dr. von Jirus, professor in the Bohemian University Medical School in Prague, whose death has been announced recently, had no faith in the lasting fashions of modern man's attire, for he bequeathed \$40,000 to the Bohemian National Museum, upon condition that his clothes be packed in cases hermetically sealed, to be opened in 200 years, that people of that time may see how foolishly we dressed in the twentieth century.

The Disease Purveying Mosquito.—The mosquito is going to be made responsible for leprosy also. Dr. Blanchard stated at the Paris Academy of Medicine that leprosy "could be transmitted by mosquitoes" and Dr. Chante-messe remarked that "leprosy was caught generally at night." "Other vermin," it is said, are the carriers of

"Malta fever," relapsing fever, typhoid, and perhaps several skin diseases.

Austrian Mortality Statistics.—Professor Gerhardt, of Vienna, directed attention, in a recent lecture, to the fact that within the last twenty years mortality has decreased from thirty-two to twenty-nine a thousand in Austria, and from twenty-one to eighteen in England.

Typhoid Fever on Railway Trains.—Precautions are about to be inaugurated by the Prussian state railway authorities to prevent the spread of typhoid fever. Practically every station will be turned into a quarantine and every station master made a health officer. In addition to orders to maintain scrupulous cleanliness throughout depot premises, the station masters are instructed to furnish the physician, who will henceforth accompany every through train, a detailed report of any typhoid fever cases in their town or any symptoms of possible cases. If fever conditions are found to exist, the station master must furnish freshly boiled water for the use of passengers and the train crews. He must also maintain tanks of sterilized water conspicuously marked for the use of the travelling public. The regular stationary drinking fountains must be sealed up until the town has been declared free from fever.

Koch's Theory Not Credited.—A new case of transference of animal tuberculosis to man is attracting the attention of the Berlin medical profession. A butcher was operated upon for lupus of the hand at the Berlin University clinic December 16. Dr. Erich Lexer expressly emphasized this case as contrary to Dr. Koch's theory.

To Grow Tall.—Dr. Springer, of Paris, has a method to make one grow tall. This is to apply static and faradic electricity to the knee-joints daily in connection with massage, night and morning. He binds the joints in compresses saturated with salt water each evening, and puts his patient upon a diet of cereals to promote the growth of cartilage.

The Deepest Well in the World.—The deepest of all borings is at Parnsdrowitz, near Ratibor, in Silesia, where the Prussian Government sunk a well 2,003.34 metres below the surface (nearly 6,573 feet). The upper part of the well is lined. Observations of temperature have been made, giving practically the same results as those obtained in the well of Schadebach, near by, which is only 256 metres less deep.

French in Scandinavia.—In January last the *Vordiskt Medicinskt Archiv*, which has always been printed in the French language, appeared in German, because it was less expensive to translate articles from the Scandinavian into German than into French. The official translators have consented to lower their prices, and it is announced that from next August the periodical will again appear in French.

Death of Dr. Kowalewski.—On November 22 Dr. Alexander Kowalewski, professor of zoology, died in St. Petersburg. He was a member of the St. Petersburg Academy of Sciences, and foreign correspondent of the Paris Academy of Sciences.

A Case of Fracture of the Skull Undiagnosed During Life.—Rendu and Geraudel report the case of a man of 46, with aphasia and cerebral confusion, without paralysis. His gait was ataxic. As there was no history, a possible diagnosis of syphilitic arteritis or tuberculous meningitis was made. Later his wife arrived and stated that he had fallen heavily. No traumatism was visible upon his shaven scalp, nor were there other signs of fracture. Lumbar puncture gave a few mononuclear lymphocytes, just like those seen in tuberculous meningitis. Ptosis and oculomotor paralysis appeared before death. The autopsy showed fracture of the right parietal bone, with hemorrhages between the fracture and dura, and on the opposite side of the brain, and hemorrhagic softening following the contusion. Rendu and Geraudel call attention to the fact that the cellular elements found in the cerebro-spinal fluid were the main cause of the faulty diagnosis. (*Bulletins et Memoires de la Société des Hôpitaux de Paris*, July 11, 1901. No. 24.) [M. O.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 7, 1901.

1. A Clinical Lecture on Delayed Union, Non-Union and Mal-Union of Fractures. A. H. TUBBY.
2. Colles's Fracture and its Treatment.

JOSEPH GRIFFITHS.

3. A Case in Which, After Erasion of a Tuberculous Elbow, a Thin Gold Plate was Buried in the Joint for Two Months. C. B. KEETLEY.
4. An Oblique Pelvis Associated with a Congenital Dislocation of the Hip Joint. LLEWELLYN PHILLIPS.
5. An Outbreak of Epidemic Catarrhal Jaundice in Derbyshire. HERBERT PECK.

1.—In a lecture on **delayed union, non-union and mal-union of fractures**, Tubby points out that in addition to the length of time which has elapsed after the occurrence of a fracture, delayed union may be distinguished from non-union by the presence in the former of loss of voluntary movement accompanied by pain on passive motion; absence of pain with voluntary motion means non-union. The causes of delayed union are: imperfect immobilization due to splints wrongly or loosely applied; the position of the fracture, the proximal fragment in fracture of the upper part of the femur, for instance, being specially difficult to control; the interposition of muscle, ligament, or synovial membrane between the osseous segments; lack of nutrition from tight bandaging; and general causes, as anemia howsoever produced, syphilis, rickets, phosphaturia, pregnancy and scurvy. Senility, locomotor ataxia, and poliomyelitis, although predisposing to osseous lesions, do not interfere with the subsequent repair. The treatment of delayed union is to improve the general health, secure perfect immobilization, and to wait. The injection of irritating fluids, acupuncture, setons, electrolysis, subcutaneous section of the callus, and rubbing the ends of the bones together are mentioned to be condemned. The various forms of bone-joining through an incision are to be employed if non-union appears inevitable and if the operation be not dangerous. The mortality for pseudoarthrosis of the femur is 20%; apparatus may make the patient's life bearable without operation. Violent union, excluding that following fractures in the upper third of the femur and in the middle of the humerus, should be very rare, as it is usually the result of inefficient treatment. Slight cases may be benefited by the use of apparatus, severe cases require operation. [F. T. S.]

2.—From a study of **Colles's fracture** in the cadaver, Griffiths concludes that the most efficient method of reduction consists of complete flexion of the wrist; this position of the wrist is maintained by strapping the forearm and hand to a metallic splint very similar to that devised by Lewis. [F. T. S.]

3.—Keetley details the history of a case of **tuberculosis of the elbow joint** which was treated by erasion of the articular structures. One month later the joint was reopened and the lower end of the humerus covered with gold plate with the idea of securing motion; 8 weeks later the plate was removed, although it had caused no irritation. Four years after the operation the motions of the joint are painless and limited only to a slight extent in extension. [F. T. S.]

4.—Phillips describes a specimen of **congenital dislocation of the hip** which he obtained from the cadaver of an adult female. The head of the femur had disappeared, a portion of the eburnated neck of the bone entering into the articulation. There was a joint capsule, and the lower and anterior acetabular surface was covered by fibrous tissue; the neck of the femur articulates with eburnated area, the result of a flattening of the upper rim of the acetabulum. The pelvis is markedly asymmetrical, the normal half being better developed. [F. T. S.]

5.—Peck reports an outbreak of **epidemic catarrhal jaundice** which occurred in Derbyshire. He saw 69 cases, which, he believes, represents quite half the cases that occurred up to the time of writing. The onset of the disease was usually gradual; there was almost always abdominal pain, and cramps in the calves of the legs occurred in many cases; after a variable period the patient vomited;

diarrhea was only occasionally present; the temperature was between 100° and 101.5° F.; a distinct rigor occurred in several cases, and there was a history of chilliness and shivering in all; jaundice usually came on a day or 2 after the vomiting; pruritis was a frequent symptom; tenderness of the liver was present in the majority of cases, but enlargement less frequently; the spleen was frequently found enlarged. There was one case of acute yellow atrophy which proved fatal. The author believes the disease to be icterus gravis or epidemic jaundice called Weil's disease. The incubation period is, perhaps, 6 or 7 days. The period of duration of the disease from exposure to infection to commencing recovery is about 10 or 12 days.

[J. M. S.]

LANCET.

December 7, 1901.

1. Presidential Address on Some War Sequelae.
CHARLES A. MORRIS.
2. Three Cases of Family Periodic Paralysis, etc.
E. FARQUHAR BUZZARD.
2. Pure Urea in the Treatment of Tuberculosis.
HENRY HARPER.
4. The Pathogenesis of Fibrous Hyperplasia.
E. H. COLBECK.
5. Acute Emphysematous Gangrene. N. H. CHOKSY.
6. A Family of Three Cases of the Peroneal Type of Muscular Atrophy.
W. B. WARRINGTON and ROBERT JONES.
7. A Few Words on Headaches of Nasal Origin.
ADOLPH BRONNER.
8. Excess of Salt in the Diet a Probable Factor in the Causation of Cancer. JAMES BRAITHWAITE.
9. A Case of Asthenic Bulbar Paralysis.
WALTER K. HUNTER.
10. Duration of Residence in Sanatoria for Pulmonary Tuberculosis. THOMAS CAMPBELL.

1.—Morris delivered the presidential address before the Chelsea Clinical Society at the Central Institute of Preventive Medicine, on October 15, 1901, on **some war sequels**. In the South African War the number of medical cases far exceeded the number of surgical cases. The common medical diseases were enteric fever, dysentery, and diarrhea. He states that the spread of enteric fever was largely due to flies and violent wind storms which carried infected dust and finally drifted it into the food and drink. The author has had some personal experience with preventive inoculation for enteric fever, and he believes that the body after inoculation is rendered less susceptible but not entirely immune, and that if the disease is taken, it is modified, its severity lessened, and the mortality reduced. He has found a number of individuals who have suffered from phlebitis and thrombosis at some time during their illness of enteric fever. The left femoral vein was commonly affected. Cases of dysentery were very numerous and frequently the patient was left with some chronic intestinal disturbance. Malaria, which is said not to exist in South Africa, occurred in a number of individuals and seemed to be invoked by surgical operations in those who were apparently healthy, as well as those who were seriously ill. The infection must have been introduced into the system in India or elsewhere. Only a small number of diseases due to exposure, such as bronchitis, nephritis, and rheumatism, developed in the soldiers. Neurasthenia, he remarks, was seen very frequently and developed after evidence of privation, exhaustion, and mental strain. The wounds induced by bullets, he states, are far in excess of those produced by shells. Shell projectiles caused lacerated and contused wounds, varying in severity. Shell fire was not very dangerous to life. The South African War was the first war in which any extensive experience was obtained showing the results of modern small calibre magazine rifles firing with smokeless powder mantled bullets which travel with an enormous velocity. The wounds produced by these modern rifles are not less dangerous to life than those of older type, but on the whole, the wounds are clean cut, often perforate through soft parts and heal very frequently by first intention. The reason why suppuration does not occur in the wounds from modern bullet wounds is: "1. The small skin wound produced by the bullet makes it almost a subcutaneous one, the walls of the narrow track

fall together, and a small scab forms on the orifice, under which it heals rapidly; (2) the climate is most favorable; the air is dry and pure and aids the formation of a scab. Even the dust seems aseptic; (3) the early application of the first field dressing; (4) the healthy condition of the wounded; (5) the injury is an aseptic one; (6) the rarity with which foreign bodies were carried into the wound." The author then gives an account, illustrated by cases, of bullet wounds of the soft parts, bones, joints, nerves, and injuries of the spine. [F. J. K.]

2.—Buzzard reports three cases of family paralysis with a consideration of the pathology of this disease. The first occurred in a married woman between the ages of 35 and 40. Her father and mother died at the age of 73 and 75 respectively. Her mother was of nervous temperament. The patient presented no signs of hysteria or excitability. The parietic seizures from which she suffered dated back to early childhood. They varied in severity lasting for many hours or a day or two. During the attacks she is unable to move, and at times there is only a temporary or comparative disability. The author thinks that these seizures invariably commence during a period of rest, but generally follow physical exercise, such as walking, cycling, etc. They never occur during the actual performance of these exercises. A peculiar sinking sensation at the epigastrium marks the onset of the paralysis. In severe attacks she gradually becomes powerless to use any voluntary muscle, except those concerned in the movements of the face, eyes, lips and palate. At times even respiration is difficult. The paralysis passes off gradually, and several days may elapse before she recovers. The attacks were at one time as frequent as two per week. The intervals of their occurrence have gradually decreased. The patient has two sons, aged 13 and 11, respectively, who also suffer from these periodic attacks of paralysis. The attacks in each never last more than one or two hours, but occur with greater frequency than in the mother's case, and, as in her case, their occurrence follows previous exercises, and not unfrequently they come at night. The author made a careful examination of these boys and finds no evidence of any organic disease of the viscera or of the central or peripheral nervous system. The author has tried all methods of treatment without curing or even alleviating this disease. The author suggests that the action of the lymph on the muscular tissues may have some relation to the pathology of the paralysis. Muscular activity with increased production of lymph or by prolonged rest and decreased secretion or stagnation of the lymph circulation seem to act as causative factors. He reaches the following conclusions: (1) That a chemical of physical change in the muscle plasma alone is not only a possible, but the probable explanation of the loss of contractibility described in this disease. 2. That the important part played by the muscular system in the control of the lymph circulation points to an unstable condition of the latter or an abnormal, perhaps, toxic, constituent of the fluid itself as possible sources for the changes in the muscles. [F. J. K.]

3.—Harper discusses pure urea in the treatment of tuberculosis and reports a number of cases treated with this drug. The first case occurred in a married woman, 29 years of age, who came under observation of the author on July 11, 1901. She was pregnant. The patient had been ill for six months, complaining of dyspnea, attacks of hemoptysis, cough, loss of appetite, and during this period she had lost one and one-half stones in weight. The expectorated material contained tubercle bacilli. Urea was administered in 20 grain doses, three times a day, increasing the dose 10 grains every week, until 55 grain doses were reached. This treatment was given in addition to the regular routine measures, as regards food, exercise, etc. The patient responded to the treatment rapidly; her cough subsided, her appetite became better, and she gained flesh immediately. The cough disappeared and tubercle bacilli were not to be found in the sputum after a time. The second case occurred in a female, 32 years of age, who came under the observation of the author on July 8, 1901. Her illness began four months before this date with a cold, which was followed by headache, loss of flesh, and languor. Tubercle bacilli were found in the sputum and, upon physical examination, signs of infiltration were elicited over the right apex. The patient was given urea in increasing doses, until 50 grain

doses, three times a day, were reached. The urea treatment was combined with the usual measures. On August 16, 1901 the patient had gained 7 pounds in weight, was feeling quite well, and cough and sputum, and physical signs disappeared. The third case occurred in a man, 25 years of age, who came under observation on July 20, 1901. His illness dated back six months and began with pains in the left side. Cough was excessive, but there was little expectoration. Loss of flesh and fever were pronounced. Tubercle bacilli were found in the sputum and physical examination elicited signs of pleurisy on the left side. Increasing doses of urea were administered until the patient was taking 60 grain doses. Decided improvement followed within one month. After two months practically all evidence of pulmonary disease disappeared. The weight increased one stone. The fourth case occurred in a boy 22 months of age. The child had had occasional attacks of diarrhea and did not increase in weight during the first six months. Enlarged glands were found in the neck. The abdomen was round, hard and cushion like. The patient's temperature was 101°F. Urea flavored with glycerine and peppermint, in four grain doses, was administered three times a day. The dose was gradually increased to 10 grains. Within one month, the abdomen became soft, the child's weight increased five pounds and the enlarged glands disappeared. The fifth case occurred in a married man, 30 years of age, who came under observation on April 7, 1901. He had had tuberculous gland in the left side of the neck for seven years, and for four years he had been under medical treatment. The patient's father died of tuberculosis. The patient's thorax was narrow, his limbs long and his weight only 5 stones, two pounds. He was put on urea in increased doses until 60 grains were taken, three times daily. Rapidly the mass decreased in size and the patient gained 1½ stones in weight. In this case it appears that the urea had a specific effect upon the tuberculous gland. The sixth case was that of a female, aged 28 years, who came under observation 6½ years ago. There was a family history of tuberculosis. Two years before she came under the care of the author she had what appeared to be acute tuberculosis. The right lung was tuberculous throughout, with a marked cavity at the apex. The sputum was loaded with tubercle bacilli. For six years she was treated on the ordinary principles, receiving abundant nutritious food; cod-liver oil and iron were the medicines taken internally. She seemed to do better when partaking of much meat. She improved from year to year very slowly. More recently signs of tuberculosis in the right lung showed themselves. On June 15, 1901, urea was administered with happy results. The cough subsided, and expectoration disappeared. The patient gained 10 pounds. The seventh case occurred in a patient 20 years of age, who came under the care of the author about 10 years ago. She had had tuberculous disease of the spine when 18 months old and at the age of eight years lupus developed on both cheeks and gradually involved a part of the nose. The patient was treated on the ordinary lines for tuberculosis—abundance in nutritious animal food and cod-liver oil and arsenic internally. The ulcerations on the cheeks and nose did not heal for eight years. On July 17, 1901, urea was administered with the most satisfactory result. Healing rapidly began, and the patient gained 10 pounds in weight. The author emphasizes that urea, which he had prescribed for his patients for two and one-half years, is of decided value in the treatment of tuberculosis, and he thinks that urea exerts a specific action on tuberculosis, as mercury on a syphilitic node, salicylate of sodium in rheumatic fever, and potassium iodide in bronchial asthma. The urea which he has been employing is a synthetic product. Harper thinks that the most suitable cases for the administration of urea are the following: "(1) Circumscribed pulmonary tuberculosis of the lung, in which the sputum exhibits abundance of bacilli, and only a limited number of cocci; (2) enlarged tuberculous glands situated on any part of the body; (3) tuberculous pleurisy (here in my cases urea acted like magic); (4) tuberculous laryngitis; (5) lupus; (6) tuberculosis of the peritoneum with fluid in the peritoneal cavity; (7) hydrocephalus in children, (8) tabes mesenterica or carreau." Unsuitable cases are: "(1) Pulmonary tuberculosis in which cocci predominate, practically covering the whole field of the microscope, and the tubercle bacilli exhibit a short stumpy appearance, the typical Koch's bacillus being scanty; (2) acute

millary tuberculosis with a high temperature (103° F. or over); (3) gastritis; (4) the last stage of tuberculosis where the patient is dying; and (5) when the patient has a temperature of over 101°." The author believes that the whole problem of the treatment is based largely upon the immunity or natural resistance. Urea stimulates immunity or natural resistance. He thinks that the drift of medical opinion is to ignore the etiology of tuberculosis and to assume that every individual is vulnerable to tubercle bacilli. He believes that the organism in which the microbes thrive constitutes the main factor in the causation of disease. He contends that "if the color of the iris, a mole situated on a particular place on the body, or a distinctive family wrinkle on the brow, not to mention the grosser forms of heredity, such as supernumerary or webbed fingers, be transmitted from generation to generation, or if the bars on the wing of the wild pigeon remain the same through centuries, it is most likely that those who have withstood the assaults of the bacillus for generations possess within their tissues a protective." He is firm in his belief that urea gives the best results in tuberculosis when Koch's bacillus is the predominating microbe. Tuberculous patients can often consume large quantities of urea, as it seems to supply something that is lacking in the economy of these patients "who crave for it as the hungry for meat and the thirsty for water." [F. J. K.]

4.—Colbeck discusses "the pathogenesis of fibrous hyperplasia." He discusses the subject under the following headings: (1) Post inflammatory fibrosis; (2) so-called compensatory fibrosis, visceral cirrhosis and the like; (3) the fibrosis of mechanical congestion; and (4) senile fibrosis. The author holds that "the essential and fundamental element in the pathogenesis of fibrous hyperplasia is increased nutrition consequent on the partial or complete loss of the control that is normally exercised over the nutritive supplies to the fibrous tissue by the more highly specialized cells with which it is associated." [F. J. K.]

5.—Choksy discusses acute emphysematous gangrene. He mentions that this condition is of infrequent occurrence and few cases are recorded in medical literature. He states that Corner, Singer, and Welch believe that the specific microorganism exists in two forms, aerobic and anaerobic, the first being generally associated with the streptococcus pyogenes and staphylococcus and the second occurring in pure cultures. Three varieties of the anaerobic have been described. "(1) *Bacillus emphysematosus*; (2) *bacillus oedematis maligni*; and (3) *bacillus aerogenes capsulatus*." The author quotes Dr. Welch: "That by far the most common specific cause of emphysematous gangrene is the *bacillus aerogenes capsulatus* and that numerous organisms, described by other observers under different names, are to all intents and purposes either identical with it or that at least one of them is an aerobic bacillus, probably identical with Sanfellee's *bacillus pseudo-oedematis maligni* which is also capable of producing this affection, but with much less frequency than the *bacillus aerogenes capsulatus*." [F. J. K.]

6.—Warrington reports three cases of the peroneal type of muscular atrophy (Charcot-Marie-Tooth-Hoffmann) occurring in a family. The first case occurred in a healthy looking woman, 56 years of age. When about 7 years old, her ankles easily turned in, therefore she often suffered from sprains. At the time of this report the muscles of the thenar eminences and of the first interosseous space were wasted to a less extent than those of the hypothenar eminences. This deformity produced very little disability. No deformities were found in the upper extremities. The right foot was hollowed and inverted and somewhat dropped. The tendon of the tibialis anticus was prominent. The foot could not be everted on account of paralysis of the peroneal muscles, all other movements could be made. The same characteristics which were found in the muscles of the right foot, but less marked, were found in the left. The knee jerks were absent and the plantar reflexes gave the usual flexor response. Electrical reactions in the thenar eminences were absent. The interosseal muscles reacted slightly and no reaction was found in the peroneal group of muscles. The second case occurred in a man, 31 years of age, the son of the above patient. The foot on both sides could not be inverted and there was always a marked club-foot deformity. Decided wasting was

present in the front and outer sides of the legs. The calf muscles were well developed and the smaller muscles of the hands exhibited extreme wasting. Feeble knee jerks and absent plantar reflexes were elicited. Electrical reaction in the atrophied muscles was not obtained. The third case occurred in a man 30 years of age, a younger brother of the above patient. Since the age of twelve this patient noticed weakness of the ankles, and, sometime after, wasting of the balls of the thumbs. The muscles of the front and outer sides of the legs were atrophied. Only a moderate degree of power was present in the calf muscles. Only slight plantar reflexes could be obtained, but the knee jerks were distinct. Electrical reaction in the thenar eminences was present. The author states that these cases conform with the classical description of Charcot, Marie, Tooth and Hoffmann. [F. J. K.]

7.—Brunner discusses headaches of nasal origin. He thinks it is not very generally known that headaches are often due to disease of the nose. Nasal trouble is not in many cases the cause of headache, but aggravates already existing symptoms. In every case of chronic headache, the cause of which cannot be found and in which there are nasal symptoms, the nasal cavities should be carefully examined. He thinks that if this would be more generally carried into effect, many of the so-called incurable headaches would be relieved. Nasal headache is often of a neuralgic character. The headache may be chiefly supra-orbital or in the middle of the head, behind the eyes, and sometimes at the top or back of the head. It presents an intermittent character and is always worse in the morning. Headache due to eye strain is always better in the morning. Nasal obstruction sometimes gives rise to a diffuse headache. Frequently dizziness is a symptom of nasal disease. A diminished resistance to alcohol, coffee, tobacco, and mental excitement is often pronounced. Affections of the frontal sinus give rise to local pains which are increased by pressure and often radiate into the head. The author gives a report of five cases of headache associated with nasal disease. [F. J. K.]

8.—Braithwaite thinks excessive salt in the diet a probable factor in the causation of cancer. The following is the substance of his theory: "(1) That excess of salt in the diet is one of the four factors that originate the disease. This is the essential factor, but it is inoperative without at least one, or probably two, of the others. Excess of salt may arise from individual taste, or from much salt meat, or from too much ordinary meat, which of course involves much salt. The other factors are these: (2) an over-nourished condition of the body from more food and especially more meat than is required. This condition is rarely met with amongst out-of-door workers; (3) an impure condition of the body owing to non-use and non-oxidation of the food which has been taken. The amount may have been moderate or even small. The cells of the body in this condition are loaded with effete material. It obtains in old age; in persons who lead indolent, easy, and in-door lives; and locally in organs the active functions of which have ceased; (4) a fourth factor is some local irritant or stimulant, such as friction from a stem of a pipe or irritation from some microorganism of which no one is actually specific, or ovarian stimulation in the case of the breast. Of these the first must always be present, and probably, in some form, the fourth, and also in all either the second or the third, but not both of them. These factors being in existence, the disease may be started in perhaps some one epithelial cell or in a mass of cells, which grow individually larger and change the nature of their protoplasm, for a cancer cell will not stain congo red, whilst an epithelial cell takes the stain deeply. The cell becomes a different being with often more than one nucleus. It is itself the parasite, living and growing at the expense of the tissue around it, and contributing nothing to the common good." [F. J. K.]

9.—Hunter reports a case of asthenic bulbar paralysis. The patient, a man aged 58, was admitted to the Glasgow Royal Infirmary on December 18, 1899. He complained of difficulty in speaking and swallowing, and of an intermittent weakness of the extensor muscles of the neck, for two months previous to admission. The patient thought the carrying of heavy loads of books on his head on two successive days was responsible for the affection. After talking for awhile, defect in speech would come on, and, after a short rest, speaking was always fluent and dis-

thet. Intermittent difficulty in swallowing was present. The family history appeared to have no relation to his condition. The patient had been a soldier for 21 years. He has had several attacks of ague, one of which lasted 10 months. He had suffered from measles and scarlet fever in childhood, and throughout his life he has had hemorrhoids. On examination no evidence of paralysis of the facial muscles was found. Firm adhesion existed between the left tonsil and the postero-lateral part of the dorsum of the tongue. The character of his speech varied. At times articulation was imperfect. Weakness of the trapezius and possibly in the erector spinae muscles was present which produced a forward drooping of the head. The patellar reflexes were present, but ankle clonus and knee clonus were absent. Vision appeared normal, there was, however, slight paralysis of the right internal rectus. The patient gradually grew worse. He had a number of attacks of dyspnea, and the difficulty in swallowing became so urgent a symptom that it was necessary to introduce food into the stomach by means of a tube. Death occurred for an attack of dyspnea of five hours' duration. A microscopical examination of the pons, medulla, and cord, was made and they all seemed to be perfectly normal. The motor and sensory tracts did not show any signs of degeneration. The motor ganglion cells stained extremely well throughout the whole cord. The peripheral nerves were not examined microscopically. [F. J. K.]

10.—Campbell discusses the duration of residence in sanatoria for pulmonary tuberculosis. He is of the opinion that on the early recognition of tuberculosis in the lungs depends the duration of residence in the sanatorium. He thinks it is necessary that laboratories for the use of medical practitioners should be established, in order that sputum examinations may be made free of charge. There is also a need for the erection of a number of sanatoria to deal with cases in the earlier stages of the disease. The shortest period of treatment which will benefit a patient has been fixed by most physicians as not less than three months. When the physical signs have become pronounced, few cases will improve in not less than six months. He thinks that at the present time, a period of six months may be looked upon as a fair limit for residence in a sanatorium. [F. J. K.]

MEDICAL RECORD.

December 21, 1901.

1. The Cure of Chronic Bright's Disease by Operations. GEORGE M. EDEBOHLS.
2. An Improved Method for Introduction of the Stomach Tube. H. CRENSHAW.
3. Results of Osteotomies for the Correction of Genu Varum and Genu Valgum. HOMER GIBNEY.
4. A Method of Protecting the Perineum During Labor. L. E. NORFLEET.

1.—J. M. Edebohls discusses the operative cure of chronic Bright's disease. He presents a study of 18 patients treated surgically, all of whom were women, and whose ages varied between 19 and 45 years. Of these 18 patients with chronic Bright's disease; five had right chronic interstitial nephritis, four had left chronic interstitial nephritis; four had right and left chronic interstitial nephritis; two had right and left chronic parenchymatous nephritis; three had right and left chronic diffuse nephritis. Right nephropexy was performed upon four patients and bilateral nephropexy upon twelve. Extensive denudation of the kidney cortex, by stripping off the capsule proper, so as to lay bare about one-half of the surface of the kidney, was a feature of all these nephropexies. In three or four instances renal cysts of various sizes were punctured and evacuated prior to anchoring the kidney. Upon his last two patients he performed total excision of the renal capsule proper with the sole and specific object of bringing about a cure of chronic Bright's disease. There has been no mortality in his series. He believes that the condition was cured in eight of his cases, and that the operation causes the increased and adequately maintained blood supply of the kidney leading to gradual absorption of the interstitial or intertubular inflammatory products and exudates, thus freeing the

tubules and glomeruli from external compression, constriction, and distortion, and permitting the reestablishment in them of a normal circulation. [T. L. C.]

2.—H. Crenshaw suggests that the introduction of the stomach tube may be very much facilitated by freezing two or three inches of the extremity of the tube just prior to its introduction, the object being to secure slight temporary anesthesia of the fauces and pharynx by means of the cold rubber. He recommends spraying the extremity of the tube for a few minutes with ethyl chloride. [T. L. C.]

3.—Homer Gibney discusses the results of osteotomies for the correction of genu varum and genu valgum. A table is presented showing the result of the operation in 21 cases. The method employed has been that of subcutaneous osteotomy. The legs are prepared as for any surgical operation. An assistant grasps firmly the thigh, the knee is held in semiflexion over a sandbag for supracondylar osteotomy, and on either side of the site of operation, for tibial osteotomy in bow-leg; the small osteotome is then forcibly pushed through skin and soft parts to the bone parallel with long axis; the osteotome, then at apex of greatest deformity, placed transversely, and with a mallet is driven into the ivory-like cortex of the bone. By gradually manipulating the osteotome, a line semicircular is cut down to the medullary canal, where less resistance is appreciable; withdraw gently the osteotome, and place a pad of gauze over the small opening made by the insertion of the instrument, the partial or incomplete fracture is in many cases easily affected. Complete fracture is often performed. The wound is surgically dressed, and put up in position of over-correction in plaster of Paris, in nearly all instances encircling and hugging the pelvis snugly. At the expiration of two or three weeks, the dressing is cut down, position of limbs observed, and still further over-corrected, as in some instances it is necessary for the plaster of Paris to be re-applied. This, however, may be lighter than the first dressing. The apparatus is worn after the discontinuation of the plaster of Paris to prevent relapse. [T. L. C.]

MEDICAL NEWS.

December 21, 1901.

1. Report of the Committee of Seven on the Prophylaxis of Venereal Disease in New York City.
2. The Medical Society of the County of New York and Its Objects. FRANK VAN FLEET.
3. Three Points in the Treatment of the Deformities of Infantile Paralysis. JOHN LINCOLN PORTER.
4. Artificial Milks. LOUIS KOLPINSKI.
5. On the Biological Relationship of Proteids. P. A. LEVENE.

3.—J. L. Porter emphasizes three points in the treatment of infantile paralysis: "(1) The most efficient treatment of the deformities resulting from infantile paralysis is the preventive treatment. Thirty-five per cent. of the deformities of the lower extremities comes from infantile paralysis. A very large percentage of these cases could have been prevented if the treatment had been begun earlier. Treatment should be begun as soon as the extent of the paralysis is well defined, for it can generally be predicted what the resulting deformity will be; (2) every case of infantile paralytic deformity, however slight or severe, can be improved to some extent by appropriate treatment. This may be anything, from adjusting a small ankle brace to correcting club-foot, to an extensive tendon transplantation or to the production of an artificial ankylosis of a joint. The author described an apparatus to be used in a condition in which the anterior muscles of the thigh and leg are affected, but those of the calf are spared. A bearing point is made on the anterior surface of the thigh by means of a spring steel band which passes half around it, another is fixed in the same way just above the ankle, then the leather strap is passed just behind the tibia below the knee joint, and thus the tibia is drawn forward by tightening the strap. Sometimes this can be accomplished quite rapidly, at others it takes several weeks, the strap being drawn a little tighter every few days. The bands at

the thigh and ankle are completed by leather straps which buckle around the leg to hold the splint in place. At the knee a ring-catch joint is made so that the patient can sit down. When he rises to walk the ring drops over the projecting bar and fixes the knee stiff and holds it in the normal position. But when the head of the tibia is drawn forward into place the heel is lifted from the floor by the contraction of the tendo-Achillis and the extensor of the foot, so that the patient cannot place the foot flat, but usually has to step on the ball of the foot; (3) simple tenotomy of the shortened tendons in these cases is of great benefit aside from the release of tendon and improvement of function that results. If tenotomy of the tendo-Achillis is done and the foot dorso-flexed to a little more than a right angle and placed in plaster of Paris until healed, then with a stop-joint at the ankle the patient can walk with the leg and foot in normal position. [T. M. T.]

4.—L. Kolipinski gives the important points necessary to produce an artificial milk: (1) That it should approximately represent all of the component parts of the animal secretion; (2) the percentage of salt and water is of vital importance; (3) the product should be cheap, readily and rapidly prepared; (4) the ingredients should be easily obtainable, fresh and sterile and the mixture be palatable. He gives the following formula for such a milk: Extract of malt (sirupy), one teaspoonful; olive oil, one tablespoonful; roasted flour, two tablespoonfuls; one broken raw egg. Beat up in a bowl with a spoon or egg beater three to four minutes. Add while stirring a tumbler of pure cold water. Season with table salt. To be taken one or two hours after meals. In hot weather add crushed ice. [T. M. T.]

5.—P. A. Levene's experiments on the biological relationship of proteids is as follows: He immunized rabbits for about two months with milk and found that their sera formed precipitates with milk, casein, milk albumin and also with beef serum. The same serum will fail to form precipitates with the entire white of the egg, egg albumin, egg globulin, chicken serum and sheep hemoglobin. On the other hand he found that animals that received injections of the white of the egg for two months will form precipitates with egg albumin, egg globulin, the yolk of the egg, with chicken serum. No precipitates will be formed on the addition of the milk proteids, beef serum, nor of the different proteids of the latter, of guinea pig serum, nor of serum of a normal rabbit. The conclusion is that chemically different proteids derived from the same or closely related animals have the power of producing similar "precipitates" when injected into animals. This seems to show that human milk could be used for obtaining serum for the detection of human blood. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

December 21, 1901. (Vol. LXXIV. No. 25).

1. The Correction of Deformities Following Osteitis of the Knee. WISNER R. TOWNSEND.
2. On the Feasibility and Management of a Hygienic Cure of Pulmonary Tuberculosis Outside of Closed Sanatoria. CHARLES L. MINOR.
3. The Treatment of Abortion. HELEN HUGHES.
4. Anygdalotomy Itash. EDGAR A. FORSYTH.

1.—W. R. Townsend states that osteitis of the knee either invades the upper end of the tibia or the lower end of the femur or both with or without destruction of the joints in about fifty per cent. It is a well-known fact if this condition is properly treated in the acute stage that all patients should recover with straight limbs. The amount of motion will vary, but the earlier treatment is begun, the more motion. Under the old method sixty per cent. recovered with motion; under the fixed plan seventy-six per cent. recovered with motion, while under the protective plan and the one used at the present day ninety-five per cent. were cured with motion at the knee. The author mentions the following deformities due to this disease: (1) Subluxation of the tibia; (2) all other deformities. All these may be present without ankylosis of the joint. Subluxation is usually present with deformity. Complete luxation rarely occurs. Forceful correction under anesthesia is advised for subluxation deformities. This is done by pressing the tibia forward as the leg is straightened and cutting the hamstring tendon when necessary. For the correction of the other deformities there are three methods

available: (1) Forceful correction; (2) osteotomy, linear or coniform; (3) excision. It will be found that a great many of these cases will be corrected by a forcible correction. If the hamstring tendon has to be cut, the external should always be divided through an open incision for fear of injury to the external popliteal nerve. The internal is cut by subcutaneous incision. After this the limb should be held for a considerable period, as it has a tendency to return. Osteotomy is preferred to an incision in all cases where the deformity is so great that the lower leg cannot be brought into a straight line with the upper, except in two classes: (1) Where the subluxation is extreme; (2) where the deformity is almost a right angle, complicated with subluxation. Excision has been discontinued by most surgeons in children, as the great majority of cases can be corrected by osteotomy. [T. M. T.]

2.—To be abstracted when concluded.

4.—E. A. Forsyth described a rash which follows the removal of the faucial and pharyngeal tonsils as follows: The rash generally appears on the second or third day after operation, and may be papular, roseolar or erythematous in type. It appears first on the neck, chest and abdomen, sometimes extending to the face or extremities, lasting two or three days, but may last as long as five. In some cases there is desquamation; in others itching. There is very little constitutional disturbance; slight fever. The author reports a case similar to the above. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 19, 1901.

1. A Discussion on the Relation Between Human and Bovine Tuberculosis, etc. A. D. BLACKADER.
2. On the Necessity for Special Study and Experience in Treating Children. FREDERICK A. PACKARD.
3. Notes on X-Light Radiable Windows in X-Light Tubes. WILLIAM ROLLINS.
4. The Formation of Cysts in the Faucial and Pharyngeal Tonsils. J. L. GOODALE.

1.—Blackader begins a discussion of the relation between human and bovine tuberculosis by a consideration of the most important literature since 1865. After reviewing the work of Villemin, Chauveau, Gerlach, Klebs, Orth, and a number of others, he concludes that the first part of Koch's statement that human tuberculosis differs from bovine and cannot be transmitted to cattle, is to be regarded as true only in a modified sense. He then refers to a number of cases in which the evidence points to the transmission of bovine tuberculosis to man. It is to be remembered that the pulmonary tissue is peculiarly susceptible to the growth and development of the tubercle bacillus; that generalization of the infection is a striking feature of tuberculosis in childhood, due probably to the activity of the lymphatic circulation and that the tubercle bacilli, gaining access to the body through the intestines, may be readily conveyed through the thoracic duct to the right side of the heart and thence directly to the lungs. With our present knowledge of the distribution of the tubercle bacillus from human sources, it is extremely probable, considering the way children are allowed to creep along the floor and the tendency they have to put everything into their mouths, that bacilli may be frequently introduced on their fingers or on their playthings. The ingestion of bovine bacilli conveyed in milk is, therefore, by no means the only source of intestinal infection. Much clinical and bacteriological work still remains to be accomplished before the latest statements of Koch can either be accepted or contradicted. [J. M. S.]

2.—Packard read a paper before the Suffolk District Medical Society, in October, on the necessity of special study and experience in treating children. He referred to a number of well-known points in which the diagnosis of disease in children is not susceptible to the ordinary rules applicable to adults. One or two points deserve special mention. He refers particularly to enlargement of the tracheobronchial lymph-nodes. Unilateral diminution in the loudness of the breath sounds, without evidence of material interposed between the lung and the chest-wall is a valu-

able sign of the enlargement of these structures when the presence of a foreign body in the bronchus of the affected side can be excluded, but the venous hum which is developed on the extreme extension of the head and which can be heard when the bell of the stethoscope is applied over the upper portion of the sternum is of greater importance. This is known as Eustace Smith's sign. It is sometimes absent even when this group of glands is enlarged. The possibility of the existence of a patent Meckel's diverticulum should always be borne in mind when a reddish, vascular growth, resembling granulation tissue, is found at the umbilicus. If such a structure were snared off, the intestinal contents might escape into the peritoneum with fatal result. In young babies the absence of Kernig's sign has no significance whatever in the diagnosis of meningitis. The recently described Babinski reflex is of but little value in children because of the fact that in perfectly healthy children irritation of the sole of the foot will cause a different character of reflex to appear in the same child almost with each succeeding stroke of the finger. The ease with which lumbar puncture can be performed in babies makes that procedure especially valuable to the pediatricist.

[J. M. S.]

3.—In treating skin lesions by the use of X-rays Rollins advises that a large opening be made in the non-radiable mask which should be covered by thin, transparent celluloid, gelatine or collodion held in place by rubber of other elastic cement. This transparent window can then be covered by some opaque paint up to the margins of the diseased area. As the condition yields to treatment and the area of disease becomes smaller, the painted area can be extended. [J. M. S.]

4.—Goodale reports 2 cases of cyst of the tonsil. He believes that these structures are produced by the adhesion of opposite sides of one of the crypts in the tonsil, so that the lining epithelium produces a secretion that distends the circumscribed cavity thus produced. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 21, 1901.

1. The Evaluation of Anthropometric Data. WINFIELD S. HALL.
2. The Education of the Degenerate. JOHN MADDEN.
3. Therapeutic Indications Suggested by the Condition of the Blood. O. T. OSBORNE.
4. Treatment of Neurasthenia. HAROLD N. MOYER.
5. A Simple Operation for the Radical Treatment of Hemorrhoids. J. RAWSON PENNINGTON.
6. Anatomical Treatment of Fractures of the Femoral Neck. C. E. RUTH.
7. Herpes Zoster Ophthalmicus, with Brief Report of Five Cases. WM. C. BANE.
8. Corneal Lesions in Acquired Syphilis. WM. H. WILDER.
9. Lachrymal Stenosis in Infants and Its Treatment. DUNBAR ROY.
10. A Study of the Fetal Stomach, Etc. W. A. EVANS and WILHELM BECKER.
11. Notes on the Intracellular Occurrence of Diplococcus Pneumonia in Cerebrospinal Meningitis. LOUIS BLANCHARD WILSON.
12. Smallpox and Vaccination, Etc. GEORGE DOCK.

1.—Hall discusses the evaluation of anthropometric data, giving an account of the old and new methods of obtaining data and the significance of the results. He draws the following conclusions: "1. The collection of anthropometric data is almost universal in the practice of medicine. In the case of certain special lines of work these data are of fundamental importance. 2. Anthropometric data have a potential value, but no practical value as such. Only through some process of evaluation can the potential value be made practical and form the basis of general conclusions. 3. That method of evaluation which involves the use of arithmetical average is both time wasting and inaccurate, while the method based on Quételet's median value is accurate, and is quickly and easily applied. 4. The median value is the

value represented by the median measurement of a series of measurements; that is, that measurement which has as many values above it as below it. 5. The above described method of evaluating anthropometric data should be of value to all surgeons, pathologists, physiologists, and psychologists; to medical examiners in schools, gymnasia, insurance companies, the army and the navy; and to criminologists, neurologists and anthropologists."

2.—Madden emphasizes the importance of education of the degenerate. He thinks that heridity, the most potent factor in determining the characteristics of the individual, will never be controlled by society through legislative enactment or otherwise, therefore degeneracy must be eliminated through education and change of environment.

[F. J. K.]

5.—J. Rawson Pennington, after referring to the character of hemorrhoids and the difficulties encountered oftentimes in their ligation and in the caustic treatment, describes a method of his own, which consists in eversion of the pile-bearing area and the removal of an elliptical piece of mucous membrane from each hemorrhoid, and then the complete removal of the tumor by dissection. The patient having been prepared in the usual way for the operation with a laxative and an enema, the sphincter is dilated and the rectum irrigated with bichloride solution of 1:3000, followed by normal salt solution. The hemorrhoids are everted by traction with a number of T-shaped forceps applied at the mucocutaneous juncture. During the removal of the hemorrhoids through the elliptical incision a stream of hot normal salt solution is allowed to flow over the wound. Any spurting vessels are caught with hemostats and twisted, the author never having found it necessary to apply a ligature. After the removal of the tumor the mucous membrane collapses and covers the denuded surface. Care should be taken in the operation not to cut the skin surface as it renders the post-operative stage much more painful. When the operation is completed a gauze tampon covered with rubber is introduced into the anus. The tampon is removed at the end of 48 hours and the bowels are opened. The author has employed this method in 138 cases, in 29 of which local anesthesia was employed. His article is illustrated with a number of cuts. [J. H. G.]

6.—C. E. Ruth, after referring to the anatomical structures concerned in fracture of the neck of the femur and to seventeen cases reported previously, in which he employed the treatment advised thirty years ago by T. J. Maxwell, add eight others to this number. In adjusting the fragments after a fracture of the neck of the femur the thigh should be flexed upon the abdomen to relax the psoas and the iliacus and prevent them from being caught between the fragments; vertical traction should then be made on the shaft of the femur while it stands at right angles to the trunk; adduction to the normal line, followed by extension of the long axis of the trunk should then be made. Buck's extension apparatus with elevation of the foot of the bed and elevation of the side of the bed upon which the injured limb lies, together with lateral extension of the upper portion of the femur, should now be carried out. Much is claimed for this treatment. It is said the patient is much more comfortable, can be much more easily bathed, and that it permits of a freer movement of the upper portion of the body and the well limb. Reference is made to a case in which this treatment was carried out in a patient 70 years of age. The patient died at the age of 90 and an examination of the bone postmortem showed perfect union to have taken place, the patient having enjoyed perfect use of the leg during the last twenty years. [J. H. G.]

12.—Dock arrives at the following conclusions in regard to the value of vaccination and particularly the advantages of using glycerine lymph. "(1) Glycerinated lymph properly raised and prepared offers less danger of septic infection than any other kind of vaccine virus, and, notwithstanding the disadvantage of slow drying, it is to be preferred to dry points as made at present; (2) the peculiar features of the vaccine vesicle as known since the days of Jenner are due to the specific virus; any marked variation from them must be looked upon as evidence of imperfect protection; (3) virus that produces an imperfect lesion should not be used, because, though it may induce immunity for a short time, may even prevent the taking of an active lymph inserted

soon after it, it is likely to obscure the real condition of the subject and set up an unfounded feeling of security; (4) a knowledge of the natural history of normal vaccinia is very desirable for the physician; (5) the vaccination histories of all cases of smallpox, varioloid and chickenpox should be ascertained and recorded as fully as possible; (6) makers of vaccine virus should give clear and explicit statements as to the quality of their products. The mere assertion of freedom from pyogenic germs covers only part of the case. Evidences of specific activity, as from use in the human being, should be given. For the makers, the results of variolous inoculations in vaccinated monkeys, as suggested by Copeman, would seem very useful and almost essential to the maintenance of a proper standard; (7) a government station for the making and testing of vaccine virus is highly desirable. This need not interfere with private enterprises, but, properly conducted, would be of great value to the latter; (8) public vaccinators should be trained for their work, and facilities should be given for others to study the methods and clinical features of vaccination."

[F. J. K.]

AMERICAN MEDICINE.

December 21, 1901.

1. Four Cases of Typhoid Cholecystitis; Two Followed by Gallstones. CHARLES G. STOCKTON.
2. A Case of Subcortical Glioma of the Lower Part of the Left Ascending Frontal Convolution Successfully Removed. JAMES STEWART.
3. Surgical Malposition of the Gallbladder.
E. D. FERGUSON.
4. The Question of Ovarian Pregnancy.
J. CLARENCE WEBSTER.
5. Blindness from Inhalation and Ingestion of Methyl Alcohol. H. V. WUERDEMANN.
6. Angoneurotic Edema; Report of a Case, etc.
BERNARD KOHN.
7. Alcohol and Insanity. ARTHUR S. HAMILTON.

1.—Charles G. Stockton and Albert T. Lytle report four cases of cholecystitis complicating typhoid fever. Two of the cases give evidence of the relation that exists between infectious cholecystitis and cholelithiasis. [T. L. C.]

2.—James Stewart reports a case of subcortical glioma of the lower part of the left ascending frontal convolution successfully removed. The case is interesting as being an instance of a successful removal of a subcortical growth, the location of which had been correctly made out six weeks previous to the operation. It shows that dysarthria and not aphasia is the characteristic form of speech disturbance met with in growths in this situation. There was a marked disorder in writing—an ataxia of writing, or what might be called dysgraphia. This was present without any weakness of the right hand, and was, therefore, not due to loss of power, but rather to disturbance of coordination. Following the operation there was a great improvement in articulation and writing. [T. L. C.]

3.—E. D. Ferguson reports three cases of surgical malposition of the gallbladder. He believes that these were due to developmental conditions. The relation of the peritoneal coat of the intestinal canal as it passes on to the gastrohepatic omentum is well known, as well as the important surgical mark known as Winslow's foramen. Though in its growth the liver falls to carry before it a complete envelop of peritoneum, the biliary ducts for present purposes may be considered as surrounded by that serous membrane, but as mesentery and omentum are but two

layers of this serous sac, outside of but still encircling certain organs, it is quite clear that in the fold extending from the intestine to the liver there may be not only protrusion of some portion of the liver from its serous envelop, but portions of the biliary ducts may be so developed as to extend beyond the omental fold and outside of the peritoneum. [T. L. C.]

4.—Webster gives an interesting, though brief, review of the case of ovarian pregnancy reported by Catherine van Tussenbroek, reported in 1899. He does not change his original opinion that ovarian pregnancy cannot exist, and in this move does not share with Lawson Tait, Berry Hart, Bland Sutton and others in their change of mind. He remarks that several conditions may simulate ovarian gestation, such as hematoma ovarii, pregnancy in an accessory tube, or pregnancy in an accessory fimbriated extremity, or in a diverticulum of the tube. While admitting that van Tussenbroek's specimen was one of exceeding interest, Webster holds that her work has not proved that there may be an exception to the statement made by him some years ago, namely, that the development of a fertilized ovum implies a genetic reaction, which results in decidual formation, and that the latter, being always present, implies a relationship of necessity. [W. A. N. D.]

5.—H. V. Würdemann reports a case of blindness following inhalation and ingestion of methyl alcohol. He reviews the literature of the subject and concludes that the indigestion of methyl alcohol will produce blindness of a characteristic type which is sudden and in most cases complete, which tends later to a partial or incomplete recovery. Without securing an authentic history and without observation for some weeks of a case or from one examination, it would not be possible to state that a certain case of blindness was or was not caused by methyl alcohol, as the ocular appearance, the state of vision, and the scotoma in the visual field are the same as in the other forms of toxic amblyopias. The prognosis might clear up the condition. [T. L. C.]

6.—Bernard Kohn reports a case of angioneurotic edema, and reviews the literature of 71 cases. He mentions the origin of the disease, and states it has been quite generally demonstrated that it is of nervous origin. Low temperature seems to have considerable influence in bringing on the attacks in the predisposed. The relation between angioneurotic edema and urticaria is discussed, as alcohol, trauma and malaria as causes. He states that the condition is a manifestation of the same angioneurotic state of the blood vessels in various tissues of the body, but there is difficulty in determining its exact nature. [T. L. C.]

7.—Arthur S. Hamilton presents a paper on alcohol and insanity. He discusses the influence of age, sex, civil conditions, occupation, as well as climate and races, and furnishes the symptoms of alcoholic insanity, disregarding delirium tremens (which is really the beginning of alcoholic insanity). Premonitory symptoms are rare, but at times there is unusual depression of spirits for a day or two, some headache, and an inability to sleep. Hallucinations of hearing are more common than those of sight. Delusions of persecution are frequent. Delusions of grandeur are not common. Delusions of marital infidelity are of frequent occurrence. Many of these cases become dangerous as a direct result of their hallucinations and delusions. Attempts at suicide are not infrequent. The most essential point of treatment is total abstinence, and seclusion in an institution of some kind is practically always necessary. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

August 29, 1901.

1. Abscess of the Sheath of the Rectus in Typhoid Fever. L. BOLLACK and H. BRUNS.
2. On the Influence of Pregnancy and Labor upon Phthisis and the Therapeutic Value of the Production of Premature Labor. S. KAMINER.
3. The Action, the Method of Use, and the Collateral Effects of Thiosinamin. F. JULIUSBERG.
4. On the Treatment of Rupture of the Liver (Conclusion). WILMS.
5. A Case of Poisoning with Ammonium Sulphide. A. HESS.

1.—The authors report a case of typhoidal suppuration in a very unusual situation—in the sheath of the right rectus abdominis. The man was admitted to the hospital on January 23d, and while entering convalescence, exhibited on the 8th of February, after a marked attack of cough, pain in the region of the rectus muscle, which in a few days was followed by the development of a mass the size of an egg, which was subsequently incised. About 150 cc. of pus were obtained from it, and pure cultures of the typhoid bacillus were found. Another mass developed on the other side in a similar position. This was not incised because it was already known that the other was caused by typhoid bacilli, and since local typhoid lesions of this kind often recover spontaneously, this second mass was left to itself, and it underwent spontaneous absorption. The patient recovered entirely. The bacilli isolated from the pus were virulent to animals, and they gave a marked agglutination reaction. The virulence, however, was not of high grade. The authors believe that there is a very definite relation between the local lesions produced by the typhoid bacillus, and the degenerative changes which take place in the muscles in typhoid fever, and which have been known for years. They think that the typhoid bacillus localizes itself in the areas which have undergone degeneration, and the fact that degeneration has occurred permits of the bacilli causing local suppurative lesions, when otherwise they, in all probability, would not occur. [D. L. E.]

2.—Kaminer gives a table of 50 cases exhibiting the influence of labor and pregnancy on phthisis. He opposes the view of Maragliano, that pregnancy should be interrupted because it interferes with the subsequent existence of a person who would probably become tuberculous. Kaminer considers this an unreasonably Spartan-like standpoint. He refers to 15 cases under his observation in which labor was artificially interrupted, and 2 in which the interruption occurred spontaneously. In 12% of these cases death occurred; in 30% there was a marked increase in the severity of the disease; and in 70% there was no change notable. In no cases was there any suggestion of a real cure. This is also strongly against Maragliano's belief that pregnancy should be artificially interrupted for the benefit of the patient. Kaminer believes that it does not aid the patient, indeed, is much more likely to make the condition worse, and at any rate any little aid given by this method is given only through the loss of the life of the child. In many instances he believes that one is justified in interrupting pregnancy, but that this is practically never one's definite duty and at any rate a decision cannot be reached by following a general law, but only by observing each case and reaching an individual opinion. He believes that the most important point is to prevent conception in phthisical subjects. [D. L. E.]

3.—Juliusberg has used thiosinamin in a series of cases, chiefly those in which there was marked scarring from lupus, keloids and similar conditions. He believes that he has observed most strikingly satisfactory results, particularly in keloids and scars resulting from lupus. He has also had excellent results from this drug in scleroderma, particularly when its use was associated with massage and elec-

tricity. He states that keloids and lupus scars have in several instances been practically entirely absorbed, and in scleroderma the board-like regions of skin have rapidly become soft and flexible. He uses the drug in a 10% water-and-glycerine solution, and states that injections of this solution are absolutely painless, while alcohol solutions are more or less painful. The dose which he used is about 1½ gr. every 2 days; he usually gave it between the shoulders. Two or three times this amount was given in some cases. Local applications of the drug in 10, 20, and 30% blisters were also used, and in many instances produced good results, but these local applications could not always be borne. No results were seen from using the drug in fresh lupus vulgaris, in cases of tabes dorsalis, and in mycosis fungoides; nor in a number of cases with so-called plastic induration of the corpora cavernosa penis. Some authors have claimed that the drug has an excellent effect upon tubercular tumors of the glands, and upon adhesions of the uterine adnexa, and various other conditions. [D. L. E.]

5.—The poisoning occurred as a result of the use of a capsule which the patient found in his room, and which he thought contained castor-oil. He broke open the capsule and swallowed the contents, when he at once had burning pain in the mouth, vomiting and diarrhea. The tongue was found to be white and was somewhat painful; he had some tenderness of the abdomen, but otherwise practically no symptoms and soon recovered entirely. It was found that the substance which he had swallowed was ammonium sulphide. The capsule containing this was intended to be used as a practical joke. When thrown against any hard substance near the object of the joke they would break and produce the unpleasant odor characteristic of ammonium sulphide. [D. L. E.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

(Vol. 70, Heft 3 and 4).

11. Contribution to the Pathogenesis of Paralysis Agitans. SCHWENN.
12. Comparative Estimations of Blood Pressure with the Syhygmomanometer of Basch, and the Tonometer of Gärtner. HIRSCH.
13. Investigations upon the Blood Pressure and the Pulse in Cases of Tuberculosis in Davos. BURCKHARDT.
14. The Typical Symptoms of Influenza. The Angina of Influenza and the Tongue and Spleen in Influenza. FRANKE.
15. Contribution to the Knowledge of Lipemia, and of Diabetic Coma with Description of a Simple Method for the Determination of Abnormal Fat Conditions in the Blood. ZAUDY.
16. A Peculiar Disease of the Small Bronchi. LANGE.
17. Intestinal Fat. DEETZ.
18. Treatment of Croupous Pneumonia in Cases Observed from the 1st of April, 1897, to the 30th of October of that Year. PETZOLD.
19. Book Reviews.

11.—Schwenn reports an interesting case of paralysis agitans occurring in a young man, who in the course of 6 or 7 years died. The symptoms were exceedingly characteristic; he first suffered from writers cramp, then from tremor in the right arm, followed by tremor in the right leg, and then, in order, the left arm and left leg. The gait was not disturbed until the 5th year. At the end of 6 years all the symptoms were characteristic. There was propulsion, disturbances of gait, the pill-roller's tremor of the fingers, and towards the end of the disease tremor of the head and tongue. In the last two years he had occasional night sweats, slight paroxysms of fever, considerable albumin in the urine without casts. The speech was lost, and swallowing became impossible. The patient finally died of indurative pneumonia. At the necropsy the following changes were noted; atrophy of the brain with edema of the meninges, a mild form of endocarditis, and nervous system otherwise normal. Microscopical examination of the brain, cord and nerves, however, failed to show any pathological changes, not even the previously described

gentle disturbance in the blood vessels. In the muscles, however, there was multiplication of the nuclei of the fibres, without any other morbid alterations in them. Schwenn, however, believes that his case proves that paralysis agitans is chiefly the result of progressive alteration in the nutrition of the muscles, which gradually invades the total musculature of the body. He does not believe that the changes he describes can be the result of gentle changes or alterations in the muscular activity, and he thinks that the changes occasionally observed in the skin argue in favor of a peripheral seat of the disease. He explains the cessation of the tremor that follows apoplexy, by supposing the normal influences passing through the muscles of the body cease, and therefore the tremor, which is a perversion of activity, must cease also. [J. S.]

12.—Hirsch has performed a number of experiments with the sphygmomanometer of Basch, and the tonometer of Gärtner. The first consists essentially of a small button that can be pressed against an artery until the latter is occluded. Pressure is then gradually relaxed until a slight pulsation reappears, and the result read. The instrument of Gärtner consists of a small hollow rubber ring which is slipped over the finger, causing anemia of the peripheral phalanx. The pressure is then relaxed until the finger becomes red, when the amount of pressure exerted is read upon the scale, and the result recorded. In both instruments it is necessary to overcome the resistance of the arterial wall, and of the soft parts lying between the artery and the compressing part of the machine. A number of comparative measurements were made, and it was found that the 2 instruments did not agree very closely. In one half the cases the tonometer pressure was from 10 to 20 mm. lower than that of the sphygmomanometer. In one fifth of the cases the results were equal, and in the remaining cases the sphygmomanometer pressure exceeded that of the tonometer. He concludes that the tonometer does not show the absolute blood pressure, but this plus the pressure caused by the soft parts of the walls of the blood vessels. The results therefore are valuable comparatively for experiments made upon the same individual. He believes that Basch's sphygmomanometer is much more accurate. [J. S.]

13.—Burekhardt has investigated the blood pressure and the pulse in a number of cases of tuberculosis in Davos, under varying conditions of climate and treatment. The investigations were performed with Gärtner's tonometer, and were commenced by Professor Egger at Basle, before the patients departed for Davos. Within an hour after their arrival the measurements were taken, and for the following week 3 times daily; later at somewhat longer intervals. The results showed that in general a moderate rise in blood pressure occurred immediately upon their arrival in Davos, although this was by no means constant. This rise in blood pressure persisted throughout the entire stay. There was also an increase in the frequency of the pulse. As the result of his studies on various cases of phthisis, Burekhardt states that in the first stage blood pressure is normal; in the second stage it falls, and the pulse-rate increases, and this condition persists throughout the course of the disease. Hydrotherapeutic measures were also tested, and it was found that the cold douche caused a considerable increase in blood pressure in nearly all cases. An injection of cinchonic acid caused practically no alteration in the blood pressure. Exercise in the form of short walks produced either no alteration in blood pressure, or a temporary diminution. Hemoptysis produced an increase in the blood pressure in one case, which was transient, followed by a rapid decrease and death. It follows from these results that it is important in the treatment of pulmonary tuberculosis to increase the blood pressure. [J. S.]

14.—Franke describes certain symptoms that he finds almost invariably in influenza, and practically never in other diseases. They consist of reddish streaks upon the anterior arch of the gums, which persist throughout the course of the disease. They vary in breadth from 2 to 3 mm., and rarely involve the extreme edge. The edges are sharp, the color is bright red, changing to bluish in anemic cases. They produce either no subjective symptoms, or only a slight feeling of discomfort in the throat, as if it were being slightly compressed. He has also observed, in a case of chronic influenza, a peculiar strawberry-like alteration of the tip of the tongue, resembling that seen in

scarlet fever. This Franke ascribes to neuritis of the nerves following influenza. The patient also had a peculiar reddening of the gums. He also describes a typical tongue in influenza, which is characterized by swelling of the papillae. This is most common in cases of recurrent influenza. It has not hitherto been described. The enlargement of the spleen is also peculiar in influenza, because it is subject to great variations in size, which occur very suddenly. In fact Franke speaks of it as a sort of barometer of the disease. [J. S.]

15.—Zaudy has examined a number of cases of diabetes mellitus, and in 2 of them found lipemia. His attention was first called to this by the appearance of small white points in a drop of blood drawn for other investigations, and he therefore prepared a hanging drop in which, in the course of 24 hours, a considerable amount of fat had gathered at the surface. The man died and at the autopsy there was found lipemia, fatty necrosis of the pancreas, retention of chyle in the intestines and mesenteric lymph glands, and some changes in the pancreatic duct. In addition the usual changes of diabetes and milky hydrocephalus. The second patient developed diabetic coma, and on the day of his death a drop of blood withdrawn the day previously showed the presence of fat. In a third case (which is merely mentioned) lipemia was also discovered. Zaudy warns that fat can only be recognized when within an hour after the withdrawal of the blood the serum of the hanging drop has become bluish white or milky, and when microscopic examination shows the absence of fibrin. In a postscript he states that in 12 cases in which he examined for lipemia it was absent in 11, including one of diabetes, and present in the 12th, a boy suffering from a very severe form. A careful analysis of the urine in the first case by Frenkel is appended to the article. [J. S.]

16.—Lange reports two very interesting cases of what is apparently a new disease. The first, a girl of 22, developed cough and then chill and headache. From this time there were progressive dyspnea with cough and moderate expectoration, considerable fever and finally death on 9th day. At the autopsy all the organs were normal with the exception of the lungs which were apparently the seat of an acute miliary tuberculosis. However, upon careful histological studies it was found that tuberculosis did not exist, but there was an inflammatory condition of the bronchioles, which showed the following types of alteration. First, bronchioles were found whose lumen was obliterated by desquamated epithelium, in the midst of which a moderate number of leukocytes could be seen. Many of the leukocytes contained eosinophile granules. Second, the small bronchi whose lumen was obliterated with a more or less homogeneous substance that took the Weigert fibrin stain, and in the midst of which leukocytes could be observed. Third, bronchioles whose lumen was occluded by fibrin throughout which spindle cells were growing, and which contained numerous connective tissue fibres. Fourth, foel consisting of young connective tissue cells newly formed by vessels, and masses of leukocytes mixed together, and showing their original relation to the bronchus on account of the presence of ciliated epithelium and circular muscle fibres, and fifth, alveoli filled with an exudate resembling the hemorrhagic exudate. Serial sections showed that these types of changes were not distinct but extended from the bronchioles into the alveoli in the order in which they have been described. The lung tissue lying between the obliterated bronchioles showed very slight alterations. The alveoli contained a few cells filled with brown pigment, and on the septum some masses staining homogenous red with eosin. Bacteria could not be found. The second case, a man of 32, had been troubled with cough for about 6 months, he then developed dyspnea, which became so severe that he was obliged to give up work. There was no temperature or cyanosis, but the dyspnea increased and the patient died after a sickness of 4 weeks. All the organs were normal except the lungs which showed the same appearance of miliary tuberculosis that was found in the previous case. Microscopical examination showed exactly the same type of alteration. There was no alteration in the blood vessels, and no bacteria of any kind could be found. It appears that the disease is characterized by a fibrinous exudate in the bronchi which interferes with admission of air into the alveoli, and causes death by dyspnea. [J. S.]

17.—Deetz reports an interesting case occurring in a man

of 50 years of age. He developed symptoms of renal colic which were always associated with evacuation of sand-like masses with the feces. He was requested to save some of this material and, as a matter of fact, it was found to have the appearance of sand. It was insoluble in sodium chloride, in nitric acid, and in water, ether, alcohol and chloroform. Microscopically the granules appeared in the form of spheres or half spheres with clear projections. They did not contain any of the constituents of gall stones. The patient did not eat fruit and therefore these cells were not the stone cells described by botanists. Chemically they contained an organic substance and calcium. Further investigations showed that they consisted of calcium oxalate and phosphate. The nature of the organic constituent was not determined. The characteristic picture of this disease is that the patient, habitually constipated, suddenly has a severe attack of colic, and then an evacuation in which sand can be observed. The attacks occur with varying frequency in different cases, sometimes several times in a month, sometimes three or four times in a year. They usually come on a few hours after a meal. Many of the cases also have membranous enteritis. Treatment consists of morphia to relieve the pain, and, in the intervals, massage of the abdomen and laxative pills. In addition patients may be treated by high lavage of the intestines, with luke-warm water and perhaps the Carlsbad treatment. [J. S.]

18.—Petzold reports the results of the treatment of croupous pneumonia with subcutaneous injections of quinine hydrochlorate. These were employed in the more severe cases that came to the Magdeburger Altstadt hospital, and the results showed that the mortality was something less than half that of the other hospitals in Magdeburg, and bore about the same relation to the mortality in 3 of the largest hospitals in Berlin, where the number of cases was considerably greater. Comparing the 3 hospitals of Magdeburg, the mortality, excluding cases dying within 12 hours after admission, in whom no quinine injections were used, showed for the Altstadt 8.8%; for Sudenburg 22.5%; and for Schweisan 30%. Including the cases that died shortly after admission, the percentages were respectively, 12.2; 24 and 30. The total number of cases was 271 and the mortality 33. Of these 10 died shortly after admission; 12 were not treated with quinine injections, and 11 died in spite of them. Many of these cases were atypical, and in 8 of them the pneumococci could not be found, and Petzold therefore concludes that certain and undoubted results can be obtained by injections of quinine in typical croupous pneumonia whose cause is the diplococcus. A number of cases are reported in order to prove this statement. However, he is also convinced that in streptococic and pneumo-bacillic pneumonia the results are almost equally favorable. It is a curious fact that the more severe cases of pneumonia that were treated with quinine gave a lower mortality than the milder cases in which it was not employed. In his own cases 84 were treated with quinine with 11 deaths, and 187 without quinine with 22 deaths. Of these 187, however, 74 occurred in children less than 10 years of age, among whom there were no deaths, the disease running an extraordinarily mild course and ceasing spontaneously. Omitting these, the mortality is, for the quinine cases 13%, and for the cases treated by other methods 19.7%. In 4 cases complicated by pregnancy, quinine was employed and 2 recovered and 2 died as the result of premature parturition. Complications do not appear to contra-indicate the use of quinine, but on the contrary it seems to act most favorably whether there be weakness of the heart, delirium or delirium tremens. Even the cases complicated by nephritis may be so treated without danger. It does not, however, appear to check the development of jaundice. Quinine does not apparently hasten the crisis, but benefits the general condition of the patient, strengthens the pulse, diminishes the dyspnea and cyanosis, and clears up the semi comatose or delirious condition of the patient. Sometimes a single injection was sufficient; sometimes a second or third was required. Petzold believes with Aufrecht that the general action of the quinine is upon the cause of the disease. The method of employment is as follows. 0.5 gram is dissolved in 17 ccm. of water, and injected under the most rigid aseptic precautions. The most favorable situa-

tion is the side of the abdomen. It is important that the point of the needle should penetrate to the subcutaneous tissue, otherwise necrosis is apt to occur. One case occurred in the practice of Petzold, in which a phlegmous infiltration of the wall of the abdomen lasted for 2 months. Ordinarily 2 injections of 0.5 gm each on consecutive days is sufficient, but it was the custom to repeat the injections every day as long as the patient appeared to be seriously ill. In case of pain at the site of injection a hypodermic injection of morphia may be employed. [J. S.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

August, 1901. (Volume 60, Nos. 5 and 6).

23. The Speech Disturbances with Otitic Abscess of the Left Temporal Lobe. W. MERKENS.
24. Echinococotomy by the Posadas-Bobrow Method. L. W. ORLOW.
25. Wound Diphtheria. TAVEL.
26. The Pathological Anatomy of Early Death After Skin Burns. KARL DOHRN.
27. The So-called Embryonal Glandular Tumors of the Kidney. ADOLF JENCKEL.
28. The Relations of the Joint Capsule and the Internal Condyle of the Humerus in Outward Dislocation of the Elbow Joint. J. EVERSMAUN.
29. An Extrasynovial Plastic Operation Upon the Joint Capsule and Other Plastic Operations Upon the Knee-joint. AUER.
30. Lymphatic Cyst of the Buttock. ACHILLES NORDMANN.
31. Outward Dislocation and Torsion of the Patella from Muscle Traction. BORCHARD.
32. Repeated Incarceration in the Obturator Foramen With Volvulus. A. von MEER.
33. The History of Circular Pyrorectomy. L. RYDYGIER.
34. The Röntgen Rays in Gunshot Wounds of the Skull. MATTHIOLIUS.

23.—Merkens has collected 25 histories of patients with otitic abscess of the temporal lobe, in whom the inability to say words aloud existed. They recognized objects, knew their uses, wrote the words, but could not pronounce them. In severer cases there occurred word deafness, the impossibility to repeat a word after hearing it pronounced, to write it, to read it, or to understand it when it was seen or heard. Nine of the 25 patients, whose histories are given, could not read correctly, eight showed word-deafness, seven could not write correctly, etc. A number of intricate diagrams shows the course of the conducting fibers, explaining how these results followed an abscess of the left temporal lobe. They are exceptionally due to a lesion of the speech centers, the conducting fibers being affected generally, especially those fibers which connect the sound and conception centers; occasionally those between the sound and writing centers. Optic aphasia, which may occur, is but a form of mind-blindness. Distinct disturbance of speech aids the surgeon in forming an early diagnosis of otitic abscess of the left temporal lobe and in performing an early operation. In making the diagnosis, tumors, encephalitis, etc., must be excluded.

[M. O.]

24.—Orlow reports the case histories of five patients upon whom closed echinococotomy by the Posadas-Bobrow method was performed, out of eight cases of echinococcus cysts of the liver which he has operated upon during the last fifteen months. This method consists of evacuating the cyst and then sewing it up. This should never be done if inflammation or suppuration has occurred. In none of the cases were there hepatic symptoms after operation. After the operation, the lungs and pleura are often affected and purulent parotitis may result. All but one of his cases recovered, that one dying at home some time after leaving the hospital. Orlow states that special care should

be taken to clean out the sac, and to search for more echinococcus cysts throughout the liver, before the sac is closed. [M. O.]

25.—After a review of the literature, Tavel reports three cases of wound diphtheria. In a whitlow, an abscess of the muscles of the back, and paronychia of the index finger, diphtheria bacilli were found. The case-histories are given in full. In none of them was the course of the affection at all different from what it would have been without diphtheria bacilli. There was absolutely no suspicion of a membrane. The diagnosis is impossible without a bacteriological examination, since most cases with the formation of a membrane are due to staphylococci and streptococci. Tavel concludes that the same kinds of disease may be caused by different bacteria, and the same bacteria may cause different forms of disease. [M. O.]

26.—Dohrn gives the case-histories of 17 patients who received severe skin burns, 13 of whom died. The blood was not found thickened, nor was there congestion of the internal organs. The red blood corpuscles showed poikilocytosis, bits broken off, variations of form, microcytes, etc. Light bodies were noted in the erythrocytes, and leukocytosis occurred. Hemoglobin or methemoglobin was found in the urine in but two cases. These changes Dohrn believes are due to the heat of the burn. But such changes can occur without producing the death of the individual. Thrombosis was found rarely, and then only in the capillaries of the brain and lungs. Albumin occurred in the urine almost constantly. Among the nine autopsies, which are given in detail, nephritis was seen in only three cases. There was, however, a marked increase in the brain pressure, some edema of the brain substance, and a beginning diffuse encephalitis. While this resembled poisoning, it explained the nervous symptoms which occur with burns. From these investigations, Dohrn believes that the cause of early death after skin burns, is a powerful intoxication due directly to the effect of the burn. [M. O.]

27.—Jenckel describes a remarkable mixed tumor of the kidney, without a sign of malignant degeneration either histologically or clinically, in a woman of 43. The tumor had grown for eight years, more upon the right side of the abdomen than the left. Laparotomy showed that it was retroperitoneal, attached to the left kidney. She recovered slowly and perfectly, in spite of the immense size of the tumor removed. This was 37x28x15 cm. and weighed 14½ pounds. Its circumference measured 96 cm. Examination showed that it had grown from three combined calices which had failed to form normal pyramids. It was composed of highly developed connective tissue with a few nuclei, myxomatous young tissue full of cells, smooth muscle tissue, fat, elastic fibers, and glandular elements with cuboidal and cylindrical epithelium. After a full discussion of the possible origin of the tumor, with the description of two other congenital tumors of the kidney, Jenckel concludes that the theory of Wilms is unnecessary to explain this case, since all the tissues found in the tumor rose from normal kidney structure. [M. O.]

28.—Eversmann reports two cases of outward dislocation of the elbow-joint, with separation and interposition of the internal condyle of the humerus, in boys of 13 and 11. The former fell upon his outstretched left hand, with immediate pain at the elbow. The dislocation was reduced with difficulty under anesthesia. There was loss of feeling in half of the fourth finger and in the entire fifth finger, with loss of power to flex the little finger. The internal condyle of the humerus, which had been broken off, was only located by the Röntgen rays, between the sigmoid cavity and the trochlea. This was removed by operation, and he recovered full use of the arm. The other boy fell upon his left elbow. Pain only appeared later, but persisted then. The conditions found were similar to those in the preceding case. He also recovered after removal of the separated epitrochlear fragment. In some cases the lack of the epitrochlea is noted distinctly;

in some it is felt in its abnormal position upon certain motions; in others it will come in between the bones, upon moving them, and so its interposition is at once recognized. It may be in the joint-capsule, or just outside of it. Eversmann advises primary arthrotomy and excision of the separated internal condyle of the humerus, suturing the joint-capsule. The incision upon the inner side of the joint will also expose the ulnar nerve. [M. O.]

29.—After a full review of the literature of dislocations of the patella, Auler describes an extrasynovial plastic operation upon the knee-joint, performed by Professor Bardenheuer. In both cases incision was made into the quadriceps tendon, which was again sutured, making it 1 cm. shorter. The end of the ligamentum patellae was separated from the tuberosity of the tibia and attached to the periosteum of the tibia. In both cases the results were excellent. Similar operations were performed upon 11 cases of genu valgum; two cases of chronic hydrops articuli; four cases of chronic rheumatism and arthritis deformans; one case of septic arthritis of the knee-joint; and one case of dislocation of the meniscus externus, with uniform success. The technique of the operations and the 21 case-histories are given in full. [M. O.]

30.—Nordmann reports a unique case of lymphatic cyst of the buttock, in a woman of 34, following a fall. The cyst, which measured 21x11 cm., upon operation, was seen to contain pure lymph. The wound healed slowly. The cyst replaced the fascia lata, for upon its removal the muscles of the thigh were uncovered. Very few similar cases were found in the literature. [M. O.]

31.—Borchard reports a case of dislocation of the patella with complete semi-torsion, caused by muscular traction, in a boy of 17. Reduction was the means of diagnosis in this case, as the patella untwisted to return into place. The diagnosis of this condition is extraordinarily difficult, and reduction should not be attempted without an anesthetic. Rest is necessary after reduction. [M. O.]

32.—von Meer reports the case of a woman of 62, with the symptoms of incarcerated hernia. Laparotomy showed a hernia of the ileum through the left obturator foramen. As she was very weak, the radical operation was not performed. Eighteen months later the condition recurred, and laparotomy was again performed. This time the hernia was again reduced, and she has kept well since. Only seven such cases have been operated. The poor general condition of the patient excluded all possibility of herniotomy. [M. O.]

33.—Rydygier insists that the operation of circular pylorotomy, when the incision is made in the linea alba, and the duodenum is sutured directly to the wound made by resecting the stomach, should bear his name, and his name only. [M. O.]

34.—Matthiolius reports the case of a young man who had been shot in the forehead four years before. Severe headache followed. As Röntgen photographs localized the bullet in the frontal bone, it was removed by operation. He has kept well ever since. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 41.

1. Bacillol and Lysoform, Two New Disinfecting Agents. CRAMER.
2. The Occurrence of Psoriasis Vulgaris Following Tattooing. BETTMANN.
3. Subcutaneous Traumatic Hemorrhage of the Abdomen. EICHEL.
4. The Cleansing of the Organism by Washing in Experimental Investigations with Tetanus. C. TONZIG.
5. The Treatment of Injuries of the Fingers with Special Consideration of Subsequent Movements. H. GEORGI.
6. Anomalies of the Nasal Cavities, Illustrated by Two Cases of Nasal Suppuration with Shortening of the Septum. C. HOPMANN.

7. Death as a Result of Treatment by Quacks.

F. ZAGGL.

8. A Case of Preserved Consciousness in an Epileptic Attack. A. DIENL.

9. Statistical Contribution to the Consideration of Tuberculosis. A. GOTTSTEIN.

1.—Cramer has made some careful experiments with *bacifol* and *lysoform* in order to determine their real disinfecting qualities. He tested them with a great number of culture media, and removed samples from these cultures at varying intervals up to an hour. It was found that in 2% solutions all growth ceased at once; in 1% solutions all growth ceased after 5 minutes and in 0.5% solutions it ceased in 10 minutes. With *lysoform* the results were very unsatisfactory. In some cases even after an hour's exposure numerous colonies could still be obtained from a 3% solution. *Bacifol* is a product of the distillation of tar; its active principle is cresol, which occurs in a proportion of 52%. It is entirely without odor, and is very cheap. It will probably serve to replace many other antiseptics, for example for the disinfection of the sputum, and in all cases where *lysol* has hitherto been used. *Lysoform* is an oily, soapy liquid, perfumed and smelling of formalin; it is soluble in water, and has remarkable odorizing qualities. It is expensive, and its germicidal properties are very unsatisfactory. [J. S.]

2.—Bettmann reports a case of *psoriasis vulgaris* that occurred in a baker, 29 years of age, who previously had been tattooed on the right forearm without further results. About 6 months ago he was tattooed on the left forearm, and 14 days later a desquamating disease of the skin appeared, limited to this area. This developed into a typical case of *psoriasis* and gradually extended to other parts of the body, remaining, however, more severe on the left fore-arm. The question arises whether the tattooing determined the localization of the *psoriasis* on account of irritation of the skin in that situation, or whether some parasite, which may be responsible in the causation of the disease, was introduced into the skin in the process of tattooing. The facts in favor of the infectious character of *psoriasis* are that the clinical course of the disease resembles in some respects the clinical course of diseases which are known to be due to microorganisms; that certain cases appear to prove the contagiousness of the disease; and the discovery of certain organisms in the diseased skin, whose etiological relation however, is still questionable. Finally, experiments have apparently shown that it is possible to produce a skin disease in animals which resembles more or less closely *psoriasis*; and in one case a physician inoculated himself and produced the typical type of the disease with numerous relapses. [J. S.]

3.—Eichel divides the various forms of intra-abdominal hemorrhage into: subcutaneous laceration of the gastrointestinal canal; injuries to the genitourinary system, and those cases in which the hemorrhage into the abdominal cavity dominates the whole clinical picture. Of course it is possible that injuries to several organs exist at the same time. The usual method by which the injury is produced is a crushing blow that is inflicted upon the abdomen when the body is supported against some hard object such as the ground. Ruptures of the liver, however, may occur as a result of a fall from a high place. The latter injury is greatly favored by fatty degeneration of the liver. Ruptures of the spleen are more likely to occur if the organ is enlarged, as for example, in malaria. The line of rupture in both liver and spleen is usually irregular, and perhaps more frequently on the convex surface. There is no pathognomonic symptom for intra-peritoneal hemorrhage. If shock occurs and the patient fails to improve under stimulants, it is probable that bleeding is taking place. If the patient's condition grows rapidly worse an hour after the injury and there is no reason to suppose intra-cranial hemorrhage, abdominal hemorrhage is again to be suspected. If dulness appears in the flanks very early, that may also be looked upon as a suspicious feature. He reports a case of a soldier 22 years of age who after great excess in eating and drinking suddenly felt severe pain in the abdomen, and his condition, in spite of all remedies rapidly grew worse. An operation was therefore performed, peritonitis was discovered due to rupture of a gastric ulcer.

in this case the absence of any history of gastric disturbance rendered the diagnosis difficult. In cases of rupture of the spleen the dulness may be limited to the left side of the abdomen. [J. S.]

4.—Tonzig has performed a number of experiments with the object of determining to what extent thorough washing of the circulatory system controls the tetanus intoxication. For this purpose he selected rabbits which were inoculated with various amounts of culture, and then some of them were given intraperitoneal and subcutaneous injections of normal salt solution daily either before or after the appearance of the symptoms, and in some cases several times a day. The cultures varied considerably in virulence, making it possible sometimes to obtain cases of very slow course. The results did not seem to show that the treatment with normal salt solution was of any effect, and Tonzig concludes that it is not possible to hope for a favorable outcome in a case of tetanus as a result of the mere washing out of the organism, and that therefore the virus of tetanus does not circulate in the body, but remains attached to the tissue elements. When, however, the case is mild from the outset, the lavage of the tissues may delay the fatal termination, or at least the appearance of the symptoms, and the procedure should be employed especially in those cases in which serum cannot be given at the beginning. [J. S.]

5.—Georgli calls attention to the importance of Ledderhose's teaching upon the treatment of wounded fingers. He believes that we are entirely too conservative in regard to this, and it is far more important to have a stump covered with loose normal skin, than to have it covered by tender scar tissue, perhaps adherent to the bone and limiting the movements of the part. He therefore contends that in all cases of injury to the fingers sufficient bone be resected to secure ample flaps of normal skin. [J. S.]

6.—Hoffmann reports two cases, the first a man with the septum unusually short, so that the naso-pharyngeal space was abnormally long and as a result the inferior turbinates projected into the space. He believes that the disturbance of the circulation of air contributed to the causation of a chronic rhinitis with the symptoms of eczema. The shortness of the septum was due to the forward dislocation of the vomer. The second case showed also shortening of the septum, and the appearance of enlarged nasal tonsils with a thickening of the mucous membrane of the septum. As the mucous membrane was very sensitive to irritation, severe coughing occurred whenever it was touched, even during deep chloroform anesthesia. [J. S.]

7.—See editorial, *Philadelphia Medical Journal*, Dec. 7, 1901, p. 969.

8.—Diehl reports the case of a man 26 years of age who had been an alcoholic for about 2 years. The result of this was that in the night, particularly after drinking too much, he would have an attack in which he would have convulsive movements, would bite the tongue, but did not lose consciousness. There was apparently no possibility of hysteria, or attacks the result of suggestion. These attacks were preceded by aura and followed by a feeling of exhaustion and depression. The general character of the patient resembled strongly that of those suffering with epilepsy. [J. S.]

9.—Gottstein has carefully studied the mortality statistics of the city of Berlin with the object of determining what proportion of infants die of tuberculosis. For this purpose he included the cases of glandular suppuration, pulmonary tuberculosis and infantile tuberculosis, and in addition the cases of chronic bronchitis and inflammation of the brain, although it is obvious that in this condition were many instances not tuberculous. These studies show that a considerable proportion of all deaths occurred in this tuberculous group; about 15%. The figures also show that the number of deaths in infants due to tuberculosis is steadily increasing, although the total mortality from tuberculosis is decreasing. He supposes this is due to the fact that children are infected in some method different from that in which adults are infected, and he believes this due to the communication of tubercle bacilli through the food. [J. S.]

VRATCH.

September 22, 1901. (Vol. XXII, No. 38).

1. Chronicle of Corporal Punishment in Russia in the Twentieth Century. D. N. ZSHBANKOFF.
2. A Case of Hypertrophic Sclerosis of the Brain in Epilepsy. A. S. MANUILOFF.
3. On the Question of Prevention of Typhoid Fever. P. ENJKO.
4. Syphilis in the District of Paraflevsk, County of Borzensk, Government of Tshernigoff, According to Family Records Kept for the Last Three Years. S. N. GENEROPITOMTSEFF.

2.—Manuiloff reports a case of hypertrophic sclerosis of the brain in a woman, 29 years old, who during life presented none of the characteristics of that affection. There were no paralyses, trophic disturbances, deformities of the skull, physical underdevelopment, lowering of the mental faculties or idiotism. The only condition present was epilepsy, but that alone was not sufficient to establish a diagnosis. On the other hand the autopsy revealed, both macro- and microscopically, a typical picture of hypertrophic sclerosis of the brain. The pathology of this affection is discussed and the bibliography given. The article is also accompanied by an illustration, showing the microscopical appearance of the sclerotic areas in the brain. [A. R.]

3.—Enjko presented in 1894 statistics from the St. Petersburg Alexandroff Institute, showing that typhoid fever may be prevented by excluding from the table uncooked fruit and vegetables and unboiled water. In the present article he shows how the morbidity from typhoid fever may be reduced to a minimum by the use of boiled water. An interesting fact mentioned by the author is the very low rate of mortality observed by him. For a period of 30 years the mortality-rate averaged 1%. (The ages of the inmates of the Institute, as gathered from one of the author's tables, range from less than 10 to over 19). [A. R.]

4.—Generopitomtseff presents statistical data concerning syphilis among the peasants, as revealed by a thorough and systematic investigation carried on for a period of 3 years. The district in which the observations were made has a population of 9594. Of these 472 or 5% were found affected with syphilis. The tables furnished by the author show a marked predominance of syphilis among women and children. Thus, syphilis in men was found in 21%, in women in 43.4% and in children in 35.6%. Similar data were obtained by Speranski and Timoschok. This is explained by the fact that the children inherit the disease from their parents (fathers) and transmit it to their mothers and nurses. The "innocents" thus constitute the most important factor in the dissemination of the disease in rural communities. The transmission of the disease by direct sexual intercourse is infrequent as compared with the other modes, as shown by the following table:

Mode of infection	Men	Women	Children	Total	Per Ct.
Sexual	14	8	—	22	4.7
Living together	27	52	3	82	17.3
Hereditary	42	105	165	312	66.1
Unknown	16	40	—	56	11.9

[A. R.]

September 29, 1901. (Vol. XXII, No. 39).

1. On the Question of Popular Healing at the Orthodox Christian Monasteries. V. PH. BUSCHUEFF.
2. The Alkalinity of the Blood Under Physiological and Pathological Conditions. V. F. ORLOVSKI.
3. On the Question of Ambulatory Curettement of the Uterus. F. V. BUKOEMSKI.
4. A Few Surgical Observations at the Novoladozshsk Zemski Hospital. A. V. MARTINOFF.

2.—Will be abstracted when concluded.

3.—Bukoemski performed at the Out-patients' Department of the Odessa City Hospital 154 curettements of the uterus. 116 were made for the cure of fungous endometritis and endometritis following abortion, 35 after recent abortions and 3 for diagnostic purposes. Of the 116 cases

of endometritis complete success was achieved in 102. In the other 14 additional intrauterine injections of iodine were required to accomplish a cure. Of the 35 cases of abortion subsequent hemorrhages were observed in 2, owing to an incomplete removal of the placental tissue. Only in 1 case did parametritis follow the curettage. The operation was performed at the office, the patient leaving the room after a 3 hour's rest. [A. R.]

4.—Will be abstracted when concluded.

October 6, 1901. (Vol. XXII, No. 40.)

1. On Catheterization of the Ureters; Its Application in Cases of Tuberculosis of the Kidneys and Inflammation of the Renal Pelvis Dependent on Calculi. I. E. GAGENTORN.
2. On the Question of Popular Healing at the Orthodox Christian Monasteries. V. PH. BUSCHUEFF.
3. The Alkalinity of the Blood Under Physiological and Pathological Conditions. V. F. ORLOVSKI.
4. Infant Mortality According to the Statistics of the Moscow Maternity Establishment. S. S. CHOLMOGOROFF.
5. A Few Surgical Observations at the Novoladozshsk Zemski Hospital. A. V. MARTINOFF.
6. A Case of Intestinal Obstruction Treated with Atropine, after Batsch. P. M. KALABUCHOFF and M. V. SAVVIN.

1.—Will be abstracted when concluded.

3.—Orlovski describes in detail his experiments and observations on the alkalinity of the blood under physiological and pathological conditions, the present paper being practically a continuation of the one published in the *Tratch*, July 28, 1901. (See *Philadelphia Medical Journal*, November 9, 1901). He found that the alkalinity of the blood is kept constant by the fixed alkalies, and the variations observed both in health and disease are due to the variations in the number of the red blood corpuscles which furnish approximately 45-53% of the general alkalinity. He investigated the blood in 62 cases of diverse diseases and found an absolute diminution of the alkalinity only in 3 diseases, namely, cancerous cachexia, hematuria of long standing and diabetes; in all other cases the alkalinity of the plasma remained as a rule constant. The effect of alkalies on the alkalinity of the blood both in health and diabetes was also determined. It was found that in healthy individuals a single dose of bicarbonate of soda administered by the mouth produced a slight and transient increase in the alkalinity of the blood. Warm rectal injections of the alkali caused a greater increase of the alkalinity, but also slight and transient. On the other hand, the rectal alkaline injections in diabetics produced a more marked and lasting increase in the alkalinity of the blood or plasma. This fact establishes the *rationale* of the use of alkaline injections in impending diabetic coma. The injections, however, should be continued after the disappearance of the first symptoms, owing to the temporary effect of the alkali. [A. R.]

4.—Cholmogoroff found by interrogating the patients seeking admission to the Moscow Maternity Hospital that the 1500 women gave birth to 5139 children. Of these only 35.91% remained alive. He considers such a high rate of mortality (64.06%) a sufficient cause for alarm. [A. R.]

5.—Martinoff performed successfully a large number of major operations in a small hospital with an operating room in which septic cases were treated and all the dressings made. Only reasonable cleanliness was possible. A considerable number of cases of diverse surgical affections are described and the details of the surgical treatment given. [A. R.]

6.—Kalabuchoff and Savvin report a case of intestinal obstruction in a man, 42 years old, which yielded to hypodermic injections of 0.002 to 0.005 grms. of atropine sulphate. The condition of the patient was such that surgical intervention was deemed necessary, but the patient declined an operation, and the atropine was employed as a last resort. [A. R.]

WIENER KLINISCHE WOCHENSCHRIFT.

October 24, 1901. (XIV Jahrgang, No. 43).

1. The Operations for Stone in the Bladder.
OTTO ZUCKERKANDL.
2. The Diagnosis of Aneurysm of the Mesenteric Artery.
GUSTAV GABRIEL.
3. Tracheoplasty. ROMAN VON BARACZ.

1.—While fifteen years ago suprapubic lithotomy was the rule in the treatment of vesical calculus, Zuckerkandl, out of 150 operations, did lithotripsy in 107 patients, perineal lithotripsy once, and suprapubic lithotomy in 37 cases. In two cases vaginal lithotomy was performed, and two small stones were removed with the evacuator. Of the 109 lithotrites, done by the Bigelow method, two were upon women. The average age was 61 years. Chloroform was the anesthetic used in most cases though cocaine locally, and antipyrin (2.5 to 5 g. by rectum) were also employed. The last method was used in 21 cases. Cystoscopy confirmed the diagnosis before operation. Four cases died after operation (3.6%), two from urinary sepsis, one from shock, and one from septic peritonitis. There was recurrence in twelve cases, the longest period between calculi being 28 years. The perineal lithotripsy was followed by complete recovery. The average age of the 37 patients upon whom suprapubic lithotomy was performed was 58 years. Chloroform was used in all but four cases, in which cocaine or antipyrin was employed. Five deaths occurred (13%), two with emboli, two with urinary sepsis, and one with intestinal obstruction. He concludes that lithotripsy is the operation of choice, rarely perineal lithotripsy, but that suprapubic lithotomy is needed for the removal of very large stones. [M. O.]

2.—In a search through the literature Gabriel found but four cases of mycotic, embolic aneurysm of the mesenteric arteries. He reports the case-history of an aneurysm of the superior mesenteric artery in a boy of 10. The heart showed recent mitral and aortic insufficiency, with endarteritis which had caused hemiplegia and aneurysm formation. The staphylococcus aureus was found in the heart and the aneurysm. [M. O.]

3.—Dieffenbach described bronchoplasty some years ago. von Baracz operated upon a boy of 14 whose trachea showed a large defect, existing since diphtheria with subsequent laryngeal stenosis at the age of five. Tracheotomy had been performed twice, with other operations later. All symptoms had disappeared for over one year. After closing the wound temporarily, to see that he could get on with it closed, he performed tracheoplasty. The wound healed by first intention, and the boy has kept perfectly well with the wound permanently closed, which had been kept open for nine years. [M. O.]

CENTRALBLATT FUER INNERE MEDIZIN.

August 24, 1901.

1. The Relation Between Sweating and Leukocytosis.
WALTHER HANNES.

1.—The previous work of Bohland is referred to, showing that the hydriotics and antihydriotics have a very great influence upon the leukocytes. Hannes has carried this further, and determined that mere sweating itself, even when no drugs are used in producing the sweating, causes marked increase in the number of leukocytes. He examined 29 children and found that in 77% decided leukocytosis followed the occurrence of sweating, whether this was spontaneous or was produced by hot air baths or similar measures. In 5 instances the leukocytes remained normal or actually decreased in number. Eight children were under one year of age, 12 under 30 months, and the remaining 9 between 4 and 11 years of age. Some of the children were perfectly well and had thoroughly good family histories; others of them had various diseases. Hannes was, however, careful to determine that none of the children had any infectious disease, or any other condition which in itself would be likely to cause an increase in the leukocytes. One interesting observation was the fact that in all the in-

stances in which leukopenia occurred, marked rachitis was present. Leukocytosis was not considered to be present unless the number of leukocytes rose above 13,000. In most cases the increase in number was from 3000 to 5000, and in some instances was still more marked. The leukocytes could be made to decrease by stopping the secretion of sweat, and they usually fell to normal about one half hour after the child was dried and re-clothed. Hannes concludes that the increase in leukocytes is due to the positive chemotactic influence exerted by substances which are constantly present in the body, and which exert this action under the influence of anything which causes sweating.

[D. L. E.]

August 31, 1901.

On Skatol Red and Other Urinary Pigments.

KARL ROESSLER.

In making indican tests one may often observe that the fluid assumes various colors from brown to violet. The pigment is usually absorbed by amyl alcohol, and commonly becomes brownish in color as it is absorbed. There has been no definite work concerning the nature of this pigment; various reports have been made concerning it, but no one has investigated its exact nature. Rossler found that it was neither indigo red nor urorosein. This led him to believe that the pigment was skatol red. He attempted to get a reaction for skatol with the pigment which he extracted from about 0.5 a litre of urine by means of amyl alcohol. The quantity was, however, so small as to be unsatisfactory and the result of the test was negative. In order to increase the amount of skatol he repeatedly administered to a patient 0.5 to 1.5 grms. of skatol, and then isolated the pigment from the urine, and after obtaining considerable quantities of it, found that it did give definite reactions for skatol. He therefore reaches the definite conclusion that this pigment is skatol red. The method of determining its presence in the urine is to add to 10 cc. of fresh urine the same volume of fuming HCl and after about 5 minutes to shake with 5 cc. of amyl alcohol. If no brownish coloration appears, one should repeat the test after having previously precipitated with lead acetate and filtered. It is well also in this case to add chloroform with the HCl in order to extract indigo blue and indigo red, and then to shake the supernatant fluid with amyl alcohol. The clinical importance of the test is as yet unknown. [D. L. E.]

September 7, 1901.

1. Contribution to Mechano-Therapy. B. H. ZEEHUISEN.

1.—Zeehuisen believes that while the importance of mechano-therapy in disease of the respiratory and circulatory systems is well recognized, this method of treatment has not been sufficiently freely used in the management of other conditions. He considers mechano-therapy of great advantage in the treatment of convalescence from acute disease, as well as in a series of other conditions. He regularly uses the following procedures. Adduction and abduction of the lower extremities; flexion and extension at the knee joint; pronation and supination at the same joint, flexion and extension at the knee joint, and flexion and extension at the ankle. The upper extremities are also exercised in appropriate cases. In the beginning the movements should be entirely passive; they should then become partly active, and ultimately should be wholly active, and undertaken against the resistance of the person giving the treatment, the resistance being gradually increased. The cases in which it is especially beneficial during convalescence are those in which prolonged confinement to bed has been necessary. He also considers it very important in convalescents who have a marked tendency to nervous disturbances and in cases of chronic disease in which prolonged rest is necessary. He has found it very valuable in many instances of general weakness. For instance in early tuberculosis, chlorosis, gastric ulcer, and in the weakness that sometimes persists for a long period after acute in-

fectious disease. He also recommends it in so-called uric acid diathesis, and as an aid to active exercise in adiposis. In neurasthenia mechano-therapy may be used, but only with the utmost care, and the use of resistance should be extremely gradual. Traumatic neuroses, particularly those occurring in soldiers, he has found to be very satisfactorily influenced by this treatment. [D. L. E.]

CENTRALBLATT FUER CHIRURGIE.

September 7, 1901. (28 Jahrgang, No. 36).

1. The Use of Gold Wire and a New Instrument in the Radical Operation for Hernia.

G. de FRANCISCO.

1.—Francisco reports the results of 120 cases of hernia operated upon by Professor Tansini, with excellent results. In order to prevent the hand of the surgeon or his assistant from touching the wound, he uses a hook to hold up the spermatic cord, a rake-like instrument to keep the aponeurosis of the external oblique muscle apart, and a spatula to hold the lower parts down, thus preventing injury from the needle. To these instruments, together with the use of gold wire for sutures, Francisco attributes Tansini's success. [M. O.]

September 28, 1901. (No. 39).

Operation in Epityphlitis During the Quiescent Period.

E. MARTIN.

The author first alludes to the results obtained by Jaffe as reported in No. 31, *Centralblatt für Chirurgie*. The cases alluded to are rare but doubtlessly occur, and are those in which for some anatomical or technical reasons it is not only impossible to isolate the appendix, but actually impossible to find it. Resection of the cecum was successful in two cases reported by Jaffe, although they were complicated by long continued intestinal fistulae. The author reports a case in which enteroanastomosis was performed with a favorable result. The patient was a man who had suffered for three years from typical recurrent epityphlitis. The attacks were afebrile and a tumor was present in the iliac region; there was pain and signs of disturbed fecal evacuation. Enteroanastomosis of the ileum and colon was performed by means of a continual suture. Nine months after the operation the patient was still healthy and improving. The author believes that absolute deductions cannot be as yet made on account of the short period of observation. [M. R. D.]

NORDISKT MEDICINSKT ARKIV.

1901. (Afd. 1, No. 2).

8. Fractures of the Thigh While Snowshoeing.

G. EKEHORN.

9. Primary Intestinal Tuberculosis with Multiple Strictures of the Small Intestine.

V. GRIMSGAARD and JOHAN NICOLAYSEN.

10. A Case of Cholecystitis, Cholangitis, Hepatitis, and Subphrenic Abscess. G. NAUMANN.

11. The Influence of the Umbilical Vesicle and the Umbilical Duct Upon the Insertion of the Umbilical Cord in the Placenta. INGOLF LOENNBORG.

12. Simultaneous Extrauterine and Intrauterine Pregnancy. HANNA CHRISTER-NILSSON.

13. The Indications and Technique of Gynecological Laparotomies. C. D. JOSEPHSON.

8.—Ekehorn reports eleven cases of fractured femur which occurred while snowshoeing, in boys ranging from 9 to 16 years in age. Some of the boys felt their legs break as they jumped or fell in the snow. Eight of the fractures were near the middle of the femur; in two cases the fracture was in the upper third; and in one case it was in the lower third, near the knee-joint. The majority of the fractures were oblique and uncomplicated. All the boys recovered rapidly. [M. O.]

9.—Grimsgaard and Nicolaysen report the case of a woman of 59, who had occasional severe attacks of colic

with enteritis during ten years. In the last year these attacks grew more frequent. Nine months after she became ill, edema, ascites, meteorism, and irregular bowel movements appeared. Tubercle bacilli were found in the stools. There was no vomiting at any time, nor was excessive acid found in the gastric juice. Noises were audible in the intestines, Kôaig's sign of intestinal stricture, and laparotomy was performed. A stricture was found in the ileum, and ileocolostomy done. She died five weeks later. The autopsy showed four strictures between the duodeno-jejunal fold and the cecal valve. Some of the mesenteric glands were enlarged. The lungs were free from phthisis. They consider this a case of true primary intestinal tuberculosis. The fatty heart and liver explain the cachexia found. They tabulated 114 cases, all younger than this one. They believe that her age caused compensatory hypertrophy, so that the symptoms only appeared late in the disease. [M. O.]

10.—Naumann reports a case of cholecystitis, cholangitis, hepatitis, and subphrenic abscess in an Englishman aged 34. First the ninth rib was resected, then laparotomy was performed, the gall bladder being sutured to the abdominal wall, and later resection of the eleventh rib was performed, the fistula closed, and he recovered. His history shows that he had probably had gallstones in childhood, and had cholecystitis. Cholangitis followed, with hepatitis and a subphrenic abscess which was evacuated by resecting the eleventh rib. No abscess of the liver was found. Since his return home, he has kept well. The gall bladder was drained through the fistula until it finally closed. [M. O.]

11.—Schultze first explained the origin of velamentous insertion of the umbilical cord from abnormal adhesion of the umbilical vesicle to the chorion or amnion, and from traction upon the vessels of the allantois by the remains of the umbilical duct. Lönnberg studied nine cases of velamentous insertion of the umbilical cord in the placenta, describing the condition found. From the examination of over 200 placentas, he found that the remnant of the umbilical duct did exert an influence upon the cord, in that it pulled the insertion of the cord toward one side of the placenta. In only a few cases did the condition resemble that described by Schultze. Many details and diagrams are given. [M. O.]

12.—Chister-Nilsson has collected 68 cases of simultaneous extrauterine and intrauterine pregnancy, one of them observed by herself. All occurred between the ages of 20 and 40 years, mainly in multiparae. The extrauterine pregnancy was tubal in 36 patients, in some of whom twin pregnancy preceded this condition. Abortion occurred or several years elapsed between the last pregnancy and this condition in many cases. In some both conceptions took place at the same time, in others one preceded the other. There was irregular metorrhagia in a few cases, while regular menstruation continued in others. Pain developed, and later the signs of pregnancy. In 20 cases both pregnancies went on to full term, uninterrupted. In 10 cases abortion occurred. In 27 cases the extrauterine fetus died; in the other cases tubal abortion followed. As a rule, rupture of the tubal pregnancy was preceded by intrauterine abortion. In most cases the ectopic fetus survived its intrauterine twin. Symptoms of peritonitis occurred and operation was frequently necessary. In 29 cases the intrauterine fetus was born at full term, living in only 23; abortion occurred in 27 cases, while the mother died before term in 6 cases. The ectopic gestation went on to term in 25 cases, both infants reaching full term in 20 patients. The diagnosis of the condition is exceedingly difficult. In 15 cases operative interference was needed to remove the extrauterine gestation sac, total extirpation in 9 cases, in which gestation had only reached four months. Of 10 cases in whom laparotomy was performed after abortion, 9 recovered. 19 of the 38 cases treated expectantly died, 10 of rupture, 5 of peritonitis, and 2

of hemorrhage. Only 10 of those treated expectantly recovered, the extrauterine gestation reaching full term. Three of the extrauterine infants were brought into the world at term, living. A description of her case follows with a table of 68 cases collected. [M. O.]

13.—Josephson reports 131 abdominal laparotomies and 12 vaginal laparotomies. Only two deaths occurred, one of thrombosis, the other of acute nephritis, both from the ether. 47 operations were for ovarian tumor, 42 for myoma, 21 for tubal disease, 16 for uterine cancer, and 17 for peritonitis, foreign bodies, ruptured uterus, Cesarean section, etc. Silk sutures were used, while no septic cases were touched during the two days preceding operation, the hands were well disinfected, and the operation was as aseptic as possible. Cysts were enucleated, then pulled out of the connective tissue, without hemorrhage. Of the 47 ovarian tumors operated, 16 were retention cysts, 17 glandular cysts, and the rest dermoid, parovarian, suppurating, and papillary cysts. Of the 42 laparotomies for myoma all but two were abdominal. 32 were performed by the Chrobak method, while two cases of panhysterectomy and six cases of enucleation were done. Hemorrhage was the indication for operation in 20 of the cases. Of the 21 cases of tubal disease, laparotomy was performed 9 times for tubal pregnancy, twice for hydrosalpinx, and 10 times for salpingo-oophoritis. Of the 16 cases of uterine cancer, 8 were adenomyomata, and 8 cancer of the cervix. Josephson's operative technique in all cases is given in full. Only four accidents occurred in the 143 operations. A forceps was left in the wound, but was removed by another laparotomy, later; a vesical fistula resulted which healed spontaneously; an incision was made into the bladder; and a ureteral fistula resulted. Tables of the cases described follow. [M. O.]

LA PRESSE MEDICALE.

October 16, 1901. (No. 83.)

1. Radial Paralysis from Elongation of the Nerve.

MARCEL LABBE.

2. Albumosuria and the Bence Jones and Jacquemet Reactions. A. SICARD.

1.—Labbe reports the case of a man of 39, who fell while lifting large stones. He noticed but slight pain, and continued at work that day. The next day, however, he could not extend the fingers of his right hand, showing marked radial paralysis. He could not extend the end phalanges of the fingers, but when they were raised, he was easily able to move the fingers. Some muscular atrophy followed. Upon electrical treatment he quickly recovered. The cause of the paralysis was evidently the fall, in which the radial nerve had been stretched. [M. O.]

2.—Sicard believes that tests for albumose should always be made in urine examination. The albumoses are hydrated albumins, before they become peptones. For the recognition of albumose in the urine, there are two test-reactions, that of Bence Jones and that of Jacquemet. Bence Jones, after filtering the urine, finds a cloudiness when it is heated to 60°, which disappears on boiling. Jacquemet adds ether to urine containing albumose, and a gelatinous ring is at once formed. Albumin, mucin, and the phosphates may give this reaction, but they can be removed by adding sodium chloride, filtering, adding acetic acid, boiling, cooling, and filtering again. Jacquemet gives the details for quantitative examination also. While the Bence Jones reaction is rarely seen, that of Jacquemet has often been observed. Still Sicard thinks that the subject is by no means settled, since there is as yet no exact definition of the albumoses. [M. O.]

October 19, 1901. (No. 84.)

1. Bloodless Reduction of Congenital Dislocation of the Hip. F. BRUN.

2. Iron in Chlorosis. E. FIQUET.

1.—Brun, who has had several more successful results from bloodless reduction of congenital dislocation of the

hip, considers this method of treating congenital luxation of the hip by far the best. Success is exceptional when the child has passed ten years, though he had good results in one of twelve. At 3 or 5 years the operation is always successful. Before that age it is difficult to maintain reduction. The main obstacle is the contraction of the adductor muscles of the hip. To return the head of the femur to the cavity of the acetabulum, this adductor cord must be destroyed mechanically. The method of operation is fully explained by diagrams, and radiograms of a case before and after reduction are given. At least three plaster casts are put on, one after another, to keep the dislocation reduced. This is well illustrated by photographs. Epiphyseal separation or sores from the plaster may occur, while sciatic paralysis is very rarely seen. [M. O.]

2.—Iron was used in chlorosis by the ancients. It is now believed that the iron is assimilated, the erythrocytes increasing in number, and the hemoglobin becoming darker by the addition of more iron. For iron acts as an oxydase, easily taking up oxygen and carrying it to the body tissues. Especially is this the case with the crenate of iron, which is indicated in chlorosis, since such patients absorb less oxygen and eliminate less carbon dioxide proportionally than normal individuals. Iron in chlorosis acts reconstructively, furnishing the iron necessary to the erythrocytes and bringing oxygen to the body cells. [M. O.]

October 23, 1901. (No. 85.)

1. Syphilis of the Frontal Lobe with Jacksonian Epilepsy.

G. DIEULAFOY.

1.—Dieulafoy reports the case of a man of 40, who entered the hospital in an almost comatose condition. He had had one attack, epileptic in character, at night, had bitten his tongue, and urinated in bed. Ten years before he had been treated for syphilis. Respiration, upon admission, was stertorous, and several attacks of typical epileptic convulsions followed. His tongue and face were turned to the right, and there was right-sided hemiplegia. The attacks lasted less than a minute. As he was known to be syphilitic, the diagnosis of gumma of the left Rolandic region was made, and 8 mg. of mercuric biniodide were injected, which were later increased to 12 mg. In spite of treatment, he died. The autopsy showed a perfectly healthy left Rolandic region, while two lesions were found, close to one another, one in the white matter of the left frontal lobe, the other in the anterior third of the left, three frontal convolutions, in the gray matter. Histological examination confirmed the diagnosis of syphilitic gummata. Other cases of frontal lesions which caused typical motor epilepsy are quoted. While Jacksonian epilepsy may be caused either by frontal or by Rolandic lesions, an attack beginning in the leg is rarely frontal in origin. Other symptoms are identical. Since parts of the cerebrum are but slightly sensitive, these gummata reach an almost fatal size before they cause a symptom. But in this case they caused death in one week. [M. O.]

October 26, 1901. (No. 86.)

1. Serofibrinous Pleurisy and Pneumogenic, Pseudo-pleuritic Pleural Effusions. P. LEDAMANY.

1.—LeDaman discusses this subject in detail, and concludes that while purulent pleurisy is due to pyogenic micro-organisms, serofibrinous or serosanguinolent pleurisy can only be tubercular. But pseudo-pleuritic pneumogenic effusions can occur. These may be serous, with edema of the lungs; serofibrinous or serosanguinolent, with tumors, tuberculosis, pneumonia, congestion, and infarcts; and seropurulent or purulent, with pyogenic pneumonia. While pleurisy is spoken of with typhoid fever, rheumatism, Bright's disease, etc., these cases are either tubercular, or simple pneumogenic, pseudo-pleuritic pleural effusions. [M. O.]

October 30, 1901. (No. 87.)

1. The Wounds of the late President McKinley.

2. Prostatectomy in the Inverted Perineal Position.

ROBERT PROUST.

1.—A review of Dr. Mann's article.

2.—Proust describes, with very many good diagrams,

his method of extirpating the prostate, called subtotal prostatectomy, done in the inverted perineal position. The incision is pre-rectal, the rectum then being lowered, thus bringing the prostate into view. An instrument called a "desenclavier" is then introduced into the urethra, and the prostate is cut upon this. Each lobe is then dissected off, and the pedicles are sutured. The vasa deferentia and the slit in the urethra are also sutured, while a catheter is left in place. Proust believes that this new method will prove of great service. [M. O.]

November 2, 1901. (No. 88.)

1. Pyloric Ulcero-Cancer. G. HAYEM.

1.—Hayem reports a case of gastric ulcer in a strong, healthy man of 40, of good family and personal history, who had been ill for five years. At first he noted only pain after meals; then eructation and vomiting followed. This recurred in attacks, and he grew worse. There were slight hyperchlorhydria, hematemesis, and melena. Then anemia followed with constipation. After much suffering, hemorrhage, and weakness, he died. An ulcer was found surrounding the pyloric opening, its edges already showing cancerous degeneration. There were no enlarged, cancerous lymph-glands in the neighborhood of the stomach. This case demonstrates plainly the fact that gastric ulcer may become cancerous. [M. O.]

LA SEMAINE MEDICALE.

October 9, 1901.

1. Associated Epidemics. V. BABES and G. ROBIN.

1.—These authors remark that our knowledge of epidemics and their causes is still far from precise. We are in the habit of considering them as specific entities, each having its particular microbial cause, and of regarding the cases of the disease as practically identical whether they occur singly or as epidemics in hospitals, as erysipelas, etc. Babes called attention in 1895 to a hospital epidemic in which there was a very high mortality and in which the recognized cause did not seem to be specific. The original pyogenic organisms seemed to have acquired great virulence by their passage through several individuals and infected subjects already suffering from some other morbid state, and the course of this re-infection was violent and rapid. Frequently there exists an epidemic of influenza or pneumonia complicating a pre-existing epidemic, and in such an instance the second disease will very frequently form an atypical picture with the clinical signs of the first infection. In such instances the virulence of the disease in the second type seems to be much increased. These considerations were suggested by the bacteriological researches which these authors have made for the purpose of discovering microorganisms, and possessing the characteristics of the *Bacillus* of Pfeiffer in infections of a grippal nature which have been classed in general under the term, influenza. They have described 8 fatal cases appearing in epidemic form, in which they presented the clinical picture of typhus fever, and in these 8 cases the *Bacilli* of Pfeiffer were found. 40 cases were included in the epidemic of which the 8 mentioned were fatal. The disease does not seem to have been an atypical typhoid, for the agglutinating reaction was not to be found in many of the cases early, but did become positive later. Neither do they fit into the syndrome of influenza, as specific organisms of this disease were not found early, but also appeared later, and they were found in old lesions such as pneumonic or gangrenous foci. They have distinguished these cases by the term **Associated Epidemics**. The majority of them resemble typhoid fever, but two cases took on the clinical picture of measles; others of influenza. [T. L. C.]

Society Reports.

NEW YORK ACADEMY OF MEDICINE. SECTION ON ORTHOPEDIC SURGERY.

Meeting of November 15, Dr. G. R. Elliott in the Chair.

Dr. Homer Gibney read a paper on the orthopedic operations for intractable cerebro-spinal lesions, reporting two cases of Friedreich's ataxia, in which marked improvement in locomotion followed operation. Incoordination was overcome by tenotomy and fasciotomy. He first corrected deformity and with properly adjusted apparatus, worn for a long time, he claimed marked benefit and, in many cases, removal of the interference due to the paralysis. Dr. H. L. Taylor agreed with Dr. Gibney upon the value of operation in paralytic deformity in children. Dr. John M. Woodbury expressed the opinion that operation offered a possibility of recovery; non-operative measures alone were simply palliative. Dr. Elliott said that many a cripple was bed-ridden, or had contractures and post-paralytic deformities that should be relieved. He cited a patient upon whom he had recently operated, bed-ridden for three years from post-typhoid contractures of spinal origin. By tenotomies, manipulation, and the subsequent use of apparatus, the girl was now walking well. Dr. Taylor read a paper on the effect of osteitis of the knee on the growth of the limb. From measurements of the femora, tibia, feet, and patella during or after osteitis of the knee, in forty patients in whom the disease had begun in childhood, the following conclusions were reached: The affected limb was longer in the first four years in the large majority of cases. In adolescents and adults it was several inches shorter, when the disease lasted over seven years. The affected leg was nearly always longer in the first four years, from lengthening of the femur. In the older cases, after a duration of seven years or more, the femur was shortened. The tibiae were usually equal in length in the early stages; later the tibia of the affected side might be slightly longer for a time, but oftener shorter; the shortening increased considerably after the subsidence of inflammation. With limbs of equal length and a duration of several years, the femur of the affected side was found longer and the tibia shorter than its mate. The foot and patella showed a difference in favor of the sound side after one year. The stimulation of growth in the affected femur was accompanied by a retardation in the tibia, foot and other parts; growth in the femur was finally retarded. The final result was considerable shortening. Dr. T. H. Myers said that his observations were almost identical. In fifteen cases observed by him the lengthening was generally in the femur, in some cases the femur lengthened while the tibia shortened, in others both bones were lengthened during the active stages of the disease. The proper functioning of the joint, after the cure of the disease, was a most important element in securing nutrition and development. Dr. H. A. Parish stated that ultimate shortening occurred in the majority of cases. He cited a case, a girl of 16, with osteitis of 13 years' duration, with great lengthening during the active stage of the disease. After partial excision, ten years ago, and, recently, supra-condylar osteotomy of the femur, and cuneiform section of the tibia for the relief of flexion, there existed only $\frac{3}{4}$ of an inch shortening, with the limb at an angle of 175° . Dr. V. P. Gibney said that, years ago, Dr. Berry, examining 50 cases, found the femur increased in length. While lengthening was generally believed to be the rule, it could readily be understood how shortening might occur from interference with the nerve supply, by pressure of the head of the tibia on the popliteal space. He referred to a patient seen ten years ago who had $1\frac{1}{2}$ inches lengthening after a long course of protective treatment. The girl was young and the disease cured; she was allowed to use the limb, and atrophy set in. At the same time the healthy limb was protected and after four or five years the normal femur lengthened and the diseased one shortened, so that $\frac{1}{4}$ inch difference was the result. Dr. Taylor said that lengthening of the femur was the rule while the disease was active, though it was probable that shortening occurred in deformed and badly managed cases, when the result would usually be considerable shortening in adult life. He referred to the work of Leusden, who took measurements of radiograms, and reached nearly identical conclusions.

Original Articles.

MEDICAL CARE AND TREATMENT OF INEBRIETY.

By T. D. CROTHERS, M. D.,

Of Hartford, Conn.

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In inebriety the problem to determine is this: First. The present condition. The organic and functional derangements of digestion, nutrition, and also of the brain and nervous system. Second. The use of alcohol and other drugs and their effect on the nerves and brain. Third. Was the drug and alcoholic condition at first only a symptom or an active causation? Fourth. What neuroses and heredity were the active or latent factors in the history of the case?

A study of these questions will point out the line of treatment that will assist toward recovery. A common case will illustrate this more clearly. You are called to see a man who has gastritis, who has taken but very little food for weeks, but has drunk continuously various forms of spirits. Both digestion and nutrition are seriously impaired. General hyperemia and defective motor and sensory control, with feeble, unstable brain power, are present. If the case is treated from these symptoms alone, very little can be expected. If the inquiry goes back to the effects of spirits on the body, and when and under what conditions they were taken, and also the origin of the drink addiction, many new indications will appear.

If it is found that the use of spirits began from some severe strain or state of exhaustion, or following some disease, or was the result of irregularity in the mental and physical surroundings, further light is added.

If the history points to a neurotic inheritance direct, as from alcoholic ancestors, or indirect, as from insane, consumptive, or epileptic, or any of the neuroses, a new view obtains.

The treatment of a case that simply checks the brain and nerve irritations by narcotics, or by removal of spirits, or by elimination removes the congestion and relieves the gastritis, is only partial.

Suppose the pledge or conversion, or any moral and mental stimulation fills the mind with an ardent confidence that he never will use spirits again; or suppose he is given narcotics until the system is saturated, the same effect follows. The mind is buoyed up with the hope that all desire for spirits has ceased, and he is henceforth a free man. All this is empirical, and is neither medical art nor science. A cathartic or narcotic given for some superficial symptoms may do good, and yet it is a mere accident. Moral advice may help the case, and the drink craze may die out; this is also an accident entirely unforeseen.

The inebriate is diseased, and the question of medical care and treatment turns on an exact knowledge of the causation and his present condition.

Such a knowledge will enable the physician to point out the conditions from which a return to

health may be expected. He can point to the oncoming insanity of which the drink impulse is only a symptom. He can anticipate the general paresis which is so commonly preceded by an impulsive craze for alcohol. Melancholy suicide, and acute delirium can all be seen in advance, and the more accurately the case is studied, the clearer will be the prognosis. There are no cases that can be more accurately anticipated than these. Certain cases in definite surroundings will have a uniform line of progress that will rarely differ. Take a hundred inebriates and from a knowledge of their heredity, environment, present condition, and the general action of alcohol on the brain and nerves, a prognosis can be made that will be verified in a large percentage of all such cases.

The first question that confronts the physician when called to a case is, what is the present condition and what means can be used to alleviate it? All inebriates suffer from degrees of paralysis, both vaso-motor, sensory, and functional. There is present always functional palsy and subacute inflammation that is generally local. The heart is enfeebled, and often enlarged. The liver is congested and the seat of a low grade of inflammation. The stomach is palsied, and often acutely inflamed. In cases of long standing, neuritis of the extremities in a greater or less degree is present.

The first treatment is preliminary, and should begin with a warm bath and thorough rubbing to counteract the vaso-motor palsies of the arteries. One of the marked effects of these palsies is to retard and prevent elimination of waste matter through the skin. As a result new sources of danger arise from the chemical decomposition of waste effete matters retained in the system. Potomaine poisonings and new sources of irritation, new soils for the growth of bacteria, appear.

The bath is a cutaneous stimulant to aid in the elimination of these products.

Recently the electrical light bath has been found valuable as a stimulant and powerful eliminator, promoting increased activity of the organic processes, and in many ways, not clear at present, increasing the normal metabolism of the body.

After the bath comes what is termed internal lavage or washing, based on the same reason, viz., that of eliminating the poisonous products which are formed by the paralysis, both functional and organic.

The lavage is best secured by a saline or mercurial cathartic and copious draughts of warm or acid waters.

For the nerve paralysis and irritation, the various forms of bromide seem sufficient. I think large doses of one hundred grains-at a time are most practical.

Of course all spirits are removed at once, and for another purpose, to uncover the real causes which may be masked behind, and appear when the spirits are removed.

If collapse and acute delirium follows this treatment, I give some form of concealed preparation of opium, usually the deodorized tincture in cinchona bark infusions. This is withdrawn as soon

as possible and the bark preparations continued. If digestion is seriously impaired, I give nuxvomica in 1-40 grain doses.

In this preliminary treatment salines, mineral waters, and fruit acids are the commonly associated remedies. Rest in a recumbent position and passive exercise from massage, together with restraint, are all important.

During this preliminary treatment a study of the physiological and pathological history will indicate the causes most active in the craze for spirits. When they are traceable to syphilitic poison and general exhaustion from bad living, a long course of mercury and arsenic, with total change of life and surroundings, are indicated.

When the first causes are clearly head injuries, and a slow degeneration from subacute inflammations and other obscure brain and nerve changes very active constitutional treatment with changes of living are essential.

Baths, diet, mineral, and acid tonics should be alternated with bark infusions.

Where heredity is prominent, the drink craze is a symptom of a constitutional impulse or proclivity to acute degeneration, exhaustion, and death.

The same prognosis should suggest the most radical changes of life and living, and all medication should be directed to this end.

When a tendency to use stimulants or drugs that are irritant and sedative to the system exists in young persons, a grave future is before them. Often such persons are found in the best families, and will seek advice for some digestive troubles, when it will appear that the real trouble is that some form of alcohol is freely used at the table, or as a family medicine for all disturbances.

Where a neurotic heredity is present, the future is equally grave.

A recent work on the treatment of children's diseases advocates the use of brandy as a tonic in constitutional debility and general anemia. The author would be astonished if chloral or morphine were urged for these conditions, and yet he advocates substantially the same thing. Alcohol to a child is nothing more than a narcotic.

A craving for drugs, of which alcohol is prominent, is a dangerous symptom.

Where the causation of the inebriety has apparently come from the exhaustion due to overwork, imperfect nourishment, and general starvation, the treatment must be directed to remove and change these conditions.

Where it has started from nutrient disorders, such as indigestion and tissue starvation, the treatment must be based on a careful examination of all the probable complications that exist.

The faults of functional and chemical processes of the liver, stomach, and intestines are to be treated as in complex states of dyspepsia.

The mental treatment is often of great value, and the physician should always remember that psychological therapeutics are essential in all these cases.

Another class will have a clear history of acquiring the drink impulse by contagion, or, more

popularly called, bad company, bad example, bad social companions and surroundings.

Many such cases will be found defective in both brain and nervous structure. They come from defective race-stock, and have a heredity or neurotic tendency; this, with faulty training, is quickly followed by an unstable brain equilibrium, and consequent exhaustion, for which alcohol soon becomes a grateful narcotic. Such cases have brain defects with central neurasthenic conditions. They need change of every condition of life and surroundings. They should go back to the country and live far removed from every possible strain on the brain and nervous system.

The primary condition in these cases is failure of the central brain structure. The exhaustion and losses of vital energy are slowly restored by natural processes. Full restoration seldom occurs, and this is manifest in weakness, debility, and lowered vitality ever after. Alcohol stills this demand for relief by narcotism and paralysis. The heart's action is raised, then lowered. Currents of blood are driven rapidly to all parts of the system, then slowed down. The temperature is lowered, and the early exhaustion is increased.

In periodic cases the abnormal brain force accumulates and is discharged in an epileptoid condition, only instead of the spasm attended by tonic and clonic contractions, it becomes an insane thirst for the narcotic effects of alcohol. When this is accomplished, a long period of rest and general anemia follows. If this insane thirst for spirits can be neutralized and changed, it may be broken up. Fortunately many of these cases have exact and distinct cycles which rarely vary, and whose return can be predicted. When this is understood, anticipating treatment can be used.

Active cathartics and prolonged hot baths, outdoor exercise, where the person leads a sedentary life, or rest where the person is actively engaged, are valuable.

Bromide given at night is sometimes of great value.

In a case of an active business man in New York who feels intensely nervous and irritable with his surroundings at distinct intervals, he goes away to the Catskills, tramping for days with dog and gun, and by this means averts a drink paroxysm.

A noted physician, who suffers in this way, goes to a hotel, takes large doses of bromide, and remains in bed for several days.

Many and various devices are used by this class, with more or less success to prevent the drink storm.

The real therapeutic aids should go farther back and seek to avert the causes which culminate in this way. In one case under my care, sexual exhaustion was the cause. The man had been a periodic drinker for ten years; his wife died, and he recovered, and was temperate for six years. He married again, and a few months later these drink storms returned. Two years later his wife went to New York and was treated six months for an ovarian tumor. He was temperate again and has been so for a year; his wife meantime is travelling in Europe. These cases are more common than one

would suppose, and indicate a neurotic basis at the beginning.

This periodic return of the drink impulse should suggest some active exciting cause that may be found and corrected.

A case was noted by Dr. Brainard, of Columbus, O., where the expulsion of a tapeworm was followed by a total subsidence of the drink impulse.

A soldier, who had been a severe drinker for years, recovered after an operation in which a spicula of dead bone was removed. This had existed from the close of the war.

The train-despatcher of a large railroad, who worked at night and had for many years long and severe drink excesses, recovered by merely changing his work to the day and sleeping at night.

A prominent hotel man, who has been under treatment, will have a drink excess if he sits up past midnight. If he is careful to retire regularly he can keep temperate.

Another case has been noted of a quiet farmer who never drinks except after a religious revival. He will take a very active part in the revival meetings, and when they end commence to drink and be much intoxicated for a week, then suffer from some acute indigestion, and after some medical care recover, never drinking again until another revival comes.

Many of these cases only drink on holidays or days of general celebration, and remain sober the rest of the time. Some condition of brain exhaustion exists which is partially controlled until these stated periods of relaxation, when it breaks out again. Such cases need treatment, and often can be cured.

These periodic cases have always a strong tendency to merge into epilepsy and acute dementia. Suicide and homicide are frequently associated and follow. The transient paralyses of the brain in these drink excesses are always perilous to brain integrity. It is a safe conclusion to infer that the brain in these cases is seriously impaired and cannot be trusted for sound consistent work.

The treatment for this condition is most important, as is also the removal of the active exciting causes.

When the case is that of a continuous drinker, the possibility of general paresis should be considered.

Often a prodromic stage of months and years occurs in which the drink impulse will be the leading symptom, then merge into paresis, which speedily culminates in death. The long formative period was noted principally for inebriety and possibly sexual excess, and slow, growing delusions of grandeur.

A noted senator has for two years developed this drink craze, which is concealed as much as possible, yet it is only symptomatic of oncoming paralysis.

These cases are numerous, complex, and are more or less amenable to medical care and treatment. They are medical cases and can only be benefited by medical advice and treatment. The radical changes of life and living can often be best secured in an asylum where they are under the con-

stant care of the medical man. The drink impulse is often only a symptom, and remedies addressed to this alone are not curative. The case is a constitutional one, to be reached by general remedies, along lines of scientific study. Here, as elsewhere, no specific remedies will be found, for the reason that the causes are complex, and include all the functions and organic processes of the body. The action of alcohol is equally complex and general, extending to all parts of the body; not only changing the chemical conditions of the nutrition and cell-growth but paralyzing and breaking up its normal action.

Therapeutic art has not advanced far enough to point out remedies that will reach or neutralize all these diseased conditions. Theories of the action of this or that remedy are open to grave suspicion of error. The more inebriety is studied, the more doubtful specific remedies will appear. Only the charlatan and the ignorant will ever urge special remedies for this disease.

In this brief outline of the medical care of such cases, my object is to make prominent the fact that these are curable cases, and always more or less benefited by exact scientific, medical care.

These armies of inebriates open up a new field for medical practice, one that can show triumphs of science and art equal to that of any other department of medicine. Unfortunately, to-day this realm has not been rescued from the mysticism of moralists and quacks. A vast army of squatters, pietists, politicians, and reformed inebriates, are teaching the world the nature and treatment of inebriety. Specifics surrounded with mystery, and urged with the most ignorant dogmatism, are accepted as truths, and the press and pulpit hail their appearance with extravagant praise. Even weak, credulous members of the profession join in the popular current. Medical men, who should be teachers and leaders of the public sentiment regarding alcohol and the inebriate, are silent, or carried away by the sentiment of the hour. Over a hundred thousand persons are dying yearly, directly or indirectly, from this disorder, and yet it receives no study or attention except from a class who, of all others, are the least able to comprehend its nature and treatment. It will be a source of wonder and amazement in the coming century that the medical man of to-day should have neglected and shown such indifference to one of the great scientific topics of the age. We look back a century and find insanity and various epidemics utterly ignored by medical men; given over to the clergy, the politician, and the moralist. History is repeated in the present indifference concerning inebriety. There are over a hundred thousand physicians in this country, and only a very few have ever given inebriety any study. Yet more than half a million temperance men in this country, of all grades, are talking, writing, and teaching what inebriety is, and how to treat it. What a terrible sarcasm on our scientific intelligence. A field for scientific work and study is open before us, occupied by quacks and an army of non-experts to-day.

As scientific men but one course remains before us. That is, to study the inebriate and his malady,

and teach the public the real facts and their meaning; to assert our true position as teachers, and thus rise above the dense ignorance of the quacks, the clergy, the politicians, the reformers, the moralists, and the inebriates themselves.

Let us show the coming generations that we had some idea of the disease of inebriety and its curability by medical means and measures in this our day and generation.

THE TYPHOID SPINE.*

By WILLIAM J. TAYLOR, M. D.,

of Philadelphia.

Attending Surgeon to the Orthopedic Hospital and Infirmary for Nervous Diseases and to St. Agnes Hospital; Consulting Surgeon to the West Philadelphia Hospital for Women.

Since Doctor Gibney's original paper was read before this Association, describing a very painful sequel of typhoid fever, which he called the "typhoid spine" and described as a peri-spondylitis, various articles have appeared by different writers under this heading. The cases described by them differ very materially in their history and their symptoms, and my object in writing this paper is to report in full one case and to try to reconcile somewhat these different opinions.

There are certainly three distinct conditions of the spine which may arise after typhoid fever. First, the true peri-spondylitis of Gibney; second, a painful condition of the muscles of the spine, resulting from a mechanical strain or injury and which is not a peri-spondylitis; and third, the hyper-sensitive neurasthenic painful spine, which is merely a neurosis and, consequently, not based upon the same pathological findings.

Doctor Osler in his paper (Johns Hopkins Hospital Report) does not define these differences with clearness, for he classifies all of these conditions under the one heading and is inclined to believe that all are bordering upon neurasthenia. Doctor Keen (The Surgical Sequels and Complications of Typhoid Fever) does not even mention this so-called typhoid spine, believing that it is merely a functional neurosis and not due to any special pathological lesion. He thus dismisses the subject as not being a surgical complication. I think, however, that if the reports of the various cases and their histories be studied with care and especially if the one case which has come under my own personal observation—the history of which I give here in full—be given due consideration, it will be seen that a definite pronounced affection of the tissues, periosteum, ligaments and deep fascia is occasionally met with and that it is distinctly a surgical sequel of this most prevalent and all-pervading malady.

The argument which has been advanced, that the typhoid bacillus, if it find a lodgment in any of the periosteal tissues, is prone to remain and produce suppuration, is, of course, well recognized, but it is not always the case by any means, for most of us have seen a marked periosteitis of the shin bone,

which in the course of time subsides or leaves only a thickening of the tissues, and resolution occur without suppuration and subsequent necrosis of the underlying bone. If this occur in the shin bone—and it undoubtedly occurs in other bones as well—why may it not also occur in the spine?

The case which I have to report is that of a man, aged 27, a pattern-maker, who was referred to me by Doctor Wharton Sinkler in May 1899. The family history was good; he had had measles, scarlet fever and diphtheria when a child and inflammatory rheumatism two years before the present attack. He has used alcohol and tobacco moderately and had one attack of gonorrhea ten years ago.

He was taken with typhoid fever February 4, 1899, and was in bed for nine weeks. The attack was quite severe but there was nothing especial about it. At the end of this time he got up and was about for a few days. He then began to have pain in the back, which was especially marked in the lumbar region and about the hips. On May 8th he had to go to bed, as the pain was very intense and extended along the whole spine, but had now become localized in the lumbar region. When he was admitted to the Orthopedic Hospital, he had not slept for three nights because of pain, which was dull and heavy but not shooting. The right hip was painful, with numbness extending to the knee, the appetite was good, the bowels constipated, the knee-jerks active, being slightly increased, the sensations normal, and there was no ankle clonus. There was a slight prominence of the spine to the right of the sacrum and also in the lumbar region and his pain was increased very much on turning from side to side. The urine contained hyaline and granular casts with pus and blood, which was probably due to some kidney complication during the fever.

At first he was treated, on the supposition that his condition was due to neurasthenia, by massage, electricity, trional at night and a liberal diet, but by the end of a week a diagnosis of Gibney's post-typhoid spine was made. His temperature was slightly above normal, but by the 20th he developed a large alveolar abscess on the right side of the jaw, which materially increased his fever. His average range of temperature was from 102 to 99, with a morning fall to normal or nearly so. His appetite continued good and he was fairly comfortable as long as he remained in bed without moving his spine. His slightest efforts, however, to move, either turning in bed or in an attempt to sit up, brought on agonizing pain.

One very peculiar symptom which was noticed in the early part of his spinal trouble was a condition of rhythmic palpitation of the abdominal walls; such a condition I have never seen before or since, and it would occur almost invariably when his abdomen was exposed in an attempt to make a physical examination. He was given salicylates, tonic and rest, but no attempt was made to lift him with a jacket or to get him out of bed. He had certain of the stigmata of hysteria, it is true, but there was undoubtedly a true pathological process in the lumbar spine, which produced thickening and a slight posterior deformity which was very distinct. Several attempts were made after he had been in bed for nearly two months, to get him out of bed, but each time the pain was so severe that he was obliged to remain quiet. His pain gradually grew less, his general health improved, the thickening about the spine subsided, the rigidity became less pronounced, and by the first of September, he was able to be up and about the wards, and was shortly after that discharged from the Hospital, apparently perfectly well, with all of the movements of the spine perfectly normal and with no pain whatever.

I saw him last on the 25th of February, 1900, when he came at my request to enable me to examine his back. He had had no pain whatever since leaving the hospital in September and had been working steadily as a draftsman. The spine was perfectly flexible in all directions, the thickening which formerly extended into the lumbar region had now entirely disappeared and he considered himself to be absolutely well.

I have lately heard from him (May 6, 1901) and learned that he has been entirely well, with no return whatever of pain or any symptoms referable to his spine.

While I believe that the majority of cases of

*Read at the meeting of the American Orthopedic Association, Niagara Falls, June 13, 1901.

painful spine after typhoid fever are neuroses known as spinal irritation, you cannot have pain, thickening, tenderness and deformity without there being a definite pathological lesion. In my own case all of these conditions were present; they were not such as you would expect to see in a tuberculous condition, nor would the subsequent history at all lead to this as an explanation; recovery has been too prompt and apparently without any limitation as to the flexibility of the spine, nor has there been any persistence or deformity. The symptoms as generally described have come on either late in the convalescence or after the patient has recovered from typhoid fever and returned to work. In most there is no history of injury, but this has been present in some. The pain is, as a rule, in the lumbar region, intense, sharp, and shooting in character which is comparatively bearable as long as the patient is lying flat on his back, but is much aggravated by any movement of the spine, either antero-posteriorly or laterally, even turning in bed is extremely painful and it is only by making a muscular effort and fixing the spine by all the voluntary muscles that it can be accomplished and then only by the aid of the nurse.

Deformity has been present, more or less marked, in every case where a true pathological lesion could be considered, but in those where the neurotic element far out-balanced the local conditions, this is not seen.

Osler's second case, a man aged 24, after a convalescence from typhoid fever, had some pain in the back, but was up and about and even able to play tennis. After a fall he suffered excruciating pain in the lumbar region and could only rest in the recumbent posture. Deep pressure over the iliac region on the left side and antero-posterior motion caused excessive pain; there was some fever. These symptoms continued from the end of November to January and it was March before he was well.

Pepper mentions (American Textbook of Medicine) a condition of obstinate periosteitis of the front of the spinal column, resulting from typhoid fever.

Periosteal thickening may disappear without suppuration, but we do not have protracted periosteal thickening lasting for weeks and months as a rule without suppuration, and it is very difficult to conceive of any attack of pain lasting for months as a result of a simple peri-spondylitis, and yet none of these cases have passed on to the formation of pus.

Lovett & Withington (*Boston Medical and Surgical Journal*, March 29, 1900, page 317), report a very interesting case where there was undoubtedly a mild, self-limited osteo-myelitis of the bodies of the vertebra, which was attended with nervous symptoms of a character usually considered hysterical and yet having at the same time pressure phenomena. Unfortunately in our study of these cases no opportunity has been given for careful pathological study as, without exception, all have recovered.

ABSTRACT OF A PAPER "A RESUME OF THE SUBJECT OF ACTINOMYCOSIS WITH REPORT OF A CASE OF ACTINOMYCOSIS ABDOMINALIS."*

By A. VANDERVEER, M.D., and ARTHUR W. ELTING, M.D.,
of Albany, New York.

Mr. President:—I desire to express my appreciation of Dr. Elting's contribution in the careful study of this subject, and in the reference he has made to various authors, French and German in especial.

The polymorphous fungus belonging to the genus of oospores was first recognized by von Langenbeck in 1845. In 1857 Lebert described a case of thoracic actinomycosis, observed by Louis in 1848, and published cuts of the actinomyces in his atlas, believing, however, that these fungi were the debris of cysticerci.

From 1868 to 1875 Rivolti and Perroncito demonstrated the so-called sarcomata of the jaws of cattle to be due to actinomyces. Bollinger, at the same time, recognizing the characteristic fungus in "Lump Jaw" in cattle, and referred it to the botanist Harz, who classified and gave to it the name of actinomycosis.

Actinomycosis in human pathology dates from the works of Israel in 1878, this author and Ponfick recognizing the identity of bovine and human actinomyces, even before the transmissibility of the disease had been proven by inoculation experiments, the latter, however, not being successful until 1880, when Joline produced the disease in a cow inoculated with some of the actinomycotic granules obtained from an animal of the same species. In 1883 Israel successfully inoculated the human actinomyces into a rabbit.

During the decade from 1880 to 1890 there were published two important articles, i. e., the classical monograph of Israel, in 1885, with a report of 37 cases of human actinomycosis, comparatively little having been added since; the second article was published by Böstrom, in which he paid special attention to human actinomycosis, and the transmissibility of the disease through vegetable life.

During the past decade much interest has been aroused in France, and among the best of the numerous publications is the exhaustive monograph of Poncet and Berard.

To-day the literature upon the subject in America is quite extensive, the disease no longer being regarded as of infrequent occurrence.

A great variety of names has been proposed for the fungus, the true distinction, however, between Madura foot and the group of pseudo actinomycoses being clearly established by Blanchard in 1895.

In the infected tissue, contents of abscess cavities, or discharge from fistulous passages, the actinomyces are usually present, in the form of small, yellowish, more or less opaque granules, in size from .15 to .75 mm. although larger granules often occur, are usually grayish-white, transparent, easily broken up, and of a consistency of soft jelly. Becoming older the granule grows more opaque and yellow, finally becoming impregnated with calcium

* Read at the Semi-Annual Meeting of the Medical Society of the State of New York, New York City, October 16th, 1901.

salts, which gives rise to a structureless concretion.

The actinomyces stain readily with ordinary basic aniline dyes, not being decolorized by Gram's method, are a facultative anaerobe and grow upon most of the common bacteriological media. The best temperature is from 33° to 37°c and even under these conditions culture development is slow, requiring from 5 to 15 days. Very often actinomyces are mixed with other micro-organisms, the latter having a more vigorous growth, and tending to obscure the former. The most common of these micro-organisms are the staphylococci, the streptococci, colon bacillus and leptothrix bucalis.

Actinomyces possess a surprising ability to develop upon cereals and vegetable media in general. At 45°c the growth of the fungus is arrested, and rapidly destroyed at 60°c.

The spores are more resistant to injurious agencies than the mycelium, although less so than the spores of bacteria. Greater resistance to noxious agencies is possessed by the spores grown upon cereals, experiments by Berard and Nicolas showing that some spores have lived as long as 4 years upon certain cereals and under unfavorable conditions.

There are a few cases on record where it seemed probable man had contracted the disease from animals, but it would appear that prolonged, intimate and close contact is necessary, which seems to indicate that the virulence and infectiousness of the actinomyces are diminished in animal organisms.

The consensus of opinion is that the great carriers of actinomycotic contagion are the different forms of cereals, especially barley, through their agency both man and domestic animals becoming infected. Pieces of cereal grains have been found in the focus of infection, the history of the case pointing almost definitely to their being the source of the disease.

Vegetables, especially those grown above ground, may also convey the contagion to man and animals.

Men are much more frequently infected than women, probably as a result of their being more exposed to infection.

Of 357 cases of human actinomycosis, collected by Huttyra, one-third occurred in the third decade of recognition of the disease.

Five chief avenues of infection have been distinguished—

1. Through the mouth and pharynx.
2. Through the respiratory tract.
3. Through the gastro-intestinal tract.
4. Through the skin, wounds, etc., and
5. A group of cases in which no definite portal of entry is discoverable.

Microscopically a focus of actinomycotic infection is characterized by a central zone, containing the fungus either free or attached to the foreign body by means of which it gained access to the part, this zone containing more or less cellular detritus and products of degeneration.

The blood vessels in the immediate vicinity of the focus are but rarely obliterated.

All the actinomycotic lesions can be divided into two great classes:—

1. The neoplastic type, which is usually found in horses and cattle.

2. The inflammatory type usually found in man and hogs.

The neoplastic type is the form in which spontaneous recovery not infrequently occurs.

In the inflammatory type the process of destruction exceeds in rapidity and intensity that of defense, tends to the production of sinuses but not of large abscess cavities, the latter usually being the result of a secondary infection.

The muscles and bones afford a very unfavorable medium for development or extension of actinomycotic foci.

The tendency to the formation of fistulous passages is quite characteristic, the discharge presenting marked differences. In some instances it is serous, in others sero-purulent and in others distinctly purulent. Secondary infection practically always exists in fistulous cases.

Another characteristic feature of actinomycotic lesions is the tendency to extend by continuity rather than by metastasis.

Poncet and Berard propose a division of actinomycotic infections into the following groups:—

1. Cervico-facial.
 2. Thoracic.
 3. Abdominal.
 4. Cutaneous.
- Foci in bone, the spinal column, the genito-urinary organs, the brain, special organs of sense, etc., being regarded as complications.

Statistics prove that about 55% of the cases were of the cervico-facial type; 20% thoracic and pulmonary; about 20% the abdominal type, and about 5% of a variety of types.

There has never been a definitely authenticated case of primary abdominal actinomycosis reported which did not originate from the gastro-intestinal tract, adhesions and abscesses being the characteristic feature, and abscesses always resulting from a secondary infection.

The actinomyces gain access to the stomach along with either animal or vegetable food, most commonly the latter. Neither the gastric juice nor the bile appear to have any very decidedly harmful effect upon the fungus.

The different portions of the alimentary tract seem to be affected in direct proportion to the length of time which the intestinal contents remain in the different parts.

Intestinal actinomycosis appears first as a small nodule in the submucosa, which undergoes degeneration at its centre, and presently gives rise to a small ulcer with undermined edges, which may extend either by progression or by confluence of several small ulcers, which, in certain instances, heal and leave irregular pigmented scars.

As the process extends, there is a decided tendency for the involved portion of the intestine to become adherent to other portions of the intestine, the abdominal viscera or the abdominal wall, preventing, in most instances, a perforation into the general peritoneal cavity. When the process originates from the colon, i. e., a portion of intestine not provided with a mesentery, retroperitoneal abscess is not an uncommon complication.

In some instances the intestine adherent to the

abdominal wall has perforated externally, forming a fecal fistula.

Perforation into the bladder is of rare occurrence, although cases have been reported by Böstrom, Hesse, Billroth and others.

The prostate has, in a few instances, been involved by extension of the disease from the rectum.

In women the pelvic viscera have sometimes been extensively involved by extension of the process from the primary intestinal focus.

In all the literature Grill was unable to find a single authentic case where abdominal actinomycosis had extended through the lymph channels.

Metastasis, in the great majority of cases, takes place through the veins rather than the arteries.

Among the secondary lesions of abdominal actinomycosis those of the liver are the most frequent, involvement occurring either by continuity, contiguity or metastasis. In 20 of the 30 cases of hepatic actinomycosis collected by Aribaud the primary focus was intestinal.

In from 50 to 60% of abdominal actinomycosis the primary focus is the cecum, appendix, or contiguous portions of the ileum and colon, i. e., in the right iliac fossa; from 10 to 15% of the cases in the rectum. In comparatively few cases has the primary focus occurred in the small intestine. There thus remain a certain number of cases in which the primary focus is undetermined, even though careful post-mortem examinations have been made.

Grill has distinguished three typical periods in the course of abdominal actinomycosis:—

1. The initial period.
2. The period of tumor formation.
3. The period of fistula.

To these three periods Hinglais has added a fourth—a period of repair.

Although in certain cases this or that period may predominate or be entirely absent, nevertheless, the periods mentioned are usually characteristic of the disease, when localized in the abdomen.

Pain, while usually present, is rarely severe, being rather a sensation of tension and discomfort.

In rectal actinomycosis the fistulae usually open about the anus and occasionally in the loin or above the pubis. Spontaneous recovery is possible, even though there be extensive infiltration of the abdominal wall, with numerous fistulae.

The duration of the disease is quite variable—from a few weeks to several years.

The prognosis in abdominal actinomycosis, even though the process be extensive, is not necessarily hopeless, for there are on record a considerable number of cases that have recovered.

In general one can say that those cases offer the best prognosis which are most amenable to surgical treatment, i. e., the abdominal form rather than the thoracic. The oldest cases are most unfavorable because of the possibilities offered for extension or metastasis.

In 77 cases of abdominal actinomycosis treated surgically, Grill found 22 recoveries 10 improvements and 45 deaths.

It is practically impossible to recognize abdominal actinomycosis in its earliest stage, although examination of fecal matter has, in a few instances,

led to a comparatively early diagnosis. In the later stages, when tunefaction is extensive, with foci of suppuration and numerous fistulae, and the discharge contains characteristic granules, diagnosis is comparatively easy.

Sarcoma, carcinoma and tuberculosis of the cecal region must also be considered in differential diagnosis.

Greater care in the selection and preparation of cereals and vegetables would certainly diminish the number of infections by this avenue. Since thorough cooking destroys the spores of actinomyces in flesh, prevention of the infection from this source would appear to be comparatively easy.

Therapeutically a so-called specific for actinomycosis has never been discovered, although iodide of potassium possesses certain qualities which produce a favorable result. In general iodide of potassium appears to act more satisfactorily and effectually, the earlier in the course of the disease it is administered, and in large and gradually increasing doses. Experiments have shown that it has little or no effect upon the growth of the actinomyces on artificial media.

Billroth, Kahler and others have tried the effect of tuberculin, improvement seeming to have followed its employment in a few instances. An interesting fact brought out by Kahler, Illich and Wolff, and confirmed by Arloing, is that men and animals infected with actinomycosis react to Koch's tuberculin the same as in cases of tuberculosis.

Ziegler has reported a favorable result following the injection of protein obtained from cultures of the staphylococcus pyogenes aureus.

Gautier has seen favorable results follow the use of electrolysis and Braum recommends the use of Fowler's solution.

In general, however, combined medical and surgical treatment would appear to have produced the best results, especially in the forms of actinomycosis more superficially placed.

It is frequently difficult to determine the extent of the process and consequently the extent of surgical intervention required.

Careful exploration of the fistulae and foci should be practiced, so far as possible, with the removal of as much diseased tissue as consistent. If apparent recovery occurs, the case should, nevertheless, be watched for several years because of the great possibility of recurrence.

Mr. A. S., Castleton, N. Y., aet 45; native of United States; carpenter by occupation; married. Admitted to Albany Hospital February 22d, 1901. Provisional diagnosis sarcoma of cecum or mesentery; corrected diagnosis actinomycosis abdominalis. Treatment: Operation and medical. Family history good. Previous history: patient had usual diseases of childhood; typhoid fever at the age of 15; was quite ill, but made a good recovery. Denies venereal disease of any kind. Patient has partaken sparingly of stimulants; smokes and chews tobacco rather excessively; has associated much with animals; never worked in grain. General health always good; no serious injuries. Present illness began November 27th, 1900. While at work had pain in stomach; however, finished day's work, and then tried various remedies without relief. Had sharp cramps in lower portion of abdomen; very severe for 3 or 5 minutes, recurring at first every half hour or so. Did not obtain relief for a week, although under the care of a physician. Pain gradually diminished, but did not disappear for eight weeks from onset. No chills, fever or vomiting, but

slightly nauseated. Pain not localized or radiating, but seemed, to patient, to be in abdomen. No jaundice; no distension of abdomen that patient ever noticed. Bowels and kidneys normal in functions.

January 1, 1901, patient was able to be up, around and improved quite rapidly. Middle of January, superintended an ice gang.

February 1, as well as usual, and had regained normal weight.

February 20th, still feeling as well as ever, but noticed a small tumor in region of umbilicus, for which he came to the Albany Hospital February 22, under my care.

Physical diagnosis: distinct tumor, size of fist, in right iliac region; smaller tumor, inflammatory in character, evidently containing pus, at umbilicus; smaller masses to be felt through and in abdominal wall, giving an impression of sarcoma of the mesentery. Heart, lungs, spleen and stomach normal. Liver dulness extended about one finger's breadth below the costal margin. Skin over tumor red, with yellow spot in centre. Urine amber, 1030, acid, no albumin or sugar, sediment slight, and a very large number of calcium oxalate crystals present. Blood examination revealed leukocytes 18,500, reds 4,710,000.

Operation, February 28, 1901. Abdominal incision 6 cm. long in median line. Peritoneum found adherent to coils of small intestines in various places, with a flattened tumor, size of half a hand, springing from right iliac crest. While supposed to be a case of multiple sarcoma of the mesentery, yet it differed from any similar case I had ever seen. There was a distinct hardening of this portion of the peritoneum extending to umbilicus, along the course of the urachus and round ligament of liver, with an abscess presenting just under the skin. The latter was not opened for fear of infecting the peritoneum. Incision in peritoneum closed with fine silk, continuous sutures; wound closed with interrupted silkworm gut sutures and iodoform gauze introduced in lower end of incision, then standard dressing. Gauze removed on 4th day, and drainage encouraged there-

after, the abscess of umbilicus having opened and discharged a creamy, flaky-like substance. Specimens of discharge and tumor were saved, but lost later, and did not reach the Bender Laboratory for examination.

Patient put upon syrup of hydriodic acid, strychnia and elixir of callisaya, with as good nourishment as possible. Not feeling at all certain of my diagnosis, and the possibility of actinomycosis, about April 1st I asked Dr. Elting to look the case over carefully, and make a thorough examination of the discharge. This was done and the case found to be one of typical actinomycosis. Cover slips stained by Gram's method showed the characteristic fungi. Cultures from several of the abscesses showed so vigorous a growth of the bacillus coli communis that the growth of the actinomyces was obscured. Patient was now administered iodide of potassium in increasing doses, i. e., a saturated solution, commencing with 3 drops in a wineglassful of water before each meal, increasing 3 drops each day until 60 drops were reached and this dose continued.

May 1, 1901: Condition improved somewhat, although necessary on two occasions to open abscesses in the abdominal wall. Less numerous actinomycotic granules in discharge than before the administration of iodide of potassium was begun. Large tumor still in right lower quadrant of abdomen, extensive induration and infiltration of abdominal wall, and four fistulous openings.

June 15th: Patient's general condition not quite as satisfactory as at previous note. Three discharging sinuses in abdominal wall, the discharge sero-purulent, and containing a moderate amount of actinomycotic granules. Appetite good, no gastro-intestinal symptoms. At patient's request he was discharged from the hospital and advised to continue the large doses of iodide of potassium.

June 25th: Patient readmitted to hospital for further observation. General condition somewhat improved but there are more discharging sinuses than at last note. Condition at this time indicated by accompanying photographs. Figs. 1 and 2.



FIG. 1



FIG. 2

August 20th. Patient returns feeling much better than when seen about 3 weeks ago. Condition of abdomen distinctly improved. Some of the sinuses closed, and discharge from remaining ones decidedly less.

Patient says two weeks ago a small pimple or blackhead developed on right side of the nose, near inner angle of eye. This was squeezed by his wife, who had attended to the abdominal wounds. 48 hours later patient noticed some pain and swelling about nose, which gradually increased, and a tumor, the size of a hen's egg, developed, which almost closed right eye. Hot applications employed and about a week from onset tumor broke and discharged considerable pus. There still remains a tumor the size of a large pigeon's egg, the skin near and around presenting a livid appearance. Discharge sero-purulent and contains a few typical actinomycotic granules. Potassium still continued.

September 20th. Patient returns feeling much improved. Abscess of nose entirely healed. Abdominal condition much improved. There are still a few actinomycotic granules in discharge from sinuses in abdominal wall.

October 12th. Patient shows still further improvement. Has been doing light work for several weeks past. Color good and general appearance excellent. Four or five discharging sinuses in abdominal wall, containing a small amount of discharge, with an occasional actinomycotic granule, mostly in an early stage of development. Condition of patient's abdomen at this time indicated in Figs 3 and 4.



FIG. 4.

containing yellowish-like pus and granules. All of these conditions are indicative of actinomycosis, also the patient's improvement for a time after operative intervention, and still further improvement when getting under the full effect of the iodide of potassium; the infection of the nose, and rapid recovery, all aid in confirming the previous diagnosis.

The photographs illustrate very nicely the appearance of the patient when improvement had commenced, and still later on when in a condition of convalescence.

CYSTIC LIVER.*

By ISRAEL CLEAVER, M. D.,

of Reading, Pa.

The specimen of liver shown here to-day needs no description to convince you of its interest and rarity.

Its dimensions are as follows: width, 12½ inches, the left lobe being 4 inches, vertical length, 8 inches, and thickness, 5½ inches. I had no means of having it weighed at the time of the autopsy.

The portion of large cyst projecting above the surface of the liver measures 7½ inches in circumference, occupies the under face of the right lobe, and crowds the gall bladder, also much enlarged.

You will notice another cyst of the size of a wa-

* Read before the Berks County Medical Society, September 14th, 1897.



FIG. 3.

If this case is studied carefully, it is very striking to observe the characteristic conditions that have been described by many authors, i. e., the tumors to be felt in the peritoneal cavity, and in the abdominal walls, the peculiar reddish-blue appearance of the surface of the abdomen and the multiple abscesses

nut, sessile on the upper margin of the left lobe, while four more of the size of hulled shellbarks, peep through the surface of the same face, but to the right of the large cyst. The gall bladder contained twenty-six calculi, varying as you see (specimens shown) in size from a wheat grain to a peanut kernel, irregular in shape, with worn facets, showing the different striae of their formation. They are the kind usually found in such subjects, and by the way, I have found these concretions so frequently in autopsies of the aged, without a previous suspicion of their existence, that I judge they are no unusual concomitant of senile degeneration, but I have not had time to search for bibliography on this point, and my memory does not just now serve me. Sections of the organ in places not occupied by the cysts, macroscopically, appear healthy.

I have submitted portions to both Drs. Frankhauser and Wethered, and they tell me that there is no parenchymatous change, and both being present, can give you their observations. Relative to the rarity of such specimens, the only mention I find thereof in such books as were at my command, is in *Treat's Annual*, 1895, a contribution from A. W. Mayo Robson, F. R. C. S., wherein he speaks of a like case reported by Dr. John B. Roberts, of Philadelphia, Pa., and another previously by himself.

Dr. Roberts' case appears in Vol. XIX, *Annals of Surgery*, p. 251, the liver weighing eleven and a half pounds, and "riddled throughout with cysts." He reports: "For ten years she had noticed a swelling in the right side of the abdomen below the ribs. * * * The tumor was irregular in outline and near the middle line presented a particularly marked elevation, which was elastic on pressure, and gave the examiner the impression that it was a cyst." No echinococcus hooklets could be detected. Operation was made, evacuating eight or ten cysts of various sizes and the patient did well for three weeks, when she unexpectedly died, autopsy revealing the condition above given.

Dr. Robson's case was also an "enormously enlarged liver filled with cysts." Hepatotomy was performed, but the case disappeared by removal and the result therefore is in doubt.



Cystic Liver.

The specimen before you differs from those, in the fact of the cysts being not so numerous, but of vastly larger dimensions.

The reporter of Dr. Roberts' patient says he had been unable to find in literature "a case of such extensive cystic degeneration of the liver." I think it very right, therefore, to offer this paper for record.

Touching the patient from whom this was taken: he was a gentleman, eighty-one years of age at his death.

He had never been intemperate, and for the last sixty years of his life was a teetotaler in practice. He had no hereditary transmission, robust frame, and until within a few years of death enjoyed vigorous health, saving that when about 35 years old he had an attack of "bilious fever." He was also subject at irregular intervals to attacks of "sick headache," occurring perhaps two or three times a year, but after attaining the age of fifty, they were still less frequent in their appearance.

Eight years previous to death he began to be troubled with rheumatoid arthritis, growing gradually worse until, during the last two years, he could only walk with the aid of crutches.

For the last four or five years he was also the subject of a more or less frequent cough and bronchorrhea, but nothing more than is usual with senile degeneration of the respiratory tract.

About the beginning of last March, 1897, he showed unusual debility, following an attack of indigestion, caused by rather free eating of fat meat. From this time food had no relish, owing mainly to apparent *loss of taste*: soups, meat, bread, etc., everything tasting "like chips." The tongue was always heavily coated, sometimes with a brown crust, but generally a white or somewhat yellow color. He suffered no pain except in his knees with moving. He was too weak to sit up, and hence was rarely out of bed during the whole of his last illness, which was six weeks in duration. The bowels were constipated, but stools of normal color, even when prompted by purgatives.

Two or three weeks after this seizure he complained of frequent micturition, and examination revealed the bladder much distended, and which was relieved by catheter at two sittings, five pints of urine being drawn with the two operations. From this time on he never voided urine without instrumental aid. At this time was also noticed an enlarged condition of the right hypochondrium, percussion and palpation, both proving the cause to be an enlarged liver. Two weeks before death he complained of considerable pain in this region, relieved by lying on the right side. There was slight fever, much thirst, but no jaundice at any time, some tenderness.

Also at this time there was first noticed an elevation of the surface about the size of an egg and similar in shape, located one and a half inches to the right of median line and about the same distance below the ribs. It was fluctuating in character, not painful to pressure and no marked tympany surrounding it.

Distended gall bladder was my diagnosis and confirmed by the consultant called in next day. Of course, little was to be done except to continue the

tonics already given, and as much nourishment as possible. No material change occurred, except that the pain on some days was worse and associated with pressure symptoms, interfering with easy respiration. On the morning of April 23d last, seeming as well as for the previous several days, he asked for a drink of water, which he received sitting up in bed, when he immediately lay back and expired with a few convulsive gasps. The autopsy showed all the other viscera of abdomen and chest healthy, except the stomach, which was slightly enlarged.

In the surprise of seeing such a specimen of the liver, search for the kidneys was overlooked. Recent adhesions were about the large fold of the peritoneum over the liver, doubtless explaining the pain of the past two weeks.

Of course several pertinent questions are suggested by reflection on this history.

Why was this cyst mistaken for the gall bladder? The absence of jaundice, normal stool, with no special acute disease should have negated this idea.

I confess to some degree of chagrin in not having conjectured the presence of a cyst.

In the report of Dr. Roberts' case there is no proof that a positive diagnosis was made before operation.

My patient was too feeble and too aged to entertain any thought of operation, but had he been a younger and more vigorous subject, I feel that the issue would have presented some very keen questionings.

I, however, learned a lesson that may save *me* in the future, and be of like benefit to some of *you*. I realize that the idea of a "distended gall bladder" was so dominant in my thought, that the possibility of its being anything else never crossed my mind, teaching that in the investigation of diagnoses, even when you know (?) that you are *right*, take time to consider whether you are *wrong*.

Some apology may be advanced on the line that the disease is rare, literature pertaining thereto meagre, and that it is impossible for a busy general practitioner to keep fully posted on those items, that rarely or never come within the pale of his experience, but it, nevertheless, shows how important it is to be posted.

THE RELATION OF THE MIDDLE TURBINATE BODY TO CHRONIC DISEASES.*

By CHARLES H. BAKER, M. D.,
of Bay City, Michigan.

Chronic nasal catarrh is so prevalent on this side of the Atlantic as to have received the epithet of "The American Disease," and the failure of medical men to find means for the cure or amelioration of the disorder has become an approbrium to the profession and a prominent feature in the bids of the charlatans for patronage. We cannot ignore the influence of climate and habits of living among us as the exciting causes, but there are long periods of the year in which these are not prejudicially active in keeping alive the trouble, so we must seek elsewhere for the causes which operate to prevent the natural tendency to spontaneous recovery which

exists in the presence of acute nasal disorders. The easy accessibility of the inferior turbinate body, and its proneness to participate in all nasal irritations, and respond by swelling and producing nasal obstruction, has made it the scapegoat for the rest of the offending organ, and it has been seared and cut, pinched and stabbed without mercy, until, if it had a tongue, its prayer for relief would have ascended to the skies.

Acute observers long since recognized that chronic nasal disorders existed which were out of the sphere of influence of the inferior turbinate, but the weight of authority favored nasal stenosis as the cause of nasal disease and the possibility of other factors being more active than this one was overlooked. My purpose in the present paper is to call attention to the much greater influence which the middle turbinate has upon the course and progress of nasal disorders, in the hope that it may assist the work of others along the same line, and sooner usher in the day when we may promise our patients with chronic nasal troubles a cure which will stay a cure. In this, as in other diseases, a knowledge of the anatomy of the organ involved must first be had before we are in a position to know what are pathological changes, so I will hastily review the anatomy of the middle turbinate.

The middle turbinate body is so located as to be in the most intimate and important relations with the meati and accessory sinuses of the nose, the olfactory nerve and the most sensitive portions of the septum. In its normal state this body protrudes from the side wall of the nasal chamber and is bent sharply downward, lying parallel to the septum and midway between it and the lateral cell. It occupies most of the space between this wall and the septum from its point of attachment down close to the superior surface of the lower turbinate. In the living subject the space between the turbinate and the septum, or turbinate and side wall, varies between one-thirtieth and three-sixteenths of an inch, but may be obliterated by swelling of the membrane or hypertrophy of the bone. The turbinate covers the outlet of the maxillary antrum, the hiatus semilunaris in which are the orifices of the anterior ethmoid cells and of the frontal sinus, while its rear portion is in close relation with the sphenoidal foramen; all of which openings are the outlets for considerable sized cavities liable to inflammation consecutive to disease of the nasal membranes. The soft tissues of the middle are much less erectile than those of the inferior turbinate, and when thickened are less amenable to shrinkage by medicinal means, as cocaine, supral-renal extract, etc. The shape and size of the middle turbinate varies considerably within what may be termed physiological limits. For instance, it may be thin and knifelike from front to rear, with uniform thickness and equal spacing from the lateral walls. Again its attachment varies greatly in altitude, sometimes low down and again very high; the high horizontal portion may be wide or scarcely demonstrable; the anterior, the middle or the posterior part may be either wider or thicker than the balance of the bone. According to these variations the anatomical relation to the surrounding tissues vary, but so long as there is no pathological change or inflammation present these

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variations do not signify. The bone is very thin, being filled with pneumatic cells with fragile lamellar walls. From various causes, developmental or nutritional, these cells are prone to enlargement, altering the structure, shape and relations of the bone to surrounding parts. The soft tissues overlying the middle turbinate bone become edematous when inflamed or irritated by discharges from neighboring sinuses, and by their swelling close off the upper meati and the outlets of the various sinuses. The sinuses are slow to become involved in inflammations of the nasal cavities, and are also slow to recover from them. They are occluded by the swollen turbinate, which in turn is irritated by their discharges and the condition is thus self perpetuated.

With the obstruction of the meati acute inflammations soon pass over into chronic and a creamy pus exudes continually, which, running over the mucous membrane produces granulation tissue just as a similar discharge elsewhere will do. In the nose this assumes the form of hyperplasia of the mucous elements, rather than the vessel loops and connective tissue of granulation elsewhere, and the abundant serum supply, aided by gravitation, makes them hypertrophy often to an enormous degree. The mucous membrane of the middle turbinate having to stand the brunt of the irritation is the first, and very often, the sole seat of polypoid growths. Everyone who removes polypus with the snare, under good illumination, will have seen on removal of those lying toward the maxillary antrum, a gush of pus as if the stopper of a bottle had been removed. This issues from some of the sinuses, and however frequently and thoroughly you may remove the polypi, you will not usually cure the discharge, except you remove the turbinate, owing to the swelling of the membranes retaining the discharges until a new polypus forms. The most careful extirpation with snare, curette, caustic, or cautery will not cure them until the turbinate is removed either in whole or in part. Very often polypi are concealed above and behind, which cannot be seen or reached by the probe, and yet are found on removal of the turbinate, and I submit that it would be impossible to cure such a case and leave the turbinate *in situ*. It is a common practice to cauterize the base from which polypi have sprung with a view to checking their formation, but my experience is that this procedure fails more often than it succeeds, while it is a fruitful source of adhesions which are very obstinate to removal. In some of these cases the amount of polypi concealed by the turbinate is astonishing, equaling or exceeding those that were visible before it was taken out.

A second indication for removal of the middle turbinate is sinus occlusion by swollen membrane, which is not yet polypoid and which does not respond to other recognized modes of treatment by cleansing and disinfection. In this class of patients the membrane seems irritable and swells to the occlusion of the sinuses, but either from the pus being produced by other organisms, or because of individual difference in resisting power, does not go on to form polypus. No method of cleansing which has ever been used will be efficient in these patients until the obstruction is removed, and this is impossible while the

turbinate body is left *in situ*. I have known two of these cases to die from cerebral involvement that I am sure could have been saved by early removal of the turbinate so as to provide free drainage from the infected sinuses.

A third indication for removal of the middle turbinate is fetid crusting of the discharges in the upper portion of the nasal chambers in non-specific cases.

Cobb in the *Archives of Otolaryngology** refers to the cure of cases of pharyngeal crusting by removal of the hypertrophied rear portion of this bone, and in case this can be demonstrated to be the only part involved, it is sufficient, but I extend the operation to the whole bone whenever the crusting extends to the middle or anterior portion of the middle fossa. A fourth indication for removal is so called "bulbous" hypertrophy, which is not a true hypertrophy of the bone, for the cells are simply ballooned out and the mucous membrane overlying is atrophied. The inferior turbinate is sometimes entirely absent as a result of the atrophying process extending to the whole nasal chamber. The membrane overlying the middle turbinate will be found covered with a number of bluish umbilicated spots resembling the mouths of tonsillar crypts. Secretion is excessive, but dries and crusts, and the only cure is removal of the bone which appears to be the focus of infection. It is remarkable how rapidly such a case improves after the operation.

Class Five.—As has been mentioned, on the septal side the turbinate lies in close proximity to the most sensitive area of the nasal mucous membrane, and when contact occurs various disturbances of the nervous system arise. Thus are produced severe sneezing, coughing, nasal asthma, hydrorrhea, headache, various eye reflexes, vertigo, tinnitus and even chorea and epilepsy, any one of which may be severe or obstinate enough to require removal of the bone as the offending cause. I have in the past year had two patients in whom persistent and ceaseless sneezing was the only symptom, but who were cured by this means after failure of other remedies.

A sixth class is that of vasomotor rhinitis, running along into other than the normal period of the year, who with the return of patency and improved breathing still suffer from pressure, sneezing, asthma, reflex cough or congestion of the eyes. On examination the turbinate is found crowding tightly against the septum and does not admit the thin probe after a liberal use of adrenal extract. I do not contend that removal of the turbinate will cure such a case without other treatment, but it will greatly shorten the period of suffering, which is a priceless boon to these patients.

I operate as follows: After as thorough cleansing as possible I apply 8 per cent. cocaine with a pledget of cotton on applicator, followed by thin pledgets laid along the upper surface and between the bone and outer wall, where they remain about ten minutes. Suprarenal extract or adrenalin is then applied, which procures an almost bloodless operation. Holmes' middle turbinate scissors, right and left, are then used, and the attachment of the bone to the lateral wall divided from before backward. If the rear portion is out of reach of the scissors

* Archives of Otolaryngology, vol. XXIX, 2 & 3.

it is cut off with the snare. The cavity is packed with a long, thin strip of iodoform gauze, which is usually removed on the following day, and generally no more packing is required. Frequent cleansing with borax solution is done by the patient until healing is complete. I have found healing promoted by insufflations of dermatine, a lead iodide compound which for this particular place has proven better than any other substance tried. Performed in this way the operation is painless and practically bloodless, and brings to a satisfactory end many otherwise tedious or hopeless conditions of disease.

THE RELATION OF THE SYMPATHETIC NERVOUS SYSTEM TO FUNCTIONAL AMBLYOPIA.*

By HARRY S. PEARSE, M. D.,

of Washington, D. C.

In reviewing the literature considerable confusion is noticed in the use of the terms "amblyopia" and "amaurosis," and only in recent years has the distinct line which divides them been generally recognized, though not always adhered to. Though there is some difference in the views concerning the application of the terms; with most observers the derivations, amblyopia from *amblys*, blunt, and *ops* sight, and amaurosis, from *amauros*, dark, form the basis of a classification which is simple and yet allows little latitude for complex amplification. Amblyopia is designated to those cases of weak sight which cannot be relieved by glasses, no matter what the cause may be. Amaurosis applies to all cases of absolute blindness, temporary or permanent, whether due to functional or pathological change in any structure concerned in the visual act; thus, blindness due to hysteria is called hysterical amaurosis, and that due to cerebral lesion, cerebral amaurosis. And this sub-classification prevails right through, each form of amblyopia or amaurosis receiving its name according to its causal factor. Of the amblyopias there are: Congenital amblyopia, dimness of vision from time of birth, and in the majority of cases due to high degrees of refractive error; amblyopia ex anopsia, dim vision from non-use, as in a squinting eye; hemeralopia, dimness of vision at night only, and its opposite, nyctalopia, dimness of vision during the day but normal at night; reflex amblyopia, due to irritation in another part of the body; traumatic amblyopia, uremic, glycosuric, malarial, anemic amblyopia, dependent respectively upon these general conditions; toxic amblyopia, from the use or abuse of drugs, and the amblyopia of central origin, due to brain lesion, and with which there may be a gradual failure of vision accompanying a descending degeneration of the optic nerve, ending in atrophy of that nerve and total blindness. Hemianopsia, a blindness of one-half of the field of vision indicates a disturbance of the brain or some part of the visual tract. Many of the above amblyopic conditions may and do progress to total blindness. The quantity of vision present determining the class to which each belongs. This aphorism can be applied to every case where there is sub-normal visual acuity. In addition to

these conditions of amaurosis following amblyopia, there are a number of cases of total blindness which do not have a common etiology with the amblyopias, viz., color blindness; scotomas, which may be scintillating or black areas in the field of vision, and monocular blindness as the result of an embolism or thrombus of the central artery of the retina.

There is a very large group of cases, including all degrees of acuity of vision, the etiology of which is still a matter of controversy. I refer to the disturbances of vision accompanying hysteria and neurasthenia. To say that a case of amaurosis is "hysterical," or that an amblyopia is "neurasthenic," does not indicate a definite pathological basis of diagnosis, and for want of a better or more descriptive scientific term these conditions are called "functional," which means, as expressed by Fuchs,¹ "an altered condition of circulation and nutrition resulting in disturbance of function." It has been conclusively proven that the sympathetic nervous system plays an active part in the control of the functions of the secretive glands and of the arterial circulation; also in the visual act through its influence over the muscles of accommodation. Strümpell² and other writers maintain that vaso-motor irritations may proceed from the cerebrum as in flushing and pallor from mental emotions. If this is so, the word "functional" bears the burden of many of the intricate and evasive phenomena of the neuroses and psychoses. And there can be no doubt but that many cases of diminution of visual acuity are due to the influence of the central nervous system upon the cellular elements of the retina, but in just what manner it is not positively known. The eye-ground, in the majority of cases, presents no visible abnormality to assist us. Severe shock or violent mental emotions in the form of grief, joy, anger, fright, etc., have produced complete blindness, undoubtedly by paralyzing the retinal elements or the visual centres in the cortex, rendering them incapable of receiving or interpreting visual impressions. Whether or not the sympathetic is concerned in this action we cannot say, but there certainly is a suspension of the functional activity of these elements (the retina or visual centres). Based on the study of 7,500 cases, Connor³ makes the statement that "there is no positive evidence of the existence of amblyopia from suppression, viz., a loss of sight from the inhibitory action of the brain upon the visual centre." It is true that the suppression theory is based on negative evidence, but it is the most plausible thus far advanced, and must be considered until more positive knowledge is forthcoming. Baas⁴ reports a case of amaurosis following the blepharospasm of phlyctenular conjunctivitis in a child. The child died of pneumonia. Upon autopsy there could not be found any microscopical lesion of the optic tract or visual centres. He regarded the condition as probably functional.

There are, however, many cases of amblyopia and amaurosis, functional in character, which can be explained upon a firm anatomical and physiological basis. Cases where there is a visible contraction

* Read before the Albany County Medical Society, April 10th 1901.

of the blood vessels of the retina traceable directly to the influence of the sympathetic.

Anatomical Connection Between the Central Sympathetic System and the Arteries of the Retina and the Muscles of Accommodation.

From the cavernous plexus of the sympathetic, located on the internal carotid artery, have been traced distinct fibrous ramifications to the vessels of the retina, to the motor and sensory nerves supplying the internal and external muscles of the eyeball and the muscles of the eyelids. It is not within the scope of this paper to consider at any length the distribution of the sympathetic to the external ocular muscles or the lid. The intercommunicating branches of the third, fourth, fifth, sixth, and seventh nerves, in and about the orbit, form a complicated mesh which can only be understood by following out the branches of each individual nerve and of the attending ganglia. In visual disturbances accompanying affections of these nerves, their origin, or any tissue in relation to them, communication can, in the majority of cases, be traced between the eye and the point of lesion. In affections of the third, fourth, and sixth, the connection is apparent, but when of the fifth or seventh, it is more difficult to trace; however, it can usually be worked out. All of these nerves contain sympathetic filaments, and their areas of distribution are therefore subject to the influence of that system.

The distribution of the sympathetic to the vessels of the fundus oculi and the internal ocular muscles is through the medium of the ciliary ganglion, situated within the orbit, very close to the optic nerve and directly anterior to the sphenoidal fissure. This ganglion receives its motor root from the third, its sensory from the fifth, and its sympathetic root from the cavernous plexus of the sympathetic, and, according to some observers, a filament from Meckel's ganglion. It supplies nerves of sensation to the eye-ball, motor filaments to the ciliary muscle and sphincter of the pupil, sympathetic filaments to the radiating fibres of the iris; and, according to Brunton,⁵ *sympathetic filaments to the vessels of the eye are given off from the sympathetic nerve before it reaches the sympathetic ganglion.* Tiedemann⁶ also says, *that a small filament penetrates the optic nerve with the arteria centralis retinac.*

Physiological Action of the Sympathetic Nerves in the Eye.

The vaso-constrictor and dilator actions of the sympathetic are as yet not fully understood. Experiments upon animals have shown that stimulation of the vaso-motor fibres terminating in the arterioles of a gland will dilate those arterioles and increase the secretion of that gland; that stimulation of the fibres to the arterioles of the skin will contract them and produce pallor. Sections of these fibres will in each case have directly the opposite effect, *i. e.*, diminution of glandular secretion and flushing of the skin. Showing that in the glands vaso-dilator fibres prevail, and in the skin, vaso-constrictor.

The action of the sympathetic upon the internal muscles of the eye and the circulation of its lining tunic is very interesting. In the head, the vaso-constrictor fibres predominate over the vaso-dilator.

The vaso-constrictor fibres ending in the structures of the eye can be traced down to the upper thoracic ganglion and stimulation will produce a contraction of the bloodvessels of the iris. This same stimulation, however, will produce dilatation of the pupil. Whereas, section of these fibres has a directly opposite effect, dilatation of the vessels of the iris and contraction of the pupil. So, as far as it is at present known, the influence of the sympathetic upon the structures of the eye is exerted to a great extent, through its action on the bloodvessels. The fact that sympathetic filaments to the vessels of the fundus have been traced by Brunton and Tiedemann, together with our knowledge of the sympathetic upon the capillaries of the skin, lead to the most reasonable inference that the capillaries of the fundus would be subject to the same influence of the sympathetic as the capillaries of the skin especially so as vaso-constrictor fibres predominate in the sympathetic nerves of the head and of the skin.

Application of Knowledge of Anatomy and Physiology of the Sympathetic to the Diagnosis of Functional Visual Disturbances.

Collins and Fränkel, in a recent paper, maintained that they had proven experimentally that the functional nervous disorders were "primarily conditioned through the sympathetic system, and were the result of a trophic disease." In discussion Worcester said that the sympathetic was probably less concerned in functional disorders than the cerebro-spinal system, and Osler said that it (the paper) was an "exhibition of retrograde-tendency." In closing Collins asked the question: "How are variations in blood-pressure brought about; does the cerebro-spinal system send any filaments to the blood-vessels?" There is the situation—on one side justifiable conclusion based on anatomical knowledge and physiological experiments; on the other the cellular activity or influence incidental to abnormal nervous or psychic processes.

The functional disturbances of vision with which we are here particularly concerned are positive conditions—disordered states of the retinal or vascular elements of the eye, or both, caused by a change in the innervation of these structures, which change may be due to an irritation of the innervating channels or to the influence of the cells in the brain, themselves disturbed by psychic processes. These irritations and disturbances act as direct causes of amblyopia and amaurosis, though in the majority of cases they produced no visible change in the retina, or in the vessels of the fundus. On the other hand, according to Barrett,⁸ and other observers, in several instances, contracted blood-vessels have been seen. Noyes⁹ reported a case in which a man of fifty-five, while talking, suddenly lost the sight of both eyes; upon examination twenty-four hours later, the retinal arteries were nearly empty and thread-like. Complete recovery of vision followed in five minutes under inhalations of amyl nitrite, which restored the calibre of the retinal arteries. Whether this drug acts by paralyzing the muscular coats of the arteries, or has a sedative action on the vaso-constrictor fibres of the sympathetic is a matter of controversy. H. C. Wood¹⁰ favors the latter view, and has many followers. Benson¹¹ re-

ports a case of temporary and partial obscuration of vision with spasm of *one* of the retinal vessels, and states that "spasm of the retinal vessels is sufficient to arrest the circulation and cause blindness." Spasm of these vessels rarely produces permanent blindness, however, because the retina is partially nourished by the choroid.

Strümpell follows up each symptom of spastic hemicrania and traces it to an *irritation* of the sympathetic; also, each symptom of paralytic hemicrania and traces it to a *paralysis* of the sympathetic, adding that when the eye is involved the vessels supplying the retina are affected as shown by spots and bright scintillations before the eyes, scintillating scotomas and hemianopsia. Von Graefe's symptom in exophthalmic goitre (lagging of the upper lid when the pupil is directed downward) is explained by that observer as due to the spasmodic contraction of the involuntary fibres of Müller, which aid in raising the eyelid and receive their nerve supply from the cervical sympathetic. The same irritation which produces this spasm may act on the vaso-constrictor fibres terminating in the retinal vessels, and which can be traced as above shown, to the same source, the cervical portion of the sympathetic. Brailey and Eyre¹² report five cases of exophthalmic goitre with increased intra-ocular tension, limitation of field of vision and amblyopia, assigning the probable causes of these conditions to the nervous and vascular disturbances at the root of the disease. Many observers advance the theory that the etiological factor of exophthalmic goitre is an infection of the cervical sympathetic ganglion. In simple glaucoma the extirpation of this ganglion has its foundation in the theory that an irritation of the sympathetic produces an increased arterial tension in the fundus, with resulting venous stasis and increased secretion of intraocular fluids, which Donders describes as a "neuriosis of secretion."

The contraction of the retinal arteries, produced by the action of quinine and acetanilid, and that of functional anemia are analogous, with the same result, transitory diminution of vision. The condition is one of mechanical anemia. Non-oxygenated blood will also produce transitory blindness by irritation of the vaso-motor centres. On the other hand, the temporary blindness following excessive hemorrhage is due, not to any change in the vessel walls, but to the insufficient blood supply to the retina and nerve centres.

A large proportion of the cases have, as I have said, the obscure etiology, hysteria, and it remains for the pathologist and neurologist to determine the basic cellular changes in this disease. Dana¹³ has reported forty-five cases of hysteria, twenty-three of which presented marked ocular symptoms, the most characteristic one being a concentric limitation of the visual field. This condition is due, I believe, to one of two conditions, or both; a diminished sensitiveness of the rods and cones in the periphery of the fundus to external impressions, or a lessening of the interpreting power of the central visual areas. Nuel¹⁴ has reported sixteen cases of what he called sympathetic amblyopia with absence of visible ophthalmic signs, following corneal injuries from flying scraps of metal. I have recently

had under observation a case similar to these in character, where sudden and absolute blindness developed one week after injury to the cornea by a piece of metal. Complete restoration of vision followed inhalations of nitrite of amyl and hypodermic injections of nitrate of strychnine. In this case there was, however, a recognizable contraction of the retinal arteries. The cases of Nuel and my own case were undoubtedly of a reflex nature, in which the sympathetic played the part which is generally attributed to it in all reflex conditions. In another recent case, a very hysterical woman, who complained of violent periodical headaches, there was a well-marked anemia of the temporal half of the optic nerve and retina of the right eye. This would seem to indicate that all of the arteries of the retina need not necessarily be involved.

Conclusions.

Our knowledge of the manifold manifestations of the disease, hysteria, in every structure of the body will not permit us to say positively that the retinal elements, the conducting channels of visual sensation, or the visual centres themselves, are free from the influence of this disease. The effect upon the visual apparatus of fright, shock, emotion, mental exhaustion, overexertion, etc., is essentially the same as in hysteria, and whether the sympathetic is concerned in this action is yet a question.

In view of the known sphere of action of the sympathetic and of the many cases observed which present the same conditions in the vessels of the fundus which the influence of the sympathetic produces elsewhere in the body, if the sympathetic does *not* influence the fundus vessels, what does? Until a more plausible source of influence is positively demonstrated, we cannot do better than accept this explanation, which is far removed from a theory.

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A Case of Tetanus on the Thirteenth Day After Vaginal Salpingectomy.—Platon and Aubert report the case of a woman of 31, ill three days with symptoms of pelvic peritonitis. Leukorrhea had begun three years before, and she had been ill over two years. Examination revealed right sided pyosalpinx. Vaginal salpingectomy followed, the operation lasting 48 minutes. The wound healed without fever for 10 days. On the thirteenth day she had an angina, trismus following, with pain and tetanic spasms of the right leg. These became generalized and she died 10 days later, in spite of the antitetanic serum used. Investigations into all material and people that she came in contact with failed to bring to light the source of the infection. (*Bulletin Medical*, July 13, 1901, No. 55). [M. O.]

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended December 21, 1901:

SMALLPOX—United States.

	Cases	Deaths
CALIFORNIA: San Francisco,	Dec. 1-8,	1
GEORGIA: Elberton,	Dec. 12,	12
INDIANA: Evansville,	Dec. 7-14,	3
MARYLAND: Baltimore,	Dec. 7-14,	1
MASSACHUSETTS: Boston,	Dec. 7-14,	60
Cambridge,	Dec. 7-14,	1
Medford,	Dec. 7-14,	1
MINNESOTA: Winona,	Dec. 7-14,	2
NEBRASKA: Omaha,	Nov. 30-Dec. 14,	22
NEW JERSEY: South Omaha,	Nov. 30-Dec. 14,	40
Camden,	Dec. 7-14,	10
Jersey City,	Dec. 1-15,	23
NEW YORK: Newark,	Dec. 7-14,	26
New York,	Dec. 7-14,	10
OHIO: Ashtabula,	Dec. 7-14,	3
Cincinnati,	Dec. 6-13,	6
PENNSYLVANIA: Allegheny City,	Nov. 30-Dec. 7,	1
Lebanon,	Dec. 9-16,	25
Norristown,	Dec. 7-14,	2
Philadelphia,	Dec. 7-14,	125
TENNESSEE: Memphis,	Dec. 7-14,	7
Nashville,	Dec. 7-14,	1
UTAH: Salt Lake City,	Dec. 7-14,	2
VERMONT: Burlington,	Dec. 7-14,	4
WASHINGTON: Tacoma,	Dec. 1-8,	1
WEST VIRGINIA: Wheeling,	Dec. 7-14,	1
WISCONSIN: Fond du lac,	Dec. 3-10,	1
Green Bay,	Dec. 8-16,	11

SMALLPOX—Foreign.

AUSTRIA: St. John,	Nov. 16-23,	7
BRAZIL: Quebec,	Oct. 15-31,	72
CANADA: Pernambuco,	Dec. 7-14,	25
Prague,	Nov. 30-Dec. 7,	16
COLOMBIA: Windsor,	Dec. 7-14,	1
FRANCE: Panama,	Dec. 2-9,	25
Paris,	Nov. 23-Dec. 30,	2
GREAT BRITAIN: Rhenms,	Dec. 16-20,	2
Glasgow,	Nov. 29-Dec. 6,	4
RUSSIA: London,	Nov. 23-30,	23
St. Petersburg,	Nov. 16-23,	1

YELLOW FEVER.

MEXICO: Vera Cruz,	Nov. 30-Dec. 7,	8
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CHOLERA.

INDIA: Bombay,	Nov. 12-19,	2
Madras,	Nov. 9-15,	17

PLAGUE—Insular.

PHILIPPINES: Manila,	Oct. 12-25,	5
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PLAGUE—Foreign.

INDIA: Bombay,	Nov. 19,	181
Karachi,	Nov. 10-17,	49

Gastropotosis and Enteroptosis.—At the Saint Antoine Hospital, Hayem recently discussed the ptoses. (*Medecine Moderne*, July 10, 1901, No. 28). He showed a case, a woman aged 39, who had had stomach trouble for 12 years. She had anorexia and gastric pain in half-yearly attacks. Then menstruation became irregular, headache, vertigo, pain in the hips, spine, and on the right side developed. Examination showed some scoliosis, and the heart sounds seemed exaggerated. Her stomach had descended, and was dilated or distended, showing hyperchlorhydria. The intestines had also descended, and in the colon scybalous masses were felt. In man, pure gastric dilation is common; in woman, gastropotosis and enteroptosis occur most frequently, due to greater mechanical constriction of the liver, or ptosis follows a sudden loss of flesh. In the case shown both corsets and pregnancy collaborated to produce the ptoses. The condition existed for years, however, before she showed any symptoms. This period of latency may be very long. She also has some true gastritis, probably secondary to the gastropotosis. The treatment will consist of a binder, and massage, continued persistently. Substantial soft diet, three meals daily, only, was prescribed, with rest, the head low, for two hours after meals. Hayem also advised the daily injection of oil. [M. O.]

JOURNAL DE MEDECINE DE BORDEAUX.

October 27, 1901. (31me. Année, No. 43.)

1. A Clinical and Bacteriological Study of Urinary Ophthalmia. AUBARET and DENIER.

1.—Urine is commonly used as an eye-wash throughout France. This was the cause of 8, out of 4, cases of severe purulent ophthalmia, the other six being gonorrheal in character. The 8 case-histories follow in detail. Bacteriological examination in every case showed the gonococcus with various other cocci. In three cases grave complications developed, the other five recovering. Aubaret and Denier conclude that this is a form of purulent ophthalmia due to the urine; that these cases must be differentiated from hypopyon keratitis; they they are less severe in form than true gonorrheal ophthalmia; that gonococci are found with various other micro-organisms; and finally that iritis and keratitis may occur. [M. O.]

LA SEMAINE MEDICALE.

October 16, 1901.

1. A Simple Method of Estimating the Size of the Cavity in Pneumothorax. PROFESSOR L. BARD.

1.—Dr. L. Bard describes his method for estimating the size of the cavity in pneumothorax. His clinical and experimental researches have been conducted on the principle of determining the intrapleural pressure in pneumothorax and in effusions. The idea was suggested to him by the law of Mariotto, depending upon the constant relation which exists between the changes of volume of a gas, and the determination of the variations as indicated by the modification of pressure which is exercised. This contribution is an elaborate one, depending, in brief, upon the following principle: He takes the pressure of the intrapleural gas by means of an intramediary canula introduced through the intercostal space. The closed canula is connected with a short piece of rubber tubing inserted upon a branch of a glass Y, the other top arm of which is connected with a manometer and the bottom with a Potain flask, the exact capacity of which is known. Steps are placed on the rubber tubes permitting the regulation of the admitted air. These stops also permit, by their communications, the establishment of the volume by insufflation of air into the pleural cavity and in the flask of the positive or negative pressure which can be exactly determined. There is an established connection between the new pressure which results from the admixture of these gases. The estimation can be made in a very few minutes without fatigue or danger to the patient, and no especial apparatus is necessary such as the one he describes. Dr. Bard then goes on to give the physical method by which the determination is made. He multiplies the known value of the flask by the difference between the pressure at once recognized in the flask and that which exists after the cock is turned on, thus establishing a connection with the thoracic cavity. This is then divided by the difference between the pressures both known of the mixed gases and that of the thoracic cavity before the connection with the flask was established.

[T. L. C.]

Verrucose Tuberculosis of the Anus.—G. Augier and J. Voituriez report a case of verrucose tuberculosis of the anus in a man of 53. (*Journal des Sciences Medicales de Lille*, July 13, 1901, No. 28). He had been ill for 5 years. At first he thought that he had hemorrhoids. There has always been some pain with defecation. He is in excellent general health, but noticed that pus passed from the anus two weeks before entering the hospital. Examination showed irregular, firm, verrucose plates about the anal orifice. No glands were enlarged. As it was believed to be an epithelioma, it was wholly extirpated. He recovered rapidly. Examination of the tumor removed showed localized tuberculosis, without sclerosis. The prognosis seems favorable in these cases. There was no other tuberculosis in the individual. The diagnosis is always difficult, and the treatment surgical, total removal of the growth. The few other cases in the literature are quoted.

[M. O.]

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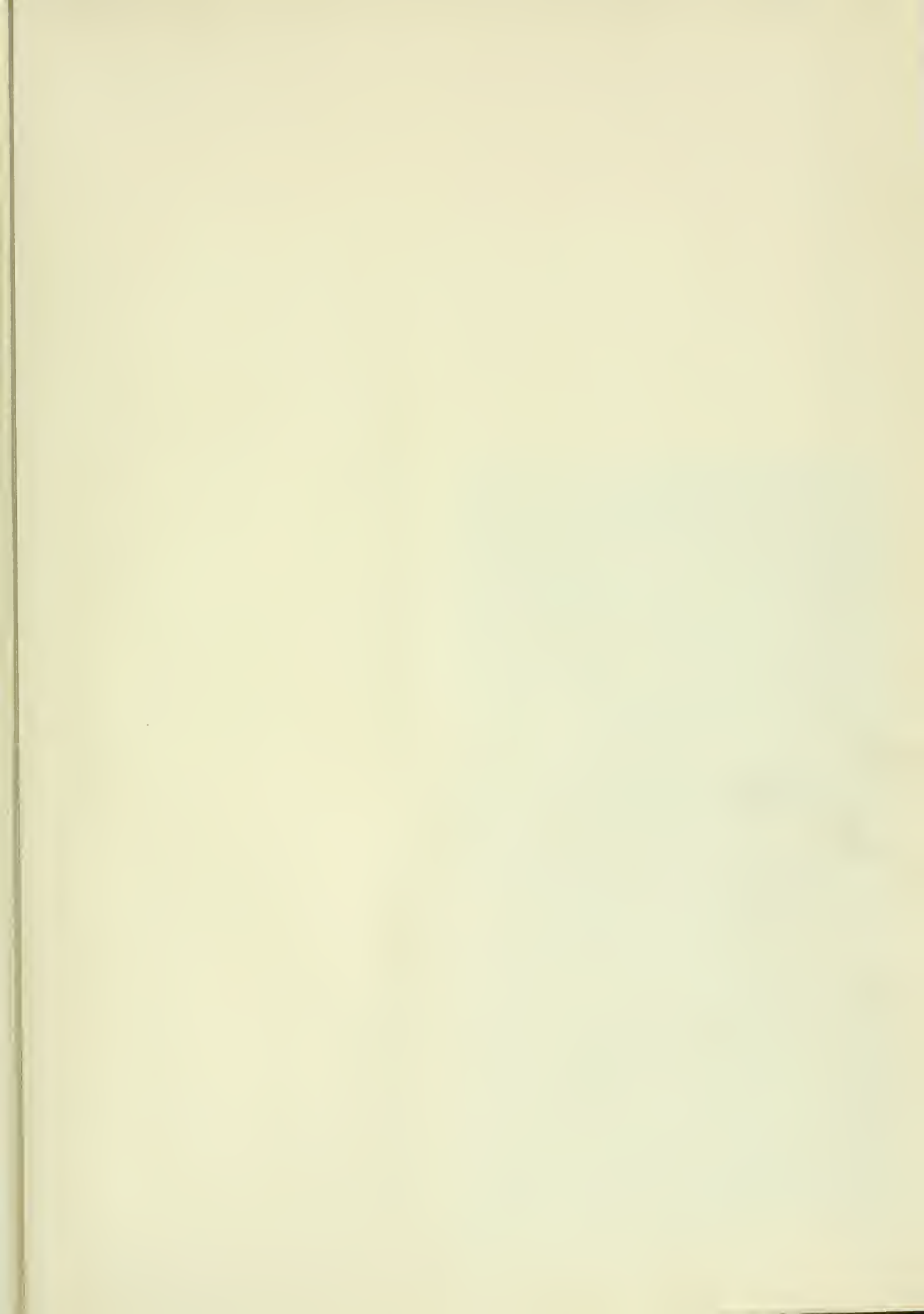
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